4/2/2024

Professional Turf Formula

0-0-62

Soluble Potash

Soluble Potash(K_2O).....62%

Derived From :

Soluble Potash

Manufactured By

Fertimix Inc.
512 North Broadway Jordan MN 55352
(952) 492-3377
www.fertimix.net

Recommended applications are 1lb per 1000 sq ft.

Net Wt 50 Lbs

SAFETY DATA SHEET

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	Muriate of Potash (MOP), all grades
Chemical Name:	Potassium Chloride
CAS Number:	7447-40-7
Chemical Family:	Inorganic Salt
Synonyms:	Potash MOP Potassium Chloride Potassium Muriate Potassium Monochloride Muriate of Potash
Primary Use:	Crop nutrient; Industrial applications
Company Information:	THE MOSAIC COMPANY 3033 Campus Drive Plymouth, MN 55441 www.mosaicco.com 800-918-8270 or 763-577-2700 8 AM to 5 PM Central Time US
Emergency Telephone:	**EMERGENCY OVERVIEW** **24 Hour Emergency Telephone Number:** **For Chemical Emergencies:** **Spill, Leak, Fire or Accident** **Call CHEMTREC** **North America: (800) 424-9300 (reference CCN201871)** **Others: (703) 527-3887 (collect)**

SECTION 2	HAZARD IDENTIFICATION	
GHS Classification:	Not Applicable	Not Applicable
	Signal Word: not applicable **Hazard Statement(s)** Not applicable	
Label Elements:		
Prevention:	Not applicable	
Response:	Not applicable	Not applicable
Storage:	Not applicable	Not applicable
Disposal:	Not applicable	Not applicable

SECTION 3	COMPOSITION INFORMATION ON INGREDIENTS			
Formula:	KCl			
Composition:	Potassium Chloride Sodium Chloride	CAS 7447-40-7 CAS 7647-14-5	95-99.5% 0.3-3.7%	

SECTION 4	FIRST AID MEASURES	
First Aid Procedures:	Eyes:	Move victim away from exposure and into fresh air. Flush eyes with plenty of clean water for at least 15 minutes. If symptoms persist, seek medical attention.
	Skin:	Wash contaminated area thoroughly with mild soap and water. If chemical or solution soaks through clothing, remove clothing and wash contaminated skin. If irritation develops and persists after washing, seek medical attention.
	Inhaled:	If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.
	Ingestion:	If large amounts are swallowed, seek emergency medical attention. If possible, do not leave victim unattended and observe closely for adequacy of breathing.
Note to Physician:	None Known	

SECTION 5	FIRE FIGHTING MEASURES
Extinguishing Media:	Use extinguishing agent suitable for type of surrounding fire.
Protection of Firefighters:	No unusual fire or explosion hazards are expected. When this material is subjected to high temperatures, it may release small amounts of chloride gas. Positive pressure, self-contained breathing apparatus is required for all firefighting activities involving hazardous materials. Full structural firefighting (bunker) gear is the minimum acceptable attire. The need for proximity, entry, flashover and/or special chemical protective clothing (see Section 8) needs to be determined for each incident by a competent firefighting safety professional. Water used for fire suppression and cooling may become contaminated. Discharge to sewer system(s) or the environment may be restricted, requiring containment and proper disposal of water (see Section 6).

SECTION 6	ACCIDENTAL RELEASE MEASURES
Response Techniques:	Stay upwind and away from spill (dust hazard). Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies as may be required (see Section 15). Minimize dust generation. Sweep up and package appropriately for disposal. Large spills can harm or kill vegetation.

SECTION 7	HANDLING AND STORAGE
Handling:	The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 8). Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Wash contaminated clothing or shoes. Use good personal hygiene practices.
Storage:	Use and store this material in dry, well-ventilated areas. Store only in approved containers. Keep container(s) tightly closed. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Material may absorb moisture from the air.

SECTION 8	EXPOSURE CONTROLS / PERSONAL PROTECTION	
Engineering Controls:	Use process enclosure, general dilution ventilation or local exhaust systems where necessary to maintain airborne dust concentration below the OSHA standards or in accordance with applicable regulations.	
Personal Protective Equipment (PPE):	Eye/Face:	Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended.
	Skin:	The use of cloth or leather work gloves is advised to prevent skin contact, possible irritation and absorption.
	Respiratory:	A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator.
	Other:	A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.
General Hygiene Considerations:	Wash thoroughly after handling Use adequate ventilation	
Exposure Guidelines:	OSHA Permissible Exposure Limits (PEL):	Particulates Not Otherwise Regulated: 5 mg/m^3 TWA (respirable); 15 mg/m^3 TWA (total)
	ACGIH Threshold Limit Value (TLV):	Particulates Not Otherwise Specified: 3 mg/m^3 TWA (respirable); 10 mg/m^3 TWA (inhalable)

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES		
Note: Unless otherwise stated, values in this section are determined at 20°C (68°F) and 760 mm Hg (1 atm).			
Appearance:	White to reddish-brown, crystalline or granular	Vapor Pressure (mm Hg):	Not applicable
Odor:	None/Strong Saline	Vapor Density (air=1):	Not applicable

Odor Threshold:	No data available	Specific Gravity or Relative Density:	1.986 - 1.990
Physical state:	Solid	Bulk Density:	Loose 64 - 75 lbs/ft^3 (1025 - 1200 kg/m^3);
pH:	5.4 – 10.0 in a 5% solution	Solubility in Water:	99.5 - 99.999%; 34.2 g/100mL at 20°C
Melting Point/ Freezing Point:	772 to 776°C (1423 to 1428°F)	Partition coefficient:	No data available
Boiling Point:	Sublimes at 1500°C (2732°F)	Auto-Ignition Temperature:	Not applicable
Flash Point:	Not applicable	Decomposition Temperature:	No data available
Evaporation Rate:	No data available	Viscosity:	No data available
Flammability:	Not applicable	Volatility:	Not applicable
Upper/lower Flammability or explosive limits	Not applicable		

SECTION 10	STABILITY AND REACTIVITY
Chemical Stability:	Stable under normal conditions of storage and handling. Material is hygroscopic (May absorb moisture from air when relative humidity >72%).
Conditions to Avoid:	None known
Incompatible Materials:	Avoid contact with hot nitric acid, may cause evolution of toxic nitrosyl chloride. Contact with other strong acids may produce irritating hydrogen chloride gas. KCl may react violently with bromine trifluoride and may explode if mixed with potassium permanganate and sulfuric acid. NaCl can react with most noble metals, such as iron or steel, building materials (such as cement), bromine, or trifluoride. A potentially explosive reaction may occur if NaCl is mixed with dichloromaleic anhydride and urea. Electrolysis of mixtures containing NaCl and nitrogen compounds may form explosive nitrogen trichloride.
Hazardous Decomposition Products:	None known
Corrosiveness:	Similar to salt. Mildly corrosive to metals in the presence of moisture.
Hazardous Polymerization:	Will not occur

SECTION 11	TOXICOLOGICAL INFORMATION		
Substance:	Potassium Chloride		
Acute Oral Toxicity:	LD_{50} (rat, oral) > 2600 mg/kg LD_{50} (mouse, oral) > 1500 mg/kg		
Acute Inhalation Toxicity:	No data available		
Acute Dermal Toxicity:	No data available		
Substance:	Sodium Chloride		
Acute Oral Toxicity:	LD_{50} (rat, oral) > 3000 mg/kg LD_{50} (mouse, oral) > 4000 mg/kg		
Acute Inhalation Toxicity:	LC_{50} (rat) > 42 g/m^3 / 1 hour		
Acute Dermal Toxicity:	No data available		
Mutagenesis:	No data available	Target Organ	No data available

Developmental Toxicity:	No data available	Carcinogenicity	No data available

SECTION 12	ECOLOGICAL INFORMATION
Ecotoxicology:	Dissolution of large quantities of potassium chloride and sodium chloride in water may create an elevated level of salinity that may be harmful to fresh water aquatic species and to plants that are not salt-tolerant. Potassium Chloride: Lepomis macrochirus LC50 - 2010 mg/l Physa heterostrapha LC50 - 940 mg/l Scenedesmus subspicatus EC50 - 2500 mg/l Sodium Chloride: Ceriodaphania dubia LC50 - 280,000 - 3,540,000 ug/l Daphnia magnia LC50 - 3,144,000 - 10,000,000 ug/l Daphnia pulex EC50 - 56.40 mM Pimephales promelas LD50 - 6,020,000 - 10,000,000 ug/l

SECTION 13	DISPOSAL CONSIDERATIONS
	This material, if discarded as produced, is not an RCRA "listed" or "characteristic" hazardous waste. Contamination may subject it to hazardous waste regulations. It is the generator's responsibility to properly characterize all waste materials. Consult federal, state/provincial and local regulations regarding the proper disposal of this material.

SECTION 14	TRANSPORT INFO
Regulatory Status:	Not regulated
Identification Number:	HTS 3104.20.00
Hazard Class:	Not applicable
Proper Shipping Name	Not applicable
Packing Group	Not applicable
DOT Emergency Response Guide Number:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable
MARPOL Annex V:	Non-HME
IMO/IMDG:	Not applicable

SECTION 15	REGULATORY INFORMATION
CERCLA:	Not listed
RCRA 261.33:	Not listed

SARA TITLE III: (Exemptions at 40 CFR, Part 370 may apply for agricultural use, or for quantities of less than 10,000 pounds on-site.)	Section 302/304: Not listed		RQ: No		TPQ: No
	Section 311/312:				
	Acute: No	Chronic: No	Fire: No	Pressure: No	Reactivity: No
	Section 313: Not listed				
NTP, IARC, OSHA:	This material has not been identified as a carcinogen by NTP, IARC, or OSHA.				
Canada DSL and NDSL:	DSL: Yes NDSL: Not listed				
TSCA:	Listed on the TSCA Inventory				
CA Proposition 65: (Health & Safety Code Section 25249.5)	Warning: This product contains substances known to the State of California to cause cancer and/or birth defects or other reproductive harm.				
WHMIS:	**WHMIS 2015** This SDS has been prepared according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR. **WHMIS 1988** *(Repealed)* Classifications and/or symbols from the Controlled Products Regulations (CPR) are included in the Other Hazardous Classifications in Section 16 for reference.				

SECTION 16	OTHER INFORMATION
Disclaimer:	The information in this document is believed to be correct as of the date issued. **HOWEVER, MOSAIC MAKES NO GUARANTEE, REPRESENTATION, OR WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO THE USE OF THIS PRODUCT.** User is responsible for determining whether this product is fit for a particular purpose and suitable for user's method of use or application and assumes the risk of use thereof. The conditions and use of this product are beyond the control of Mosaic, and Mosaic disclaims any liability for loss or damage incurred in connection with the use or misuse of this product. Each user should review the recommended industrial hygiene and safe handling procedures in the specific context of the intended use and determine whether they are appropriate.
Preparation:	The preparation of this SDS was in accordance with ANSI Z400.1-2010.
Revision Date:	December 22, 2015
Sections Revised:	All
SDS Number:	MOS 100052
References:	Globally Harmonized System of Classification and Labelling of Chemicals (GHS) – 4th Edition 2011 OSHA Hazard Communication Standard, 2012 MARPOL Annex V; The Fertilizer Institute (TFI), 2003; TOXNET Toxline, Tomes, ECHA, OECD SIDS

Other Hazard Classifications:

NFPA HAZARD CLASS	
Health:	1
Flammability:	0
Instability:	0
Special Hazard:	None

HMIS HAZARD CLASS	
Health:	1
Flammability:	0
Physical Hazard:	0
PPE:	Section 8

WHMIS 1988 (CPR) HAZARD CLASS	
Symbol	N/A
Classification	Not WHMIS Controlled
Sub Class	N/A

WHMIS 2015 (HPR) HAZARD CLASS	
Signal Word	N/A
Symbol	N/A
Classification	Not WHMIS Controlled
Hazard Statements	N/A

4/2/2024

Professional Turf Formula

16-0-4

Guaranteed Analysis

Total Nitrogen (N).....16%

16% Urea Nitrogen

Soluble Potash(K_2O).....4%

Derived from:

Urea, Muriate of Potash

Manufactured By

Fertimix Inc.

512 North Broadway Jordan MN 55352

(952) 492-3377

www.fertimix.net

Covers Approximately 8000 Sq. Ft.

Net Wt 50 Lbs

16-0-4

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Date of Issue: 03/29/2018 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: 16-0-4

1.2. Intended Use of the Product

Use of the Substance/Mixture: No use is specified.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Fertimix
512 Broadway St N
Jordan, MN 55352
1-800-333-8608
952-492-3377
www.fertimix.net

1.4. Emergency Telephone Number

Emergency Number : 612-221-0141

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US Classification

Carc. 1A H350
Comb. Dust

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS08

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : May form combustible dust concentrations in air.
H350 - May cause cancer (Inhalation).

Precautionary Statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing, and eye protection.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)

1.11% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral, Dermal, Inhalation (Dust/Mist))

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Carbonic acid, calcium salt (1:1)	(CAS-No.) 471-34-1	47.5006 - 47.9853	Not classified
Urea	(CAS-No.) 57-13-6	40.2640875 - 43.33959	Comb. Dust
Potassium chloride	(CAS-No.) 7447-40-7	7.657 - 8.0197	Not classified
Urea, N,N-methylenebis-	(CAS-No.) 13547-17-6	<= 1.08675	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Quartz	(CAS-No.) 14808-60-7	< 0.72705	Carc. 1A, H350 STOT SE 3, H335 STOT RE 1, H372

Biuret	(CAS-No.) 108-19-0	<= 0.65205	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Sodium chloride	(CAS-No.) 7647-14-5	0.02418 - 0.29822	Not classified

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: Using proper respiratory protection, move the exposed person to fresh air at once. Encourage exposed person to cough, spit out, and blow nose to remove dust. Immediately call a poison center, physician, or emergency medical service.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: May cause cancer (Inhalation).

Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust may cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May cause cancer. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust may cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible Dust.

Explosion Hazard: Dust explosion hazard in air. Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.

Reactivity: Hazardous reactions will not occur under normal conditions. May react vigorously with strong acids. Releases carbon dioxide gas when mixed with acids.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. Do not breathe fumes from fires or vapors from decomposition. Remove containers from fire area if this can be done without risk. Avoid raising dust.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Amines. Ammonia. Halogenated Compounds. Hydrogen chloride. Potassium oxides. Metal oxides. Urea decomposes to biuret, cyanuric acid, ammonia and carbon dioxide. Hydrogen sulfide is a reaction product. Nitrogen oxides may form in fire conditions. Hydrogen cyanide may be formed. Crystalline silica exists in several forms, the most common of which is quartz. If crystalline silica (quartz) is heated to more than 870°C, it can change to a form of crystalline silica known as trydimite, and if crystalline silica (quartz) is heated to more than 1470°C, it can change to a form of crystalline silica known as cristobalite. The OSHA PEL for crystalline silica as trydimite and cristobalite is one-half of the OSHA PEL for crystalline silica (quartz).

Other Information: Risk of dust explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid generating dust. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Vacuum clean-up is preferred. If sweeping is required use a dust suppressant. Use explosion proof vacuum during cleanup, with appropriate filter. Do not mix with other materials. Use only non-sparking tools. Minimize generation of dust. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion. Keep dust levels to a minimum and follow applicable regulations.

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Do not breathe dust. Avoid creating or spreading dust. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. Use appropriate personal protective equipment (PPE).

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Avoid creating or spreading dust. Use explosion-proof electrical, ventilating, lighting equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up.

Incompatible Materials: Strong acids, strong bases, strong oxidizers. Moisture. Fluorinated compounds. Peroxides.

7.3. Specific End Use(s)

No use is specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Urea (57-13-6)		
USA AIHA	WEEL TWA (mg/m³)	10 mg/m³

Particulates not otherwise classified (PNOC)		
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m³ Respirable fraction 10 mg/m³ Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³ Respirable fraction 15 mg/m³ Total Dust

Carbonic acid, calcium salt (1:1) (471-34-1)		
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)

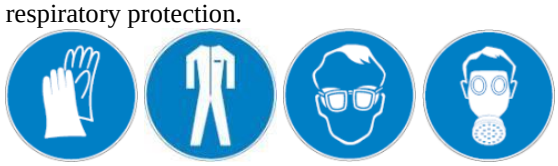
Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	A2 - Suspected Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)
USA IDLH	US IDLH (mg/m³)	50 mg/m³ (respirable dust)

USA OSHA	OSHA PEL (TWA) (mg/m³)	50 µg/m³

8.2. Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. Power equipment should be equipped with proper dust collection devices. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure all national/local regulations are observed.

Personal Protective Equipment : Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing : Chemically resistant materials and fabrics.

Hand Protection : Wear protective gloves.

Eye and Face Protection : Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State : Solid

Appearance : No data available

Odor : No data available

Odor Threshold : No data available

pH : No data available

Evaporation Rate : No data available

Melting Point : No data available

Freezing Point : No data available

Boiling Point : No data available

Flash Point : No data available

Auto-ignition Temperature : No data available

Decomposition Temperature : No data available

Flammability (solid, gas) : No data available

Vapor Pressure : No data available

Relative Vapor Density at 20°C : No data available

Relative Density : No data available

Solubility : No data available

Partition Coefficient: N-Octanol/Water : No data available

Viscosity : No data available

9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions. May react vigorously with strong acids. Releases carbon dioxide gas when mixed with acids.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition. Dust accumulation (to minimize explosion hazard).

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers. Moisture. Fluorinated compounds. Peroxides.

10.6. Hazardous Decomposition Products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

Urea (57-13-6)	
LD50 Oral Rat	8471 mg/kg

Biuret (108-19-0)	
LD50 Oral Rat	14300 - 15000 mg/kg

Potassium chloride (7447-40-7)	
LD50 Oral Rat	2600 mg/kg

Sodium chloride (7647-14-5)	
LD50 Oral Rat	3 g/kg
LD50 Dermal Rabbit	> 10000 mg/kg (Species: New Zealand White)
LC50 Inhalation Rat	> 42 g/m³ (Exposure time: 1 h)

Carbonic acid, calcium salt (1:1) (471-34-1)	
LD50 Oral Rat	6450 mg/kg

Quartz (14808-60-7)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rat	> 5000 mg/kg

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: May cause cancer (Inhalation).

Quartz (14808-60-7)	
IARC group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

Silica, crystalline (general form)	
IARC group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
OSHA Specifically Regulated Carcinogen List	In OSHA Specifically Regulated Carcinogen list.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Dust may be harmful or cause irritation. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust may cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: May cause cancer. Repeated or prolonged exposure to respirable (airborne) crystalline silica dust may cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Long term exposure to respirable crystalline silica results in a significant risk of developing silicosis and other non-malignant respiratory disease, lung cancer, kidney effects, and immune system effects.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Not classified.

Urea (57-13-6)	
LC50 Fish 1	16200 - 18300 mg/l (Exposure time: 96 h - Species: Poecilia reticulata)
EC50 Daphnia 1	3910 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

Potassium chloride (7447-40-7)	
LC50 Fish 1	1060 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	825 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	750 (750 - 1020) mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	880 mg/l (Exposure time: 24 h - Species: Daphnia magna)

Sodium chloride (7647-14-5)	
LC50 Fish 1	5560 (5560 - 6080) mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	340.7 (340.7 - 469.2) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
NOEC Chronic Fish	252 mg/l (Species: Pimephales promelas)

12.2. Persistence and Degradability

16-0-4	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

16-0-4	
Bioaccumulative Potential	Not established.

Urea (57-13-6)	
BCF Fish 1	< 10
Log Pow	-1.59 (at 25 °C)

Sodium chloride (7647-14-5)	
BCF Fish 1	(no bioaccumulation)

Carbonic acid, calcium salt (1:1) (471-34-1)	
BCF Fish 1	(no bioaccumulation)

12.4. Mobility in Soil
No additional information available

12.5. Other Adverse Effects
Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods
Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.
Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.
Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT
Not regulated for transport

14.2. In Accordance with IMDG
Not regulated for transport

14.3. In Accordance with IATA
Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

16-0-4	
SARA Section 311/312 Hazard Classes	Health hazard - Carcinogenicity Physical hazard - Combustible dust

Urea (57-13-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Biuret (108-19-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium chloride (7447-40-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium chloride (7647-14-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbonic acid, calcium salt (1:1) (471-34-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Quartz (14808-60-7)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.

Quartz (14808-60-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 03/29/2018

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Carc. 1A	Carcinogenicity Category 1A
Comb. Dust	Combustible Dust
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)

17-0-0

.29% Prodiamine, All Mineral

GUARANTEED ANALYSIS

Total Nitrogen (N) 17.0%
17.0% Urea nitrogen

Plant foods derived from: Urea.

580-4060 polypocketsm

AWARD

PROFESSIONAL TURF FERTILIZER

PRODIAMINE 0.29 PLUS

FOR PRE-EMERGENCE CONTROL OF GRASS AND BROADLEAF WEEDS
IN LAWNS AND ORNAMENTAL TURF
(excluding golf course putting greens)
LANDSCAPE ORNAMENTALS, ESTABLISHED PERENNIALS AND WILDFLOWER PLANTINGS
STOPS MANY WEED GRASSES BEFORE THEY GROW
PREVENTS CRABGRASS, ANNUAL BLUEGRASS, FOXTAIL

ACTIVE INGREDIENT:	
Prodiamine (CAS # 29091-21-2)	0.29%
INERT INGREDIENTS:	99.71%
TOTAL:	100.00%

EPA Reg. No.53883-170 -57131 **EPA Est. No. 57131-WI-1**

Net Wt. 50 lbs.

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or repeated skin contact with product may cause allergic reactions in some individuals.

FIRST AID

IF IN EYES:	· Hold eye open and rinse slowly and gently with water for 15-20 minutes. · Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. · Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	· Take off contaminated clothing. · Rinse skin immediately with plenty of water for 15-20 minutes. · Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	· Call a poison control center or physician immediately for treatment advice. · Have person sip a glass of water if able to swallow. · Do not induce vomiting unless told to do so by the poison control center or physician. · Do not give anything by mouth to an unconscious person.
IF INHALED:	· Move person to fresh air. · If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. · Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Telecommunications Network at 1-800-858-7378.

ENVIRONMENTAL HAZARDS

This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Not for use on plants being grown for sale or other commercial use, for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

This product is a pre-emergence herbicide that provides residual control of many grass and broadleaf weeds in established lawns and ornamental turf (excluding golf course putting greens), landscape ornamentals and established perennials and wildflower plantings. It controls susceptible weeds by inhibiting weed seeds, germination and root development. When used according to directions, it will control: barnyardgrass; bluegrass; annual (Poa annua)1; carpetweed; chickweed, common; chickweed, mouseear (from seed); crabgrass (large, smooth); crowfootgrass; cupgrass, woolly; foxtails, annual; goosegrass[1]; henbit; itchgrass; johnsongrass (from seed); junglerice; knotweed; kochia; lambsquarter, common; lovegrass; panicum (Texas, fall, browntop); pigweed; purslane, common; pusley, Florida; rescuegrass[3], shepherd's purse[2], signalgrass, broadleaf; speedwell, Persian; sprangletop; spurge, prostrate; witchgrass; woodsorrel, yellow (from seed).

[1]In many areas a single application of 5.2 to 11.9 pounds/1,000 square feet (225 to 518 pounds/acre) will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained with an initial application of 5.2 to 7.9 pounds/1,000 square feet (225 to 345 pounds/acre), followed after 60 to 90 days by a second application at doses that would not exceed the maximum annual rate (see"Minimum and Maximum Application Rate by Turfgrass Species" table in the Rates of Application section of this label).

[2]For this weed, apply in late summer, fall or winter prior to germination.

[3]Suppression only.

WHEN TO APPLY TO ESTABLISHED TURF: This product must be applied prior to germination of weed seeds, as it will not control established weeds.

THIS MAP SHOWS APPROXIMATE CRABGRASS GERMINATION DATES

APPLICATION DIRECTIONS: Apply this product uniformly, using a suitable spreader that has been properly calibrated. Most effective weed control will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1-2 inches) incorporation, prior to weed seed germination and within 14 days application.

USE PRECAUTIONS: The following precautions apply to the use of this product in turf grasses and lawns. Application of this product may thin emerged annual bluegrass and newly overseeded grasses. Do not apply to overseeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if this product is applied before seedling secondary roots are in the second inch of soil (not thatch plus soil). Do not apply to newly set sod until the following year. Application to turf stressed by drought, low fertility, or pest damage may result in turf injury. Disturbing the herbicide barrier with cultural practices (such as core aeration) may result in reduced weed control. Do not apply to putting greens, or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (Poa annua) are desirable species. Do not apply through any type of irrigation system. Do not apply aerially. Do not graze or feed livestock forage cut from treated areas.

RATES OF APPLICATION: This product is recommended for use on the turf grass species listed in the following table. The maximum amount of this product that may be applied per year is given for each turf grass species. Do not exceed the maximum yearly rate listed:

MINIMUM AND MAXIMUM APPLICATION RATES (by Turf Grass Species)

Turf Species	Minimum Rate	Maximum Annual Rate[1]
Bahiagrass, Bermudagrass[2] Centipedegrass, Zoysiagrass, Seashore Paspalum, St. Augustinegrass Tall Fescue (including turf-type)	2.75 lbs/1,000 sq. ft. (120 lbs/acre)	11.9 lbs/1,000 sq. ft. per year (518 lbs/acre per year)
Buffalograss Kentucky Bluegrass Perennial Ryegrass	2.75 lbs/1,000 sq. ft. (120 lbs/acre)	7.9 lbs/1,000 sq. ft. per year (345 lbs/acre per year)
Creeping Red Fescue	2.75 lbs/1,000 sq. ft. (120 lbs/acre)	6 lbs/1,000 sq. ft. per year (260 lbs/acre per year)
Creeping Bentgrass	2.75 lbs/1,000 sq. ft. (120 lbs/acre)	5.2 lbs/1,000 sq. ft. per year (225 lbs/acre per year)

[1]These are the maximum rates per calendar year.
[2]May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 4.1 pounds/1,000 square feet (179 pounds/acre). Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded. Suppression only of foxtail, goosegrass and rescuegrass due to reduced rates used in sprigging situations.

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rates recommended for each turf species. The length of time of residual weed control provided by this product is related to the rate applied. Use the higher rates listed for longer periods of weed control.

WHEN TO OVERSEED AFTER APPLICATION: This product will inhibit germination of turf seed if overseeded too soon after application. Follow rates and intervals in table for best overseeding/reseeding results (see map above).

USE RATE	MONTHS BEFORE OVERSEEDING		
	North	Transition	South
2.75 pounds/1,000 sq. ft. (120 pounds/acre)	4	4	4
5.2 pounds/1,000 sq. ft. (225 pounds/acre)	5	4	4
6 pounds/1,000 sq. ft. (260 pounds/acre)	6	5	5
6.3 pounds/1.000 sq. ft. (275 pounds/acre)	-	6	6
7.9 pounds/1,000 sq. ft. (345 pounds/acre)	-	7	7
9 pounds/1,000 sq. ft. (393 pounds/acre)	-	-	9
10.3 pounds/1,000 sq. ft. (448 pounds/acre)	-	-	10
11.9 pounds/1,000 sq. ft. (518 pounds/acre)	-	-	12

LANDSCAPE ORNAMENTALS: (including established perennials and wildflower plantings): This product may be applied for residual pre-emergence weed control in ornamentals. Apply at the rate of 5.2 to 11.9 pounds/1,000 square feet (225 to 518 pounds/acre) in fall and/or spring. Use higher rates of application for longer control periods. Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rate of 11.9 pounds/1,000 square feet (518 pounds/acre) per year.

APPLICATION TIMING AND INFORMATION: This product may be applied to newly transplanted and established ornamentals a broadcast, over the top or directed application. Around new transplants, delay application to allow soil to settle and water thoroughly before applying. Apply after cuttings form roots and become established. Apply before budding/grafting or after buds/grafts have taken to avoid any inhibition of the tissue union. This product is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1 to 2 inch) mechanical incorporation, prior to weed seed germination and within 14 days following application. Best weed control is obtained when applied to soil free of clods, weeds and debris such as leaves. Prior to application, control existing vegetation by hand weeding, cultivation or the use of an appropriate post-emergence herbicide.

TOLERANT ORNAMENTAL SPECIES: This product will not harm most trees, shrubs, vines and flowers. The species listed below are tolerant to this product. Best results will be obtained when product is uniformly applied to the soil surface; avoid applying to ornamental shoots which may defeat the effort to get uniform distribution on the soil surface. This product may be applied over the top of these species. When plants are under stress (such as heat, drought or frost damage) some cultivars of listed plants may be sensitive to this product.

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SCIENTIFIC NAME	COMMON NAME
Abies spp.	Fir species** (Balsam, Frasier, Noble, etc.)
Abelia grandiflora	Abelia: Sherwood
Acer palmatum	Japanese Maple
A. Platanoides	Norway Maple
Achillea spp.	Yarrow: King Edward
Actinidia chinensis	Kiwi*
Agapanthus africanus	Lily-of-the-Nile (African Lily)
Agapanthus orientalis	
Akebiaq quintata	Five -leaf or Chocolate Vine
Allium cernuum	Lady's Leek, Nodding Onion
Anemone hybrida	Japanese Anemone
Aquilegia spp.	Aquilegia: Red and Gold
Arctostaphylos densiflora	Vine Hill Manzanita
Arctotheca calendula	Cape Weed
Artemesia spp.	Wormwood; Silver Mound, Castle
Aster spp.	Aster: Bonnie Blue, Purple Dome
Aster X Frikartii	
Athrium Filiz-femina	Lady Fern; Fern Lady
Aucuba japonica	Japanese Aucuba
Begonia spp.	Fibrous Begonia: Hardy Grandis
Berberis gladwynensis	Barberry
B. Julianae	Wintergreen Barberry
B. mentorensis	Mentor Barberry
B.Thunbergii	Japanese Barberry
B. Verruculosa	Warty Barberry
Bergenia cordifolia	Snowbank
Boltonia asteroides	Butterfly-Bush (Dwarf Blue); Royal Red
Buddleia davidii	Japanese Boxwood
Buxus microphylla	Weeping Bottlebrush
Callistemon viminalis	Scotch Heather
Calluna vulgaris	Tussock Bellflower, (White Clips)
Campanula carpatica	Trumpet Flower, Madame Galen
Campis X Tagliabuana	Hottentot Fig (Ice Plant)
Carpobrotus edulis	Feathery Cassia
Cassia artemisoides	Wild Lilac
Ceanothus rigidus	
Ceratostigma plumbagonoides	False Cypress
Chamaecyparis pisifera	Cleyera
Cleyera japonica	Citrus species*
Citrus spp.	Coreopsis (Calliopsis) Early Sunrise, Moonbeam
Coreopsis spp.	Flowering Dogwood
Cornus florida	American Dogwood
C. Stolonifera	Pampas Grass
Cortaderia seloana	Cranberry Cotoneaster
Cotoneaster apiculatus	Cotoneaster
C. buxifolius	Bearberry Cotoneaster
C. dammeri	Rockspray Cotoneaster
C. Microphyllus	Hawthorne
Crataegus spp.	Lucifer
Crocosmia spp.	Italian Cypress
Cupressus sempervirens	White Trailing Ice Plant
Delosperma alba	Cooperi Pink
Delosperma spp.	Larkspur: Blue Elf
Delphinium spp.	Dianthus: Maiden Pinks "Zing"
Dianthus deltoides	Cheddar Pink
D. gratianopolitanus	Hop Bush
Dodonea viscosa	Coneflower, Purple; Magnus
Echinacea purpurea	Silverberry
Elaeagnus pungens	Wintercreeper
Euonymus fortunei	Evergreen Euonymus
E. japonica	Spreading Euonymus
E. kiautschovica	Japanese Aralia
Fatsia japonica	Border Forsythia
Forsythia intermedia	Weeping Forsythia
Forsythia suspensa	Greenstem Forsythia
F. viridissima	Gaillardia, Blanket Flower: "Goblin"
Gaillardia spp.	Gardenia, Cape-Jasmine
Gardenia jasminoides	
Gaura spp.	Gentian
Gentiana dahurica	Cranesbill
Geranium cinereum	Gladiolus species**
Gladiolus spp.	Baby's Breath
Gypsophilia repens	English Ivy
Hedera helix	Sunrose
Hellanthemum spp.	Daylily: Aztec Gold, Stella de Oro, Tender Love
Hemerocallis spp.	Rose of Sharon**
Hibiscus	Mallow: Disco Belle White
Hibiscus spp.	Chinese Hibiscus
Hibiscus rosa-sinensis	Hosta, Plantain Lily (Fragrant)
Hosta plantaginea	Hosta, "Seersucker"
H. Sieboldiana	
Houttuynia cordata var. variegata	Bigleaf Hydrangea
Hydrangea macrophylla	Holly
Ilex Berrey	Chinese Holly
Ilex cornuta	Japanese Holly
I. crenata	American Holly
I. opaca	Yaupon Holly, Schillings
I. vomitoria	
Inula ensifolia	Sword-Leaved Iris; Jodiesong
Ins ensata	Siberian Iris; Cabernet
Ins siberica	Iris species**
Iris spp.	Winter Jasmine
Jasminium nudiflorum	Chinese Juniper; Nick's Compact, Parsonnii
Juniperus chinensis	Shore Juniper; Blue Pacific
J. conferta	Parsoni
J. davurica	Creeping Juniper
J. horizontalis	Walnut*
Juglans spp.	Shrimp Plant
Justicia brandegeana	Crape Myrtle
Lagerstromia indica	Crape Myrtle; Tuscarora
Lagerstromia indica X Fauriei	Weeping Lantana
Lantana montevidensis	Lavender; Munstead
Lavender spp.	Edelweiss
Leonopodium alpinum	Amur Privet
Ligustrum amurense	Chinese Privet; Variegata
Ligustrum sinense	Japanese Privet
L. japonicum	Glossy Privet (Waxleaf)
L. lucidum	Lily; Jazz
Lilium spp.	Big Blue Lily, Silver Mound, Evergreen Giant
Liriope muscari	Liriope, Variegated
Liriope muscari var. variegata	Liriope, Creeping
Liriope spicata	Cardinal Flower, Indian Pink
Lobelia Cardinalis	Japanese Honeysuckle
Lonicera japonica	Tatarian Honeysuckle
L. tatarica	Burgundy
Loropetalum chinense	Loosestrife; Modern Pink
Lythrum spp.	Magnolia species**
Magnolia spp.	Ice Plant
Maleophora luteola	Crabapple*
Malus spp.	Yaku Jima, Silberfeder
Miscanthus sinensis	Heavenly Bamboo
Nandina domestica	Narcissus species**
Narcissus spp.	Oleander
Nerium oleander	Olive*
Olea europaea	Mondo Grass
Ophiopogon japonicus	Osmanthus (False Holly); Gulf Tide
Osmanthus heterphyllus	Trailing African Daisy
Osteospermum fruticosum	Sourwood
Oxydendrum arboreum	Tree Peony
Paeonia suffruticosa	Fountain Grass (Dwarf)
Pennisetum setaceumi	
Perovskia atriplicifolia	Avocado*
Persea americana	Frasier's Photinia (Redtip)
Photinia Fraseri	Dragonhead, False; Vivid
Physotegia Virginiana	Spruce species** (Colorado Blue, Norway, etc.)
Picea spp.	Lily-of-the-Valley Bush
Pieris japonica	Calabrian Pine
Pinus brutia	Canary Island Pine
P. canariensis	Slash Pine
P. Elliottii	Aleppo Pine
P.halepensis	Austrian Pine
P. nigra	Longleaf Pine
P. palustrus	Monterey Pine
P. radiata	Eastern White Pine
P. strobus	Scotch Pine
P. sylvestris	Loblolly Pine
P. taeda	Japanese Black Pine
P. Thunbergiana	Virginia Pine
P. Virginiana	Pistachio*
Pistacho spp.	Queensland Pittosporum
Pittosporum rhombifolium	Japanese Pittosporum
P. tobira	Japanese Yew
Podocarpus macrophyllus	English Laurel
Prunus laurocerasus	Almond, Apricot, Nectarine, Peach, Plum and Prune*
Prunus spp.	Douglas Fir**
Pseudotsuga menziesii	Firethorn (Scarlet)
Pyracantha coccinea	Firethorn
P. fortuneana	Firethorn
P. koidzumii	Bradford Pear spp.
Pyrus spp.	Oak, Shumard's Red
Quercus Shumardii	Oak species
Quercus spp.	Indian Hawthorne
Raphiolepsis indica	Yedda Hawthorne
Raphiolepsis umbellata	'Coral Bells,' ' Formosa,' ' Hino-crimson,' PJM'
Rhododendron	'Delaware Valley White', ' Roseum Elegans,'
(including Azalea)	'Flame Creeper', ' Girard Crimson', 'Wakeebisu
	'White Gumbo', 'George L. Tabor'
Rosa banksiae	Lady Bank's Rose
Rosmarinus officinalis	Rosemary*
Rudbeckia spp.	Black-Eyed Susan; Goldsturm
Santolina virens	Santolina
Saxifraga spp.	Saxifrage; Purple Dome
Scabiosa spp.	Pincushion Flower
Sedum album	Stonecrop
Sedum cauticola	Stonecrop; Lidakense
Sedum dasyphyllum	Stonecrop
Sedum spurium	Stonecrop; Dragon's Blood
Spiraea bumalda	Spirea; Anthony Waterer
Syzygium paniculatum	Australian Brushcherry
Taxus cuspidata	Japanese Yew
T. media	Yew
Teucrium spp.	Germander
Thalictrum diptercarpum	Meadow Rue
Thuja occidentalis	American Arborvitae
Trachelospermum asiatum	Star Jasmine
Tsuga canadensis	Canada Hemlock
Tulipa spp.	Tulip species
Veronica spp.	Veronica, Speedwell; Sunny Border
Viburnum japonicum	Japanese Viburnum
V. odoratissimum	Sweet Viburnum
V. plicatum	Japanese Snowball
V. rigidum	Canary Island Viburnum
V. suspensum	Arrowood Viburnum
V. tinus	Laurustinus
V. trilobum	Cranberry Bush
V. wrightii	Leatherleaf Viburnum
Vinca major	Greater Periwinkle, Vinca
Vinca Minor	Common Periwinkle, Vinca
Vitis spp.	Grape*
Weigela florida	Old Fashioned Weigela
Yucca aloifolia	Spanish Bayonet, Yucca
Y. filametosa	Adam's Needle, Yucca

*Do not use on food producing trees, vines or plants.
**Not for use on container grown plants.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in original container in a dry place. Store in locked area out of reach of children and domestic animals.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spilled bait, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for Guidance.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Empty container through use according to label instructions. Do not rinse unless required for recycling. Offer for recycling, if available. If recycling is not available; then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALE AND WARRANTY

The DIRECTIONS FOR USE of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop, injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of The Manufacturer or the Seller. All such risks shall be assumed by the Buyer.

The Manufacturer warrants that this product conforms to the chemical description on the label, and is reasonably fit for the purposes set forth in the DIRECTIONS FOR USE, when it is used in accordance with such directions, subject to the inherent risks mentioned above.

THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY EXTENDS TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNING, OR CAUTIONS. BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. THE MANUFACTURER and the seller offer this product, and the Buyer and User accept it, subject to the foregoing CONDITIONS OF SALE AND WARRANTY.

EC GROW

Distributed By Eau Claire Co-op Oil Co., PO. Box 837, Eau Claire, WI 54702

SAFETY DATA SHEET

Award Turf Fertilizer with Prodiamine .29%
17-0-0 All Mineral

Revision: 08/25/2021
Supersedes Revision: 02/04/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 544-5400

Product Name: Award Turf Fertilizer with Prodiamine .29% 17-0-0 All Mineral

Reference #: 53883-170-57131

Company Name: Eau Claire Coop Oil Company
P.O. Box 837
Eau Claire, WI 54702

Emergency Contact:	Chemtrec	(800)424-9300
Information:	Product Related	(715)876-6422

2. HAZARDS IDENTIFICATION

Serious Eye Damage/Eye Irritation, Category 2A
Acute Toxicity: Inhalation, Category 4
Acute Toxicity: Oral, Category 4
Skin Corrosion/Irritation, Category 2

GHS Signal Word: **Warning**

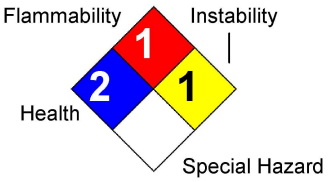
GHS Hazard Phrases:
Causes serious eye irritation.
Harmful if inhaled.
Harmful if swallowed.
Causes skin irritation.

GHS Precaution Phrases:
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Use only outdoors or in a well-ventilated area.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Do not eat, drink or smoke when using this product.
Take off contaminated clothing and wash it before reuse.
Keep out of reach of children.

GHS Response Phrases:
IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation persists, get medical advice/attention.

GHS Storage and Disposal Phrases:
Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard Rating System:



Potential Health Effects (Acute and Chronic): May cause respiratory tract irritation. Not expected to be a chronic hazard.

Inhalation: May be harmful if inhaled. Inhalation of dust may cause respiratory tract irritation.

Skin Contact: May cause skin irritation. May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation. Dust may cause mechanical irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
57-13-6	Urea	11.0 -92.0 %
NA	Other Non-Hazardous Ingredients	2.0 -85.0 %
29091-21-2	Prodiamine	0.29 %
16389-88-1	Dolomitic limestone	2.0 -85.0 %

4. FIRST AID MEASURES

Emergency and First Aid Procedures: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. Get medical aid if cough or other symptoms appear.

In Case of Inhalation:

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical aid if irritation develops and persists. Wash off with soap and plenty of water.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid if irritation develops and persists.

In Case of Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. For further assistance, contact your local Poison Control Center 1-800-222-1222.

Note to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Pt: No data. Method Used: Estimate

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Use extinguishing media appropriate to surrounding fire conditions. Substance is noncombustible. Decomposes at high temperatures, resulting in toxic and corrosive products. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

Flammable Properties and Hazards: No data available.

6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions: Prevent further leakage or spillage if safe to do so.
Do not let product enter drains or waterways. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Avoid generating dusty conditions. Provide ventilation.

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not let this chemical enter the environment.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Minimize dust generation and accumulation. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse. Wash hands thoroughly after handling.

Precautions To Be Taken in Storing: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances, inaccessible to children and domestic animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
57-13-6	Urea	PEL: PNOR 15 Total 5 Resp. mg/m3	TLV: PNOS 10 Inhalable 3 Resp. mg/m3	No data.
NA	Other Non-Hazardous Ingredients	No data.	No data.	No data.
29091-21-2	Prodiamine	No data.	No data.	10 mg/m3 TWA
16389-88-1	Dolomitic limestone	PEL: 15 Total 5 Respirable mg/m3	TLV: 10 total 5 Respirable mg/m3	No data.

Respiratory Equipment (Specify Type): A respiratory protection program that meets OSHA's 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eye Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[ ] Gas [ ] Liquid [X] Solid
Appearance and Odor:	Various Colors.
Melting Point:	No data.
Boiling Point:	No data.
Autoignition Pt:	No data.
Flash Pt:	No data. Method Used: Estimate
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	No data.
Percent Volatile:	No data.

10. STABILITY AND REACTIVITY

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Incompatible materials, dust generation.
Incompatibility - Materials To Avoid:	Strong acids, Strong bases, Strong oxidizing agents, Sodium hypochlorite, Calcium hypochlorite, Hydrogen flouride, Sodium nitrate, Nitrosyl Perchlorate, DICHROMATES, Liquid chlorine, Nitrates, Permanganates, Chromyl chloride, No significant incompatibilities identified with common materials and contaminants.
Hazardous Decomposition Or Byproducts:	Oxides of phosphorus, Nitrogen oxides (NOx) and ammonia (NH3), Carbon monoxide, Oxides of nitrogen, Carbon dioxide, Oxides of sulfur, Oxides of potassium, Hydrogen cyanide, Hydrogen chloride.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological Information:	CAS# 29091-21-2: Prodiamine: Acute toxicity, LD50, Ingestion:, Rat, 5000. MG/KG. Acute toxicity, LD50, Dermal, Rat, 2000. MG/KG. Acute toxicity, LC50, Inhalation, Rat, 1.800 MG/L, 4 H.
Carcinogenicity/Other Information:	OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Additional studies are needed to to determine whether the cell transforming activity of quartz is related to its carcinogenic potential.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA

57-13-6	Urea	n.a.	n.a.	n.a.	n.a.
NA	Other Non-Hazardous Ingredients	n.a.	n.a.	n.a.	n.a.
29091-21-2	Prodiamine	n.a.	n.a.	n.a.	n.a.
16389-88-1	Dolomitic limestone	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment wash waters.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging.
Dispose of as unused product.

14. TRANSPORT INFORMATION

GHS Classification: Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation
Acute Toxicity: Inhalation, Category 4 - Warning! Harmful if inhaled
Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed
Skin Corrosion/Irritation, Category 2 - Warning! Causes skin irritation

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name:
DOT Hazard Class:
UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: No information available.

15. REGULATORY INFORMATION

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
57-13-6	Urea	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory, 8A CAIR; CA PROP.65: No; CA TAC, Title 8: No; WI Air: No
NA	Other Non-Hazardous Ingredients	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No; CA TAC, Title 8: No; WI Air: No
29091-21-2	Prodiamine	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No; CA TAC, Title 8: No; WI Air: No

16389-88-1 Dolomitic limestone

CAA HAP,ODC: No; CWA NPDES: No; TSCA: Inventory; CA PROP.65: No; CA TAC, Title 8: No; WI Air: No

Regulatory Information: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION: Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or reated skin contact with product may cause allergic reactions in some individuals.

16. OTHER INFORMATION

Revision Date: 08/25/2021

Additional Information About This Product: No data available.

Company Policy or Disclaimer: This Safety Data Sheet (SDS) is to be used as a reference to address the safe handling of the product. All statements, technical information and recommendations contained herein are to the best of our knowledge, reliable and accurate. This SDS is not intended to make any representation as to how the product will perform when used as intended. Nothing in this SDS is intended to be a representation or warranty by the manufacturer with regard to accuracy, safety, usefulness, technical information, materials, techniques, or practices. This product is sold "AS IS" and nothing in this SDS should be deemed to be a representation or warranty of any injury, loss, or damage of any kind sustained by, or arise from, the use of this product.

20-0-5

FERTILIZER

GUARANTEED ANALYSIS	
TOTAL NITROGEN (N)	20.00%
AVAILABLE PHOSPHATE (P_2O_5)	0.00%
SOLUBLE POTASH (K_2O)	5.00%

Derived from Urea and Muriate of Potash

50 LB

Safety Data Sheet

Section 1: Identification

Product Name: **20-0-5 50#**

Other means of identification: None

Recommended Use: Lawn Fertilizer

Manufacturer
BCA Products
24399 225th Avenue
P.O. Box 429
Sleepy Eye, MN 56085
www.rivereregioncoop.com
fkral@riverregioncoop.com

Telephone 1-888-454-4744

Emergency telephone number CHEMTREC 1-800-424-9300

Section 2: Hazard Identification

Classification according to paragraph (d) of §1910.1200: Mixture

Label Elements:

Signal Word:
WARNING

Hazard Statements: Causes irritation to skin, eyes and respiratory tract.

Precautionary Statements: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

Other hazards: None identified at this time.

Other Information:
NFPA Label
Health - 1
Flammability - 0
Reactivity - 0

Section 3: Composition/information on ingredients

Chemical Name	Common Name	CAS #	Impurities and stabilizing additives	%
Urea	None	57-13-6	None	44.0
Potassium Chloride	Muriate of Potash	7447-40-7	None	9.0
Limestone	None	1317-65-3	None	47.0

Section 4: First-Aid Measures

Description of First Aid Measures

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Skin: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists.

Eye:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.
Ingestion:	Drink plenty of water. Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms and affects, both acute and delayed	
Inhalation:	Symptoms may include coughing or shortness of breath.
Skin:	Symptoms include redness, itching and pain.
Eye:	Symptoms include redness and pain.
Ingestion:	Symptoms include nausea, vomiting and diarrhea.
Indication of any immediate medical attention and special treatment needed	Get medical attention immediately if symptoms are non-responsive to suggested first aid measures.

Section 5: Fire-fighting Measures

Flammable Properties	This product is not flammable.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Foam and water.
Unsuitable Extinguishing Media	None identified at this time.
Specific Hazards arising from the chemical	Reactions with incompatibilities may pose an explosion hazard. Fires may pose irritating, corrosive and/or toxic gases. May release small quantities of chlorine gas and ammonia when heated.
Special Protective Equipment and Pre-cautions for Fire-fighters	Fire fighters should wear full protective gear. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivelant) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	
Personal Precautions	Keep unnecessary personnel away. Keep upwind. Ventilate the area. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Protective Equipment	Gloves recommended. Respirator optional.
Emergency Procedures	If spill could enter any waterway, contact the local authorities. Contact the NATIONAL RESPONSE CENTER at 1-800-424-8802. In case of accident or road spill notify: CHEMTREC at 1-800-424-9300.
Environmental Precautions	Prevent further leakage or spillage if safe to do so.

Methods and Material for Containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements, or confined areas.
Methods and Material for Cleanup Measures	Avoid dust formation. Small Spills: Sweep up or vaccuum up spillage and collect in suitable container for disposal. Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airbourne dust and prevent scattering by moistening with water. Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

Section 7: Handling and Storage

Precautions for safe handling:	Keep formation of airbourne dusts to a minimum. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. See section 8 of the SDS for Personal Protective Eqiupment.
Conditions for safe storage:	Keep container tightly closed in a dry, cool, and well-ventilated area.
Incompatible Materials:	Acids, strong reducing agents. Strong oxidizing agents. Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. It is incompatible with sodium nitrite, gallium perchlorate, phosphorus pentachloride, nitrosyl perchlorate, titanium tetrachloride and chromyl chloride. Mildly corrosive to metals in the presence of moisture.

Section 8: Exposure controls/personal protection

Control Parameters

Chemical Name	CAS #	OSHA PEL	ACGIH TLV
Urea	57-13-6	15mg/m^3	10mg/m^3
Potassium Chloride	7447-40-7	15mg/m^3	10mg/m^3
Limestone	1317-65-3	15mg/m^3	5mg/m^3

Engineering Measures/Controls:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airbourne levels below recommended exposure limits. If exposure limits have not been established, maintain airbourne levels to an acceptable level.
Personal Protective Equipment	
Eye/Face	Use tight fitting goggles if dust is generated.
Hands	Gloves
Skin/Body	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	Wear respirator if there is dust formation.

General Hygiene Recommendations	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: Physical and chemical properties

Appearance/Description	
Physical State	Solid crystal
Color	Mixed color
Taste	Not Available
Odor	Slight Ammonia Odor
Odor Threshold	Not Available
pH	Not Available
Melting Point/Freezing Point	132.7°C
Initial Boiling Point and Boiling Range	Not Available
Flash Point	Not Available
Evaporation Rate	Not available
Flammability	Not Available
Upper/lower flammibility limits	Not Available
Vapor Pressure	Not available
Vapor Density	Not available
Relative Density	Not Available
Solubilities	Water
Partition coefficient: n-octano/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	Not Available

Section 10: Stability and reactivity

Reactivity	None identified at this time.
Chemical Stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Extreme temperatures. Incompatibilities. Fire and dust explosions.
Incompatible materials	Acids, strong reducing agents. Strong oxidizing agents. Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. It is incompatible with sodium nitrite, gallium perchlorate, phosphorus pentachloride, nitrosyl perchlorate, titanium tetrachloride and chromyl chloride. Mildly corrosive to metals in the presence of moisture.
Hazardous decomposition products	Ammonia and Hydrogen Sulfide may be release in reactions with strong bases of from thermal decomposition. Combustion may produce carbon oxides, nitrogen oxides,cyanuric acid, cyanic acid, biuret, carbon dioxide, and sulphur dioxide.

Section 11: Toxicological Information

Routes of exposure:	Inhalation, Ingestion, Skin, and Eyes
Acute (Immediate) Effects	None identified at this time.
Chronic (Delayed) Effects	None identified at this time.
Chronic effects from short term exposure	None identified at this time.
Chronic effects from long term exposure	None identified at this time.
Numerical measure of toxicity	Not available
Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest esition), or by OSHA	No

Section 12: Ecological Information

Ecotoxicity	None identified at this time.
Persistenace and degradability	This material is readily biodegradable and is not likely to bioconcentrate.
Bioaccumulative potential	Bioaccumulation is a possibility.
Mobility in soil	This material is readily absorbed by plants from the soil. Mobility is possible when mixed with water. This material may leach into groundwater.
Other adverse effects	None identified at this time.

Section 13: Disposal Considerations

Waste treatment methods

Product waste:	Waste must be disposed of in accordance with federal, state, and local environmental control regulations.
Packaging waste:	Waste must be disposed of in accordance with federal, state, and local environmental control regulations.

Section 14: Transportation Information

DOT		Not regulated as dangerous goods
	UN number	Not regulated as dangerous goods
	UN Proper Shipping Name	Not regulated as dangerous goods
	Transport Hazard Class	Not regulated as dangerous goods
	Packing Group	Not regulated as dangerous goods
	Environmental Hazards	Not regulated as dangerous goods
TDG		Not regulated as dangerous goods
IMO/IMDG		Not regulated as dangerous goods
IATA/ICAO		Not regulated as dangerous goods

Transport in bulk (according to Annex II of MARPOL 73/78 and the LBC Code)	Not regulated as dangerous goods.
Special precautions for user	Not regulated as dangerous goods.

Section 15: Regulatory Information

Safety, health and environmental regulations specific for the product in question

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. CERCLA/SARA Hazardous Substnaces - Not applicable.
CERCLA (Superfund) reportable quantity	None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 311 hazardous chemical	Yes
State Regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 16: Other Information

Last Revision Date	6/25/2013
Preparation Date	6/25/2013
Disclaimer/Statement of Liability	The information contained herein is accurate to the best of our knowledge. My Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

46-0-0

BCA UREA
FERTILIZER

GUARANTEED ANALYSIS	
TOTAL NITROGEN (N)	46.00%
AVAILABLE PHOSPHATE (P_2O_5)	0.00%
SOLUBLE POTASH (K_20)	0.00%

Derived from Urea.

DIRECTIONS FOR USE

HOW TO APPLY: Apply only when lawn is dry, watering after application to get fertilizer into root system. To eliminate possibility of burning and striping, do not overlap.
WHEN TO APPLY: Best time to apply is early spring(April-May) and early fall(August-September). For a thick green lawn apply every 4-6 weeks.

PACKAGED BY RIVER REGION COOPERATIVE/ BCA PRODUCTS
PO BOX 429
SLEEPY EYE MN 56085

NET WT. 40 LBS

Safety Data Sheet

Section 1: Identification

Product Name: **46-0-0 40#**

Other means of identification: None

Recommended Use: Lawn Fertilizer

Manufacturer

BCA Products
24399 225th Avenue
P.O. Box 429
Sleepy Eye, MN 56085
www.rivereregioncoop.com
fkral@riverregioncoop.com

Telephone 1-888-454-4744

Emergency telephone number CHEMTREC 1-800-424-9300

Section 2: Hazard Identification

Classification according to paragraph (d) of §1910.1200: Mixture

Label Elements

Signal Word:
WARNING

Hazard Statements: Causes irritation to skin, eyes and respiratory tract.

Precautionary Statements: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

Other hazards: None identified at this time.

Other Information

NFPA
Health - 1
Flammibility - 0
Reactivity - 0

Section 3: Composition/information on ingredients

Chemical Name	Common Name	CAS #	Impurities and stabilizing additives	%
Urea	None	57-13-6	None	100.0

Section 4: First-Aid Measures

Description of First Aid Measures

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Skin: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists.

Eye:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.
Ingestion:	Drink plenty of water. Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms and affects, both acute and delayed	
Inhalation:	Symptoms may include coughing or shortness of breath.
Skin:	Symptoms include redness, itching and pain.
Eye:	Symptoms include redness and pain.
Ingestion:	Symptoms include nausea, vomiting and diarrhea.
Indication of any immediate medical attention and special treatment needed	Get medical attention immediately if symptoms are non-responsive to suggested first aid measures.

Section 5: Fire-fighting Measures

Flammable Properties	This product is not flammable.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Foam and water.
Unsuitable Extinguishing Media	None identified at this time.
Specific Hazards arising from the chemical	Reactions with incompatibilities may cause an explosion hazard.
Special Protective Equipment and Pre-cautions for Fire-fighters	Fire fighters should wear full protective gear. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. As in any fire, wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH (approved or equivelant) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	
Personal Precautions	Keep unnecessary personnel away. Keep upwind. Ventilate the area. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Protective Equipment	Gloves recommended. Respirator optional.
Emergency Procedures	If spill could enter any waterway, contact the local authorities. Contact the NATIONAL RESPONSE CENTER at 1-800-424-8802. In case of accident or road spill notify: CHEMTREC at 1-800-424-9300.
Environmental Precautions	Prevent further leakage or spillage if safe to do so.

Methods and Material for Containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements, or confined areas.
Methods and Material for Cleanup Measures	Avoid dust formation. Small Spills: Sweep up or vaccuum up spillage and collect in suitable container for disposal. Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airbourne dust and prevent scattering by moistening with water. Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

Section 7: Handling and Storage

Precautions for safe handling	Keep formation of airbourne dusts to a minimum. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. See section 8 of the SDS for Personal Protective Equipment.
Conditions for safe storage	Keep container tightly closed in a dry, cool, and well-ventilated area.
Incompatible Materials:	Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. It is incompatible with sodium nitrite, gallium perchlorate, phosphorus pentachloride, titanium tetrachloride and chromyl chloride. Mildly corrosive to metals in the presence of moisture.

Section 8: Exposure controls/personal protection

Control Parameters

Chemical Name	CAS #	OSHA PEL	ACGIH TLV
Urea	57-13-6	15mg/m^3	10mg/m^3

Engineering Measures/Controls:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airbourne levels below recommended exposure limits. If exposure limits have not been established, maintain airbourne levels to an acceptable level.
Personal Protective Equipment	
Eye/Face	Use tight fitting goggles if dust is generated.
Hands	Gloves
Skin/Body	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	Wear respirator if there is dust formation.

General Hygiene Recommendations	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: Physical and chemical properties

Appearance/Description	
Physical State	Solid crystal
Color	Mixed color
Taste	Not Available
Odor	Slight ammonia odor
Odor Threshold	Not Available
pH	Not Available
Melting Point/Freezing Point	132.7°C
Initial Boiling Point and Boiling Range	Not Available
Flash Point	Not Available
Evaporation Rate	Not available
Flammability	Not Available
Upper/lower flammibility limits	Not Available
Vapor Pressure	Not available
Vapor Density	Not available
Relative Density	Not Available
Solubilities	Water
Partition coefficient: n-octano/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	Not Available

Section 10: Stability and reactivity

Reactivity	None identified at this time.
Chemical Stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatibilities.
Incompatible materials	Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride. It is incompatible with sodium nitrite, gallium perchlorate, phosphorus pentachloride, titanium tetrachloride and chromyl chloride. Mildly corrosive to metals in the presence of moisture.
Hazardous decomposition products	May produce oxides of nitrogen, cyanuric acid, cyanic acid, biuret, and carbon dioxide.

Section 11: Toxicological Information

Routes of exposure:	Inhalation, Ingestion, Skin, and Eyes
Acute (Immediate) Effects	None identified at this time.
Chronic (Delayed) Effects	None identified at this time.

Chronic effects from short term exposure	None identified at this time.
Chronic effects from long term exposure	None identified at this time.
Numerical measure of toxicity	Not available
Whether the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest esition), or by OSHA	No

Section 12: Ecological Information

Ecotoxicity	None identified at this time.
Persistenace and degradability	This material is readily biodegradable and is not likely to bioconcentrate.
Bioaccumulative potential	Bioaccumulation is a possibility.
Mobility in soil	This material is readily absorbed by plants from the soil. Mobility is possible when mixed with water. This material may leach into groundwater.
Other adverse effects	None identified at this time.
Other information	None identified at this time.

Section 13: Disposal Considerations

Waste treatment methods

Product waste:	Waste must be disposed of in accordance with federal, state, and local environmental control regulations.
Packaging waste:	Waste must be disposed of in accordance with federal, state, and local environmental control regulations.

Section 14: Transportation Information

DOT		Not regulated as dangerous goods
	UN Number	Not regulated as dangerous goods
	UN Proper Shipping Name	Not regulated as dangerous goods
	Transport Hazard Class	Not regulated as dangerous goods
	Packing Group	Not regulated as dangerous goods
	Environmental Hazards	Not regulated as dangerous goods
TDG		Not regulated as dangerous goods
IMO/IMDG		Not regulated as dangerous goods
IATA/ICAO		Not regulated as dangerous goods

Transport in bulk (according to Annex II of MARPOL 73/78 and the LBC Code)	Not regulated as dangerous goods.

Special precautions for user	Not regulated as dangerous goods.

Section 15: Regulatory Information

Safety, health and environmental regulations specific for the product in question

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List. CERCLA/SARA Hazardous Substnaces - Not applicable.
CERCLA (Superfund) reportable quantity	None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
Section 311 hazardous chemical	Yes
State Regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 16: Other Information

Last Revision Date	6/3/2013
Preparation Date	6/3/2013
Disclaimer/Statement of Liability	The information contained herein is accurate to the best of our knowledge. My Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

PrimeraOne®

PrimeraOne Prodiamine 65WDG Herbicide

For preemergence control of grass and broadleaf weeds in:

- Established turfgrasses (excluding golf course putting greens), lawns and sod nurseries;
- Landscape ornamentals in nurseries or in established plantings;
- Established perennials and wildflower plantings;
- Plants grown for cut foliage production (Florida only);
- Conifer and hardwood tree seedling nurseries;
- Christmas tree farms;
- Managed transportation and utility rights-of-way, including rail and equipment yards, and public utility facilities (substations, tank farms, pumping stations, parking/storage areas, ungrazed fencerows).

ACTIVE INGREDIENT:	
Prodiamine (CAS No. 29091-21-2)	65.0%
OTHER INGREDIENTS:	35.0%
TOTAL:	100.0%

FIRST AID

IF SWALLOWED • Call a poison control center or doctor immediately for treatment advice. • Have affected person sip a glass of water if able to swallow. • Do not induce vomiting unless told by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.

IF IN EYES • Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

IF INHALED • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Emergency phone numbers (800) 424-9300 CHEMTREC (transportation and spills), (800) 900-4044 Poison Control Center (human health), (800) 345-4735 ASPCA (animal health)

EPA REG. NO. 60063-26

EPA Est. No. 37429-GA-01 (Lot No. begins with BT)
EPA Est. No. 60063-GA-001 (Lot No. begins with VL)

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS

MANUFACTURED FOR: Sipcam Agro USA, Inc.
2520 Meridian Parkway, Suite 525, Durham, NC 27713

9501960-000-20120710

NET WEIGHT: 10 Pounds

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact, while mixing or handling the concentrated material, may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

WPS USES:

Mixers, loaders and applicators and other persons who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR part 170) – in general, agricultural-plant uses are covered – must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves, such as butyl rubber > 14 mils, or neoprene rubber > 14 mils, or nitrile rubber >14 mils (See instructions for Category A on the EPA chemical resistance category selection chart B you want other options.)
- Shoes plus socks

NON-WPS USES:

Mixers and loaders who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR part 170) – in general, only agricultural-plant uses are covered by the WPS – must wear:

- Waterproof gloves

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- After handling this product, immediately wash the outside of gloves before removing them, then remove gloves and all other PPE. Immediately wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product has low solubility in water. At the limit of solubility, this product is not toxic to fish. However, at concentrations substantially above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment wash water.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Workers Protection Standard, 40 CFF part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

WHERE TO USE

PrimeraOne Prodiamine 65WDG Herbicide is a preemergence herbicide that provides residual control of many grass and broadleaf weeds in:

- Established turfgrasses (excluding golf course putting greens), lawns and sod nurseries;
- Landscape ornamentals in nurseries or in established plantings;
- Established perennials and wildflower plantings;
- Plants grown for cut foliage production (Florida only);
- Conifer and hardwood tree seedling nurseries;
- Christmas tree farms;
- Managed transportation and utility rights-of-way, including rail and equipment yards, and public utility facilities (substations, tank farms, pumping stations, parking/storage areas, ungrazed fencerows).

HOW PRIMERAONE PRODIAMINE 65WDG HERBICIDE WORKS

PrimeraOne Prodiamine 65WDG Herbicide controls susceptible weeds by preventing growth and development of newly germinated weed seeds. Weed control is most effective with PrimeraOne Prodiamine 65WDG Herbicide is activated by at least 0.5 inch of rainfall or irrigation or shallow incorporation (1 to 2 inches) before weed seeds germinate and within 14 days following application.

USE PRECAUTIONS

1. Do not graze or feed livestock forage cut from areas treated with PrimeraOne Prodiamine 65WDG Herbicide.
2. Follow all applicable directions, restrictions, and precautions on the labels of EPA-registered tank mix partners.
3. Do not blend PrimeraOne Prodiamine 65WDG Herbicide onto dry fertilizer or any other granular material.
4. Chemigation: Do not apply this product through any type of irrigation system unless instructed otherwise in this label.
5. Do not apply aerially.
6. Do not apply to golf course putting greens.

MIXING AND APPLICATION

Mixing

PrimeraOne Prodiamine 65WDG Herbicide must be mixed thoroughly in the spray tank to ensure uniform application. Follow these steps:

1. Fill the spray tank ¼ full with clean water or fluid fertilizer only.
2. Start agitation and check to ensure it is working properly.

3. Add PrimeraOne Prodiamine 65WDG Herbicide directly into the tank.
4. Add the rest of the carrier to obtain the final spray volume.
5. A spray colorant may be used with PrimeraOne Prodiamine 65WDG Herbicide to mark areas as they are treated. This will improve application accuracy by minimizing swath skips and overlaps.
6. Maintain vigorous agitation in the spray tank before and during the application. This will ensure a well-mixed spray suspension.
7. Do not allow spray suspension to dry in the tank. Thoroughly clean the sprayer after use by flushing the system with water containing a detergent. Refer to the Pesticide Disposal section of this label for waste disposal.

Tank Mixing PrimeraOne 65WDG Herbicide

PrimeraOne Prodiamine 65WDG Herbicide may be tank mixed with certain other EPA-registered herbicides to provide a broader spectrum of weed control or to control emerged weeds. Refer to the specific directions for use for tank mix partners, and consult the label(s) of the individual tank mix partners(s) for use rate, application timing, weeds controlled, and specific precautions and/or restrictions. Tank mixes are permitted only in states where the tank mix partners(s) are registered for the application site and the turf and ornamental species listed. When using PrimeraOne Prodiamine 65WDG Herbicide in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions on the labels of the products used.

Before tank mixing pesticides, it is advisable to test compatibility by mixing the products in a small container first. See the Compatibility Test section.

Compatibility Test

Before mixing PrimeraOne Prodiamine 65WDG Herbicide with other pesticides in the spray tank, test the compatibility by mixing all components (carrier and pesticide products) in a small container in proportionate quantities. For example, a 1-qt. Jar would be 1/100 the volume of a 25 gals./A spray rate. At 1 lb./A the PrimeraOne Prodiamine 65WDG Herbicide rate would be proportional to 4.5 g per qt. Add approximately 1.5 teaspoons to a qt. of water. Calculate amounts for the other products based on rate per acre. An approximate volume would be 1.5 teaspoons for each lb./A of a dry formulation and 0.5 teaspoons for each pt./A of a liquid formulation. (See following table.)

Amount of Component to Add to One quart Jar of Spray Carrier (Assuming Carrier Volume of 25 gals./A)

Component Formulations	Rate Per		Level Teaspoons
	Acre	1,000 sq. ft.	
PrimeraOne Prodiamne 65WDG Herbicide	1.0 lb.	0.4 oz.	1.5
Dry Tank Mix Partners	1.0 lb.	0.4 oz.	1.5
Liquid Tank Mix Partners	1.0 pt.	0.4 oz.	0.5

If components do not ball-up or form flakes, sludge, gels, oily films or layers, then the mixture is compatible. Incompatibility will usually occur within 5 minutes after mixing. If the components are not compatible, use a compatibility agent and rerun the test to determine if the mixture is suitable. If components are still not compatible, do not tank mix.

Mixing Order for Tank Mixtures

Notes: (1) When mixing PrimeraOne Prodiamine 65WDG Herbicide with other components (carrier and partner pesticide products), allow products to completely dissolve between steps. This is key when tank mixing with ester formulations. (2) Maintain agitation throughout mixing and application of the mixture.

Add the products to the spray tank in the following order:

1. Add products packaged in water-soluble bags first. Agitate the tank mixture. Allow the water-soluble bags to completely dissolve and the product to disperse before adding any other tank mix partner.
2. Then add water-dispersible granules (WDG or WG formulations) and wettable powders (WP formulations). Add wettable powders to the tank as agitation continues. Allow the product to disperse completely before other products are added.
3. Add spray adjuvants and spray markers. Read the adjuvant's label first and use only those adjuvants approved for application to turf and ornamentals. When an adjuvant is to be used with this product, Sipcam Agro USA recommends the use of a Chemical Producers and Distributors Association certified adjuvant.
4. Add flowable liquids (FL) or suspension concentrates (SC).
5. Add emulsifiable concentrates (EC) last.

Application

Apply PrimeraOne Prodiamine 65WDG Herbicide in a minimum of 20 gals/A (0.5 gal./1,000 sq. ft.) of carrier (water and/or fluid fertilizer) using a calibrated, low-pressure sprayer with 50-mesh or coarser screens. A broadcast boom or handheld wand designed for herbicide or insecticide application will provide the best results. Select nozzle pressure and gallonage to provide complete coverage.

Weeds Controlled

When used as directed in this label, PrimeraOne Prodiamine 65WDG Herbicide will control the following weeds:

Barnyardgrass	Goosegrass [5/]	Purslane, common
Bluegrass, annual (*Poa annua*) [1/]	Henbit [2/]	Pusley, Florida
Carpet weed	Itchgrass	Rescuegrass [4/]
Chickweed, common [2/]	Johnsongrass (from seed)	Shepherds purse [2/]
Chickweed, mouseear (from seed)	Junglerice	Signalgrass, broadleaf
Crabgrass (Large, Smooth) [3/]	Knotweed [2/]	Speedwell, Persian
Crowfootgrass	Kochia	Sprangletop
Cupgrass, woolly	Lambsquarter, common	Spurge, prostrate
Foxtails, annual	Lovegrass	Witchgrass
Pigweed	Panicum (Texas, Fall, Browntop)	Woodsorrel, yellow (from seed)

[1]In areas where *Poa annua* is a winter annual, apply PrimeraOne Prodiamine 65WDG Herbicide in August or September to established, non-overseeded turf before *Poa annua* seeds germinate. These timings are approximate. Consult State Extension Service for more specific timing for your area. Also see the section of this label ***Poa Annua* Control in Established Bermudagrass Overseeded with Perennial Ryegrass (AZ, CA, NV, and TX only).**

[2]To control this weed, apply PrimeraOne Prodiamine 65WDG Herbicide in late summer, fall, or winter before weed seeds germinate.

[3]Fall applications for spring crabgrass control in cool-season grasses: In those areas where the ground freezes in the winter, PrimeraOne Prodiamine 65WDG Herbicide can be applied in the fall at rates of 1.0-1.15 lbs./A after the soil temperature falls below 50ºF but before the ground freezes. This application will control crabgrass the following spring.

[4]Suppression only.

[5]In any area a single application of 1-2.3 lbs./A of PrimeraOne Prodiamine 65WDG Herbicide will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective control may be obtained by making an initial application of 1-1.5 lbs./A followed, after 60-90 days, by a second application that does not exceed the maximum rate for that turfgrass species listed in the Maximum Application Rate Table.

Do not exceed a dosage of 1.5 lbs. a.i./Acre, (2.3 lbs./A of this product) per year on any use site.

ESTABLISHED TURF

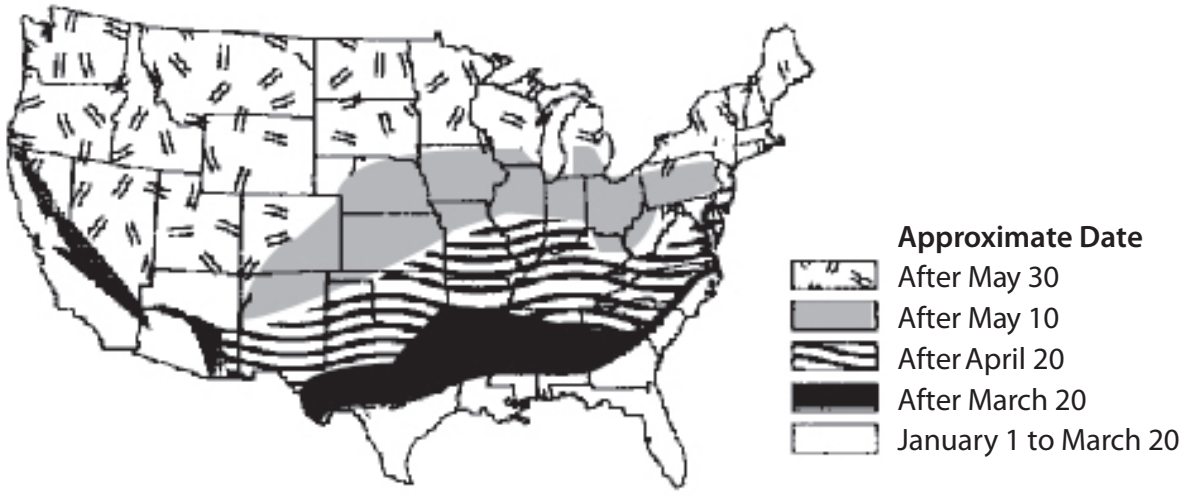
PrimeraOne Prodiamine 65WDG Herbicide is a preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turfgrasses including:

- Golf courses **excluding** putting greens
- Lawns
- Sod nurseries

The maximum amount of PrimeraOne Prodiamine 65WDG Herbicide that may be applied per year is given for each turfgrass species in the Annual Use Rates section of the label.

For optimum weed control, PrimeraOne Prodiamine 65WDG Herbicide should be activated by at least 0.5 inch of rainfall or irrigation before weed seeds germinate and within 14 days following application. See the map below for approximate crabgrass seen germination dates.

CRABGRASS SEED GERMINATION DATES



Use Precautions-Turfgrass

1) Do not apply PrimeraOne Prodiamine 65WDG Herbicide to areas where dichondra, colonial bentgrass, velvet bentgrass, or annual bluegrass (*Poa annua*) are desirable species.
2) Do not cut (harvest) treated sod before 90 days after application. To avoid turfgrass injury, do not apply to newly set sod until the sod has rooted and exposed edges have filled in.
3) To avoid turfgrass injury, do not apply PrimeraOne Prodiamine 65WDG Herbicide to turf stressed by conditions such as drought, low fertility, or pest damage.
4) Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.
5) ***Do not apply PrimeraOne Prodiamine 65WDG Herbicide to golf course putting greens.***
6) If the depth of the creeping bentgrass root system becomes shallow and root tips contact PrimeraOne Prodiamine 65WDG Herbcide-treated soil, new root formation may be inhibited. Mowing height can affect the depth of a plant's root system. To avoid this, do not apply PrimeraOne Prodiamine 65WDG Herbicide to creeping bentgrass less than 0.5 inch in height.

Application Timing and Rate-Turfgrass

PrimeraOne Prodiamine 65WDG Herbicide may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications should be made before target weeds germinate. **PrimeraOne Prodiamine 65WDG Herbicide will not control weeds that have already emerged.**

The amount of PrimeraOne Prodiamine 65WDG Herbicide to apply depends upon:

1. the length of residual weed control desired (the higher the application rate, the longer the control),
2. the turf species, and
3. the maximum amount which can be applied to the turf species per calendar year.

Length of Crabgrass Control*

***Length of control varies by region. This table is an average for planning purposes.**

Annual Use Rates-Turfgrass

PrimeraOne Prodiamine 65WDG Herbicide can be applied to the turfgrass species listed in the following table. Do not apply more than the highest rate listed for each species in a calendar year.

Table 1. Maximum Application Rate of PrimeraOne Prodiamine 65WDG Herbicide Per Calendar Year by Turfgrass Species [1/]

Turf Species	lbs. Product/Acre	oz. Product/1,000 sq. ft.
Bermuda grass [2/] Bahiagrass Centipedegrass Kikuyugrass Seashore Paspalum St. Augustinegrass [3/] Tall Fescue (including turf-type) Zoysiagrass	1.0-2.30 [1/]	0.36-0.83
Buffalograss Kentucky Bluegrass Perennial Ryegrass	0.5-1.50 [1/]	0.185-0.55
Fine Fescue	0.5-1.15 [1/]	0.185-0.42
Creeping Bentgrass (0.5 inches or more in height) [4/]	0.5-1.00 [1/]	0.185-0.37

[1]PrimeraOne Prodiamine 65WDG Herbicide may be applied more than once a year as long as the total amount applied is not greater than the maximum application rate for each turf species. All applications must be made before weed seeds germinate.

[2]May be used on newly-sprigged or plugged Bermudagrass at rates not to exceed 0.80 lb./A (0.30 oz./1,000 sq. ft.). Newly-sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

[3]Use an initial rate of 0.75-1.5 lbs./A per application.

[4]To avoid grass injury, do not apply PrimeraOne Prodiamine 65WDG Herbicide to creeping bentgrass mowed at less than 0.5 inch in height.

When to Apply PrimeraOne Prodiamine 65WDG Herbicide After Overseeding Turf
Injury to desirable seedlings is likely if PrimeraOne Prodiamine 65WDG Herbicide is applied before the secondary roots of seedlings are in the second inch of soil (not thatch plus soil). To reduce the potential to injure overseeded turf, wait 60 days after seeding or until after the second mowing, whichever is longer, before applying PrimeraOne Prodiamne 65WDG Herbicide.

When to Overseed After Application-All States*
PrimeraOne Prodiamine 65WDG Herbicide will inhibit the development of turfgrass species overseeded too soon after application.

Follow rates and intervals in the table below for best overseeding/reseeding results.

*Note: In AZ, CA, NV, and TX, the overseeding interval can be shorter in established bermudagrass that has been overseeded with perennial ryegrass. See the next section "*Poa Annua* Control in Established Bermudagrass Overseeded with Perennial Ryegrass (AZ, CA, NV, and TX only)".

Amount of PrimeraOne Prodiamine 65WDG Herbicide	**Interval (Months) Before Overseeding**		
Lbs. Product/A	**North**	**Transition**	**South**
.75	4	4	4
1.00	5	4	4
1.15	6	5	5
1.25	-	6	6
1.50	-	7	7
1.75	-	-	9
2.00	-	-	10
2.30	-	-	12

***Poa annua* control in Established Bermudagrass Overseeded with Perennial Ryegrass (AZ, CA, NV, and TX only)**
Use on golf courses (excluding golf course putting greens, lawns, and sod nurseries when overseeding with perennial ryegrass (minimum seeding rate of 350 lbs./A).

How Much and When to Apply

Amount to Apply	When to Apply	Expected Control	Use Precautions
0.58-1.0 lb./A	**First application:** 6 to 8 weeks **before** ryegrass overseeding **Second application:** 4 to 8 weeks **after** overseeding or when perennial ryegrass roots are in the second inch of soil	1 application for 70% or greater control of *Poa annua* Second application may enhance control	1. Some seedling mortality and temporary reduction in root growth of new seedlings may occur. 2. To reduce the potential for seedling mortality, maintain a moist seedbed with light, frequent irrigation. 3. make no more than 2 applications per year for this use, and do not exceed a total of 1.3 lbs./A per year. 4. Do not make a second application if any injury to the ryegrass is observed after the first application. 5. Do not make a second application unless the product was first applied before overseeding.

ORNAMENTALS (CONTAINER, FIELD, AND LANDSCAPE GROWN, INCLUDING CHRISMAS TREE FARMS), RIGHTS-OF-WAY, GROUNDS OF UTILITIES, UNGRAZED FENCE ROWS

PrimeraOne Prodiamine 65WDG Herbicide may be applied to soil surfaces for preemergence control of many grass and broadleaf weeds:

- Around ornamental shrubs, trees, established perennial vegetation and wildflower plantings;
- On or surrounding managed rights-of-way for transportation systems including roadways, roadsides, railways, and equipment yards;
- On grounds of utilities such as power substations, tank farms, pumping stations, parking and storage areas;
- On ungrazed fence rows.

Application Timing and Information
PrimeraOne Prodiamine 65WDG Herbicide:

1. Will not control emerged weeds.
2. May be applied to newly-transplanted and established ornamentals as broadcast or over-the-top-spray.
3. Is most effective when applied to soil free of clods, weeds, and debris such as leaves and mulch.
4. Is most effective when the product is activated in the soil before weed seeds germinate and within 14 days after application.
5. Is activated when the treated area receives at least 0.5 inch of irrigation or rainfall, or shallow (1 to 2 inches) mechanical incorporation.

Use Precautions
To reduce injury potential:

a. In the spring when buds are rapidly growing and expanding, over-the-top application of PrimeraOne Prodiamine 65WDG Herbicide may temporarily injure new growth of desirable plants. To reduce the possibility of injury at this time, wait to apply PrimeraOne Prodiamine 65WDG Herbicide over-the-top of newly emerged vegetation until it has hardened off, unless your experience indicates that the ornamental plant will not be injured by the other-the-top application.
b. After application, immediately irrigate the treated area to wash PrimeraOne Prodiamine 65WDG Herbicide from plant surfaces onto soil (watering plants before application may improve the washing process).

Ornamentals, Christmas Tree Farms – Application Sites and Instructions

Site	Application Instructions
Newly-Transplanted container or Field Nursery Stock	1. Delay application until soil has settled around transplants. 2. Water transplants thoroughly before application. 3. Apply after cuttings from roots and are established. 4. To avoid inhibition of the tissue union, apply before budding/grafting or after buds/grafts have taken.
Established Container, Field Nursery Stock, or Landscape Plants	Apply at any time as a broadcast, over-the-top, or directed spray.
Landscape (or Ornamental) Plantings	1. Apply as a broadcast, over-the-top, or as a directed spray. 2. Delay application to newly-transplanted ornamentals until soil has settled around transplants.
Bare Ground Application for Container Placement	1. Apply to soil (including mulch, gravel, wood chips, or other permeable base) upon which containerized ornamentals are placed. 2. After PrimeraOne Prodiamine 65WDG Herbicide is applied, perform shallow cultivation or hand weeding only, or avoid disturbing the herbicide barrier.
In Shade Houses and Uncovered Polyhouses	After PrimeraOne Prodiamine 65WDG Herbicide is applied, uncovered polyhouses must remain open for at least 7 days and ornamentals must receive 2 irrigations totaling at least ½ inch of water.
Ornamental Bulbs and Perennial Wildflower Plantings	1. PrimeraOne Prodiamine 65WDG Herbicide may be applied to bulbs or perennial wildflower species listed in the section **Tolerant Ornamental Species.** 2. Apply before or after bulbs emerge but before bulbs bloom and weeds emerge. In wildflowers, a postemergence herbicide labeled for wildflowers may be needed to control weeds that have already emerged.

How Much and When to Apply

Amount to Apply (Broadcast)*	When to Apply	Comments/Instructions
1.0-2.3 lbs./A or 0.37-0.83 oz./1,000 sq. ft.	In fall or spring before weeds germinate or after weeds are removed.	1. Use the higher rate for longer control. 2. PrimeraOne Prodiamine 65WDG Herbicide may be applied more than once per year as long as the total amount of product applied does not exceed 2.3 lbs./A per year.

*Note: For band application calculate amount per acre:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate} = \text{amount to apply per acre of field}$$

Equivalent Measurements for PrimeraOne Prodiamine 65WDG Herbicide

Lbs./A	Oz./1,000 sq. ft.	Approximate Equivalent-Tablespoons/1,000 sq. ft.
1.0	0.37	1
1.5	0.55	1.5
2.0	0.74	2
2.3	0.83	2.25

Tank Mixtures For Use On Ornamentals

PrimeraOne Prodiamine 65WDG Herbicide may be tank mixed with other registered herbicides listed on this label to provide a broader spectrum of weed control or to control emerged weeds. Tank mixes with PrimeraOne Prodiamine 65WDG Herbicide are for use only in states where the tank mix partner(s), application site, and intended use pattern are registered. Follow the label(s) of the tank mix partner(s) for application rates, timing, weeds controlled, tolerant ornamentals, and specific use precautions and/or restrictions. Before mixing pesticides in the spray tank, test compatibility by mixing the products in a small container first. See the **Compatibility Test** section of this label.

Tank Mix Partners for PrimeraOne Prodiamine 65WDG Herbicide on Ornamentals

Product	Precautions/Instructions
Goal® (use on conifers only)	Mix with PrimeraOne Prodiamine 65WDG Herbicide for postemergence control of certain broadleaf weeds including malva and filaree.
Gallery®, Sim-Trol®, Pennant®	See product labels for weed spectrum and tolerant ornamentals.
Roundup® or other glyphosate-based products[1], Finale®	These nonselective tank mix herbicides control most emerged annual broadleaves and grasses. Take extreme care to prevent tank mixtures with these products from contacting the foliage and stems of turfgrass, trees, shrubs, or other desirable vegetation because desirable vegetation may be severely injured or killed. Apply these tank mixtures as a directed spray and use a shield to prevent spray from contacting foliage of desirable plants. Following instructions on the tank mix partner's label, delay irrigation of the treated area to allow time for the herbicide to be absorbed by weed foliage.

[1]Roundup is one brand of a nonselective herbicide containing glyphosate. Other glyphosate products may also be used.

Tolerant Ornamental Species

PrimeraOne Prodiamine 65WDG Herbicide will not harm most trees, shrubs, vines, and flowers. The species listed below in Table 2 are tolerant to PrimeraOne Prodiamine 65WDG Herbicide. PrimeraOne Prodiamine 65WDG Herbicide may be applied over-the-top of the listed species.

When plants are under stress (such as heat, drought, or frost damage), some cultivars of listed plants may be sensitive to PrimeraOne Prodiamine 65WDG Herbicide.

Table 2. Tolerant Ornamental Species

Scientific name	Common name
Abelia grandiflora	Abelia
Abies spp.	Fir species (Balsam, Fraser, Noble, etc.)
Acer palmatum	Japanese maple
Acer platanoides	Norway maple
Achillea spp.	Yarrow
Actinidia chinensis	Kiwi*
Agapanthus orientalis	Lily of the Nile; African lily
Akebia quintata	Five-Leaf or Chocolate Vine
Allium cernuum	Lady's Leek; Nodding Onion
Anemone hybrida	Japanese Anemone
Aquilegia spp.	Columbine
Arctostaphylos densiflora	Vine hill manzanita
Arctotheca calendula	Cape weed
Aucuba japonica	Japanese Aucuba
Artemisia spp.	Wormwood; Silver Mound; Castle
Aster spp.	Aster
Athyrium filix-femina	Lady Fern
Begonia spp.	Fibrous Begonia
Berberis gladwynesis	Barberry
Berberis julianae	Wintergreen barberry
Berberis mentorensis	Mentor barberry
Berberis thunbergii	Japanese barberry
Berberis verriculosa	Warty barberry
Bergenia cordifolia	
Boltonia asteroides	Snowbank
Bougainvillea spp.	Bougainvillea
Buddleia davidii	Butterfly-bush
Buxus microphylla	Japanese boxwood
Callistemon citrinus	Crimson bottlebrush
Callistemon viminalis	Weeping bottlebrush
Calluna vulgaris	Scotch heather
Campanula carpatica	Tussock bellflower
Campsis X tagliabuana	Trumpet creeper, Trumpet flower
Carpobrotus edulis	Hottentot fig; Ice plant
Cassia artemisoides	Feathery Cassia
Ceanothus rigidus	Wild lilac
Ceratostigma plumbaginoides	
Chamaecyparis pisifera	False cypress
Chrysanthemum nipponicum	
Cleyera japonica	Cleyera
Citrus spp.*	Ornamental orange, lemon, lime, etc.*
Coreopsis spp.	Coreopsis (Calliopsis): Early Sunrise, Moonbeam
Cornus stolonifera	American dogwood
Cortaderia selloana	Pampas grass
Cotoneaster apiculatus	Cranberry Cotoneaster
Cotoneaster buxifolius	Cotoneaster
Cotoneaster dammeri	Bearberry Coteneaster

(continued)

Scientific name	**Common name**
Cotoneaster microphyllus	Rockspray Cotoneaster
Crataegus spp.	Hawthorn
Cupressus sempervirens	Italian cypress
Crocosmia spp.	Lucifer
Delosperma spp.	Ice plant
Delphinium spp.	Larkspur
Dianthus deltoidia	Dianthus; Maiden pinks
Dianthus gratianopolitanus	Cheddar pink
Dodonea viscosa	Hop bush
Echinacea purpurea	Coneflower
Elaeagnus pungens	Silverberry
Euonymus fortunei	Wintercreeper
Euonymus japonica	Japanese spindle tree; Evergreen Euonymus
Euonymus kiautschovica	Spreading Euonymus
Fatsia japonica	Japanese aralia
Forsythia intermedia	Border Forsythia
Forsythia suspense	Weeping Forsythia
Forsythia viridissima	Greenstem Forsythia
Gaillardia spp.	Gaillardia; Blanket flower
Gardenia jasminoides	Gardenia; Cape-jasmine
Gaura spp.	Gaura
Gentiana dahurica	Gentian
Geranium cinereum	Cranesbill
Gladiolus spp.**	Gladiolus species**
Gypsophila repens	Baby's breath
Hedera helix	English ivy
Helianthemum spp.	Sunrose
Hemerocallis spp.	Daylily
Heucherella spp.	Coral bells
*Hibiscus rosa-sinensis***	Chinese Hibiscus**
Hibiscus spp.	Mallow; Rose of Sharon**
Hosta plantaginea	Hosta; Plantain lily
Hosta sieboldiana	Hosta
Houttuynia cordata var. *variegata*	
Hydrangea macrophylla	Bigleaf Hydrangea
*Ilex cornuta***	Chinese holly**
Ilex crenata	Japanese holly
Ilex opaca	American holly
Ilex pernyi	Holly
Ilex vomitoria	Yaupon holly
Inula ensifolia	
Iris spp.	Iris
Jasminium nudiflorum	Winter jasmine
Juglans spp.*	Walnut*
Juniperus chinensis	Chinese juniper
Juniperus conferta	Shore juniper
Juniperus davurica	
Juniperus horizontalis	Creeping juniper

(continued)

Scientific name	**Common name**
Justicia brandegeana	Shrimp plant
Lagerstroemia indica	Crape myrtle
Lagerstroemia indica and hybrids	Crape myrtle
Lantana montevidensis	Weeping Lantana
Lavender spp.	Lavender; Munstead
Leontopodium alpinum	Edelweiss
Ligustrum amurense	Amur privet
Ligustrum japonicum	Japanese privet
Ligustrum lucidum	Glossy privet; Wax-leaf
Ligustrum sinense	Chinese privet
Lilium spp.	Lily
Liriope muscari	Liriope
Liriope spicata	Liriope, creeping
Lobelia cardinalis	Cardinal flower; Indian pink
Lonicera japonica	Japanese honeysuckle
Lonicera tatarica	Tatarian honeysuckle
Loropetalum chinense	Loropetalum
Lythrum spp.	Loosestrife
Magnolia spp.**	Magnolia
Maleophora luteola	Ice plant
Malus spp.*	Crabapple*
*Miscanthus sinesis***	Yaku Jima**, Silberfeder**
Nandina domestica	Heavenly bamboo
Narcissus spp.**	Narcissus, Daffodil
Nerium spp.	Oleander
Oenothera missouriensis	Evening primrose
*Olea europaea**	Olive*
*Ophiopogon japonicus***	Mondo grass**
Osmanthus heterophyllus	Osmanthus; False holly
Osteospermum fruticosum	Trailing African daisy
Oxydendron luteum	Sourwood
Paeonia suffruticosa	Tree peony
*Pennisetum setaceum***	Fountain grass**
Perovskia atriplicifolia	
*Persea americana**	Avocado*
Photinia fraseri	Photinia; Redtip
Physostegia virginiana	False dragonhead
Picea spp.**	Spruces (Colorado Blue, Norway, etc.)
Pieris japonica	Japanese andromeda; Lily-of-the-valley shrub
Pinus brutia	Calabrian pine
Pinus canariensis	Canary island pine
Pinus elliottii	Slash pine
Pinus halepensis	Aleppo pine
Pinus nigra	Austrian black pine
Pinus palustris	Longleaf pine
Pinus radiata	Monterey pine
Pinus strobus	Eastern white pine
Pinus sylvestris	Scotch pine

(continued)

Scientific name	Common name
Pinus taeda	Loblolly pine
Pinus thunbergiana	Japanese black pine
Pinus virginiana	Virginia pine
Pistacia spp.*	Pistachio*
Pittosporum rhombifolium	Queensland Pittosporum
Pittosporum tobira	Japanese Pittosporum
Podocarpus macrophyllus	Japanese yew
Prunus laurocerasus	English laurel
Prunus spp.*	Almond, Apricot, Nectarine, Peach, Plum, and Prune*
*Pseudotsuga menziesii***	Douglas fir**
Pyracantha coccinea	Firethorn, scarlet
Pyracantha fortuneana	Firethorn
Pyracantha koidzumii	Firethorn
Pyrus spp.	Pear spp., including 'Bradford'
Quercus rubra	Red oak
Quercus shumardii	Shumard oak
Raphiolepsis indica	Indian hawthorne
Raphiolepsis umbellata	Yedda hawthorne
Rhododendron spp.	Rhododendrons, Azaleas
Rosa banksiae	Lady Banks rose
Rudbeckia spp.	Black-eyed Susan
Rumohra adiantiformis	Leatherleaf Fern
Santolina virens	
Saxifraga spp.	Saxifrage; Purple dome
Scabiosa spp.	Pincushion flower
Sedum spp.	Stonecrop
Spiraea bumalda	Spirea
Syzygium paniculatum	Australian brushcherry; Japanese boxcherry
Taxus cuspidata	Japanese yew
Taxus spp.	Yew
Teucrium spp.	Germander
Thalictrum dipterocarpum	Meadow rue
Thuja occidentalis	American arborvitae
Trachelospermum asiatum	Star jasmine
Tsuga canadensis	Canada hemlock
Tulipa spp.	Tulip
Veronica spp.	Veronica; Speedwell
Viburnum japonicum	Japanese viburnum
Viburnum odoratissimum	Sweet viburnum
Viburnum plicatum	Japanese snowball
Viburnum rigidum	Canary island viburnum
Viburnum japonicum	Japanese viburnum
Viburnum suspensum	Arrowood viburnum
Viburnum tinus	Laurustinus
Viburnum trilobium	Cranberry bush
Viburnum wrightii	Leatherleaf viburnum
Vinca major	Vinca

(continued)

Scientific name	Common name
Vinca minor	Periwinkle
Vitis spp.*	Grape*
Weigela florida	Old fashioned Weigela
Yucca aloifolia	Spanish bayonet
Yucca filamentosa	Yucca; Adam's needle

* Do not use on food producing trees, vines, or plants.
** Not for use on container grown plants.

NEW PLANTINGS, REPLANTING, AND ROTATIONAL PLANTINGS

Nursery, landscape, or non-cropland areas treated with PrimeraOne Prodiamine 65WDG Herbicide should be rotated only to ornamental species listed on this label for 1 year following application unless the following test has shown species safety:

> Before planting a species not listed on this label, it is recommended that several test strips of an indicator plant such as wheat, sorghum, or corn be sown into the treated area. If the indicator plants germinate and grow normally to a height of 12 inches with normal root development, it is safe to plant.

In areas disturbed by new plantings or replanting of labeled species, it may be necessary to retreat exposed soil to maintain satisfactory weed control.

CHEMIGATION INSTRUCTIONS -- OVERHEAD SPRINKLER IRRIGATION APPLICATION

- Apply this product only through an overhead sprinkler irrigation system. Do not apply this product through any other type of irrigation system.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
- To avoid injury to foliage, make sure foliage is sufficiently wet before application or adequate irrigation is applied after application.
- If sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result.
- If sprinkler distribution patterns overlap excessively, injury to leatherleaf ferns and other ornamentals may result.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to public water systems unless pesticide label-prescribed safety devices for public water systems are in place.
- If necessary, a person knowledgeable of the chemigation system and responsible for its operation, or someone under the supervision of the responsible person, shall shut the system down arid make necessary adjustments.

Operation Instructions

1. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water. pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (e g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

8. Prepare a mixture with a minimum of 20 parts of water to 1 part PrimeraOne Prodiamine 65WDG Herbicide and inject this herbicide suspension mixture into the overhead system. Injecting a large volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Before injecting PrimeraOne Prodiamine 65WDG Herbicide in to the system, run the irrigation system long enough to wet the foliage, then inject PrimeraOne Prodiamine 65WDG Herbicide suspension mixture in the pesticide supply tank (see number 8 above) in 1 inch of irrigation water. After the application is complete, continue the irrigation until all residues are washed off the foliage.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store in original container away from feed or foodstuffs and separated from other pesticides.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility.

CONTAINER DISPOSAL:
Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call CHEMTREC (phone: 1-800-424-9300) day or night.

WARRANTY AND LIMITATION OF DAMAGES

CONDITIONS OF SALE: Sipcam Agro USA, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Sipcam Agro USA, Inc.. **SIPCAM AGRO USA, INC. DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SIPCAM AGRO USA, INC. SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SIPCAM AGRO USA, INC.'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. BUYER AND USER ACKNOWLEDGE AND ASSUME ALL RISKS AND LIABILITY RESULTING FROM HANDLING, STORAGE AND USE OF THIS PRODUCT. SIPCAM AGRO USA, INC. DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**

08/05/09

PrimeraOne® Prodiamine 65WDG Herbicide

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 5/26/2015 Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier

Product Form: Mixture

Product Name: PrimeraOne® Prodiamine 65WDG Herbicide

Synonyms: Prodiamine, 65%

Other means of identification: Group 3 Fungicide; EPA Reg. No. 60063-26

1.2. Intended Use of the Product

Use of the substance/mixture: Weed killing compound

1.3. Name, Address, and Telephone of the Responsible Party

Manufacturer

Sipcam Agro USA, Inc.
2525 Meridian Parkway, Suite 350
Durham, NC 27713
T 919-226-1195

1.4. Emergency Telephone Number

Emergency Number : (800) 424-9300 CHEMTREC (transportation and spills)
(800) 900-4044 Poison Control Center (human health)
(800) 345-4735 ASPCA (animal health)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Eye Dam. 1 H318

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS05

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H318 - Causes serious eye damage

Precautionary Statements (GHS-US) : P280 - Wear eye protection, protective gloves
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor

2.3. Other Hazards

No additional information available

2.4. Unknown Acute Toxicity (GHS-US)

8% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification
Prodiamine	CAS No 29091-21-2	65	Not classified
Silica, amorphous	CAS No 7631-86-9	≤1	Skin, Eye, Respiratory

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes.

First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. IF SWALLOWED: Immediately call a POISON CONTROL CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Causes serious eye damage.

Symptoms/Injuries After Inhalation: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/Injuries After Skin Contact: May cause an allergic reaction in sensitive individuals. May cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: May be harmful if swallowed.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Alcohol foam, carbon dioxide, dry chemical, water spray, fog. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other information: Do not allow run-off from fire fighting to enter drains or water courses. De-contaminate equipment or materials involved in pesticide fires.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).

Emergency Procedures: Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do no eat, drink or smoke when using this product.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Products: Strong acids. Strong bases. Strong oxidizers.

Storage Area: Store locked up.

7.3. Specific End Use(s) Weed killing compound

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Silica, amorphous (7631-86-9)		
USA NIOSH	NIOSH REL (TWA) (mg/m³)	6 mg/m3
USA OSHA	OSHA PEL (TWA) (mg/m³)	80 mg/m3/%SiO2

8.2. Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protective Equipment : Protective goggles. Gloves.

Hand Protection : Wear chemically resistant protective gloves.

Eye Protection : Chemical goggles or safety glasses.

Respiratory Protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State : Solid

Appearance : Tan.

Odor : No data available

Odor Threshold : No data available

pH : 8.66

Relative Evaporation Rate (butylacetate=1) : No data available

Melting Point : 252.5-254.5 °C (486.5-490.1 °F)

Freezing Point : No data available

Boiling Point : decomposes @ 240°C

Flash Point : No data available

Auto-ignition Temperature : No data available

Decomposition Temperature : No data available

Flammability (solid, gas) : Not flammable

Vapor Pressure : 0.0033 mPa @25°C

Relative Vapor Density at 20 °C : No data available

Relative Density : No data available

Specific Gravity : 1.47 @25°C

Density : 0.63 g/ml

Solubility : Water: 0.013 ppm @25°C

Log Pow : No data available

Log Kow : No data available

Viscosity, Kinematic : No data available

Viscosity, Dynamic : No data available

Explosive Properties : Not explosive

Oxidizing Properties : No data available

Explosive Limits : Not applicable

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Hazardous reactions will not occur under normal conditions.

10.2 Chemical Stability: Product is stable.

10.3 Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4 Conditions to Avoid: Direct sunlight. Extremely high or low temperatures.

10.5 Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

10.6 Hazardous Decomposition Products: Carbon oxides (CO, CO2). Sulfur oxides. Silicon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity : Not classified

Silica, amorphous: Dusts in high concentrations may cause skin, eye and respiratory tract irritation.

Skin Corrosion/Irritation: Not classified pH: 8.66

Serious Eye Damage/Irritation: Causes serious eye damage. pH: 8.66

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: IARC Group 2B

Silica, amorphous (112926-00-8)	
IARC group	3

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Silica, amorphous: Skin, eye, respiratory tract

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Potential Adverse Human Health Effects and Symptoms: Causes serious eye damage.

Symptoms/Injuries After Inhalation: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/Injuries After Skin Contact: May cause an allergic reaction in sensitive individuals. May cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: May be harmful if swallowed.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Not applicable

12.2. Persistence and Degradability

PrimeraOne® Prodiamine 65WDG Herbicide	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

PrimeraOne® Prodiamine 65WDG Herbicide	
Bioaccumulative Potential	Not established.

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.

Hazard Class : 9

Identification Number : UN3077

Label Codes : 9

Packing Group : III

ERG Number : 171

14.2 In Accordance with IMDG

Proper Shipping Name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class	:	9
Identification Number	:	UN3077
Packing Group	:	III
Label Codes	:	9
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-F

14.3 In Accordance with IATA		
Proper Shipping Name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Packing Group	:	III
Identification Number	:	UN3077
Hazard Class	:	9
Label Codes	:	9
ERG Code (IATA)	:	9L

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

PrimeraOne® Prodiamine 65WDG Herbicide

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact, while mixing or handling the concentrated material, may cause allergic reactions in some individuals.

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2 US State Regulations

Silica, amorphous (112926-00-8)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
H232	May form combustible dust concentrations in air
H318	Causes serious eye damage

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. SDS US (GHS HazCom)

QUALI-PRO®

3-D

Herbicide

FOR USE BY TURF MAINTENANCE PERSONNEL, LANDSCAPING, OR COMMERCIAL APPLICATORS ONLY.

SELECTIVE BROADLEAF WEED CONTROL IN TURFGRASSES INCLUDING USE ON GOLF COURSES AND SOD FARMS. ALSO FOR HIGHWAYS, RIGHTS-OF-WAY, AND OTHER SIMILAR NON-CROP AREAS. TO CONTROL CLOVER, DANDELION, HENBIT, PLANTAINS, WILD ONION, AND MANY OTHER BROADLEAF WEEDS.

CONTAINS 2,4-D, MECOPROP-P, AND DICAMBA; THE ACTIVE INGREDIENTS USED IN TRIPLET® SELECTIVE HERBICIDE. QUALI-PRO 3-D IS NOT MANUFACTURED OR DISTRIBUTED BY NUFARM AMERICAS, INC.

ACTIVE INGREDIENTS:	**% BY WT.**
*Dimethylamine Salt of 2,4-Dichloro-phenoxyacetic acid	30.56%
**Dimethylamine Salt of (+)-R-2-(2-methyl-4-chlorophenoxy) propionic acid ≠	8.17%
***Dimethylamine Salt of Dicamba (3,6-dichloro-o-anisic acid)	2.77%
OTHER INGREDIENTS:	58.50%
TOTAL	100.00%

Contains:
*2.44 lbs. 2,4-Dichlorophenoxyacetic acid per gallon or 25.38%.
**0.65 lbs. (+)-R-2-(2-methyl-4-chlorophenoxy) propionic acid per gallon or 6.75%.
***0.22 lbs. 3,6-dichloro-o-anisic acid per gallon or 2.30%.
≠CONTAINS THE SINGLE ISOMER FORM OF MECOPROP-p.

EPA Reg. No. 66222-225 EPA Est. No. 37507-MT-001

KEEP OUT OF REACH OF CHILDREN

DANGER — PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER - PELIGRO

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get into eyes, on skin, or on clothing.

For additional first aid, precautionary, handling, and use statements, see inside of this booklet.

Manufactured for:
Makhteshim Agan of North America, Inc.
4515 Falls of Neuse Rd., Suite 300
Raleigh, NC 27609

EPA 102510/Rev A

FIRST AID	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prosar at 1-877-250-9291 for emergency medical treatment information. **NOTE TO PHYSICIAN:** If in eyes, specialized ophthalmologic attention may be necessary. If swallowed, probable mucosal damage may contraindicate the use of gastric lavage. There is no specific antidote; treat symptomatically.	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are barrier laminate, nitrile rubber, neoprene rubber, or Viton. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

All mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Goggles or face shield
- Chemical-resistant gloves, except for applicators using ground boom equipment
- Chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

For containers over 1 gallon and less than 5 gallons in capacity: Persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron.

For containers of 5 gallons or more in capacity: A mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a nonrefillable pesticide container are emptied, the probe must be rinsed before removal.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets or exceeds the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic invertebrates and may adversely affect nontarget plants. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C, (W.D. WA). For further information, please refer to EPA web site http://www.epa.gov/espp.

Groundwater Contamination: Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPP have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D and MCPP pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to

contain spills will help prevent groundwater contamination.

Cleaning of Equipment: When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources.

Do not apply when weather conditions favor drift away from target area.

Do not contaminate domestic or irrigation waters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water is:
- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.
For turf use, the maximum number of broadcast applications per treatment site is 2 per year.
Do not enter or allow people or pets to enter the treated area until sprays have dried.

PRECAUTIONS AND RESTRICTIONS

Do not enter or allow people or pets to enter the treated area until sprays have dried.

Do not use this product on or near desirable plants including within the drip line of the roots of desirable trees and shrubs, since injury may result. Do not apply directly to or near water, storm drains, gutters, sewers, or drainage ditches. Do not apply within 25 feet of rivers, fish ponds, lakes, streams, reservoirs, marshes, estuaries, bays, and oceans. Do not apply when windy. To prevent product runoff, do not overwater the treated area(s) or apply when raining or when rain is expected that day. Rinse applicator over lawn area only.

Avoid broadcast and small spot treatment applications when temperatures exceed 90°F, as turf injury may occur.

Avoid applying during excessively dry or hot periods unless irrigation is used. For optimum results, turf should not be mowed for 1 to 2 days before and after application, do not apply if rain is expected within 4 hours after the application, and delay irrigation cycle for 24 hours. Reseed no sooner than 3 to 4 weeks after application of this product. Failure to observe all precautions may result in injury to turf and/or susceptible plants.

Avoid mist to vegetables, flowers, ornamentals, shrubs, trees, and other desirable plants. Do not pour spray solutions near these plants.

Chemigation Statement: Do not apply this product through any type of irrigation equipment.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, airblast) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Boom Height
For ground boom applications, do not apply with a nozzle height greater than 4 feet above the crop canopy.

Droplet Size
When applying sprays that contain 2,4-D as the sole active ingredient or when applying sprays that contain 2,4-D mixed with active ingredients that require a coarse or coarser spray, apply only as a coarse or coarser spray (ASAE Standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles. When applying sprays that contain 2,4-D mixed with other active ingredients that require a medium or more fine spray, apply only as a medium or coarser spray (ASAE Standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed
Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas including but not limited to residential areas, bodies of water,

known habitat for nontarget species, nontarget crops within 250 feet downwind. If applying a medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Temperature Inversions
If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Susceptible Plants
Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use, or consumption. Susceptible crops include but are not limited to cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements
Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment
All application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

ADJUVANT USE: When an adjuvant is to be used with this product, Makhteshim Agan of North America, Inc. suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

DRIFT CONTROL AND DEFOAMING: For drift control and defoaming, use a product similar to Compadre® at .125% v/v.

FERTILIZER USE: This product can be mixed with some liquid fertilizers or liquid iron metals. Because liquid fertilizer and liquid iron differ in pH, free ammonia content, density, salt concentration, and percentage of water, a compatibility test is recommended prior to mixing in application equipment. All state and/or federal regulations relating to the application of liquid fertilizers or liquid iron and this product must be strictly followed.

WEEDS CONTROLLED BY QUALI-PRO 3-D

Bedstraw	Henbit	Purslane
Black Medic	Knotweed	Ragweed
Buckhorn	Lambsquarters	Sheep Sorrel
Burdock	Lespedeza	Shepherdspurse
Chicory	Mallow	Speedwell
Chickweed	Morningglory	Spurge
Clover	Peppergrass	Wild Carrot
Dandelion	Pigweed	Wild Garlic
Dock	Plantain	Wild Lettuce
Ground Ivy	Poison Ivy	Wild Onion
Heal-All	Poison Oak	Yarrow

USE SITES
SOD FARMS

Quali-Pro 3-D is intended for use on sod farms. Quali-Pro 3-D provides selective, broadleaf control in warm-season and cool-season turfgrass established for commercial sod production. For application information on sod farms, refer to the tables found in the section of the labeling entitled **ORNAMENTAL AND RECREATIONAL LAWNS AND TURF** for allowable use sites, rates, and comments, but follow the section of the labeling entitled **Use Precautions and Limitations for Sod Farms** in the paragraph below.

Application Schedules for Sod Farms
Apply Quali-Pro 3-D to broadleaf weeds that are actively growing. Follow-up applications may be required for dense infestations of perennial and biennial weeds. Do not apply this product to "Floratam" St. Augustinegrass.

Newly Seeded Areas
The application of Quali-Pro 3-D to grass seedlings is suggested after the second mowing.

Newly Sodded, Sprigged, or Plugged Areas
The application of Quali-Pro 3-D to newly sodded, sprigged, or plugged grasses should be delayed until 3 to 4 weeks after the sodding, sprigging, or plugging operations. Also, applications to dormant bermudagrass, dormant zoysiagrass, and dormant bahiagrass are suggested.

Use Precautions and Limitations for Sod Farms
1. Delay mowing 1 to 2 days before and after the application of this product.
2. Do not apply this product immediately before rainfall or irrigation. Do not irrigate or water the turfgrass within 24 hours after application.
3. Treated areas may be reseeded 3 to 4 weeks after application.
4. Application is limited to 2 applications per year.
5. Do not exceed a maximum of 4.0 pints Quali-Pro 3-D (1.2 lbs ae 2,4-D/acre) per application.
6. Observe a minimum of 30 days between applications.

ORNAMENTAL AND RECREATIONAL LAWNS AND TURF

Quali-Pro 3-D is for use on Ornamental Turf Lawns (Residential, Industrial, and Institutional), Parks, Cemeteries, Athletic Fields, and Golf Courses (Fairways, Aprons, Tees, and Roughs), and similar turf areas. Institutional sites are defined as turf areas around properties or facilities providing a service to public or private organizations including but not limited to hospitals, nursing homes, schools, museums, libraries, sports facilities, golf courses, and office buildings. Ornamental sites include turfgrass established around residences, parks, streets, retail outlets, cemeteries, industrial and institutional buildings. Residential/domestic sites are defined as areas associated with the household or home life including but not limited to apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, hospitals, or convalescent homes.

An adjuvant may be included in the spray solution.

Application is limited to 2 applications per year.

Use a maximum of 4.0 pts Quali-Pro 3-D/acre (1.2 lbs ae 2,4-D/acre) per application.

The maximum seasonal rate is 8.0 pts Quali-Pro 3-D/acre (2.4 lbs ae 2,4-D/acre) excluding spot treatments.

USE SITE	RATES	COMMENTS
Cool-Season Grasses such as Bentgrass Bluegrass Fescue Rye	3 to 4 pints per acre (1.1 to 1.5 fl oz/1000 sq ft) (.9 to 1.2 lb ae/acre)	For normal application, use 40 to 80 gallons of water per acre (1 to 2 gallons of water per 1000 sq ft). For professional lawn maintenance, use 1 to 5 gallons of water per 1000 sq ft. Higher water volumes may be used when tank mixed with a turf fertilizer. Follow fertilizer labels for proper amounts to add.
Warm-Season Grasses such as St. Augustine (dormant) Bahia Bermuda Centipede (dormant) Zoysia	2 to 2.5 pints per acre (0.75 to 0.9 fl oz/1000 sq ft) (.6 to .8 lb ae/acre)	Use 40 to 200 gallons of water per acre (1 to 5 gallons of water per 1000 sq ft). Use reduced rates if grass is stressed from heat or drought. Exercise care when applying during growth stages from dormancy to green-up and from green-up to dormancy. Some temporary discoloration may occur on warm-season grasses. NOTE: If Bermudagrass is dormant, up to 4 pints per acre may be used (1.5 fl oz/1000 sq ft). However, some hybrid Bermudagrasses may be sensitive to this product. Contact your local Extension Service Weed Control Specialist.

NOTE: Care should be taken to avoid overdosing Bentgrass, St. Augustine, and Centipede grasses, or injury may result. Large volumes of spray water (i.e., one fluid ounce in 5 gallons of water per 1500 square feet) will aid in obtaining uniform coverage. If hand-type sprayers are used, it is preferable to use a single nozzle sprayer rather than a multiple nozzle boom as sideways application with a boom where the spray from more than one nozzle is allowed to fall on the same area will result in heavy local over-application and subsequent turf discoloration or injury.

Lower Volume Equipment: Use as little as 5 gallons of water per acre. Use only application equipment that is capable of spreading a uniform droplet wetting each weed surface.

NON-TURF AREAS

Roadsides (including aprons and guardrails), rights-of-way, and other similar non-crop areas: For control of broadleaf weeds, mix at a rate of 2.6 to 6.5 pints (.8 to 2.0 lb ae 2,4-D) of Quali-Pro 3-D per 50 to 300 gallons of water. This mixture will cover 43,500 square feet. Thoroughly saturate all weeds with spray mixture. Apply any time between the time when plants come into full leaf (spring) to when the plants begin to go dormant. Best results are obtained when weeds are young and actively growing. Do not cut weeds until herbicide has translocated throughout the plant causing root death. For small broadleaf weeds, use the lower rate. Heavy dense stands require the higher rate with high water volume. For small (spot) applications with small tank sprayers, apply at the rate of 4 ounces of Quali-Pro 3-D per gallon of water and spray to thoroughly wet all foliage. **Postemergence (annual and perennial weeds) applications:** Application is limited to 2 applications per year. Use a maximum of 2.0 lbs ae 2,4-D or 6.5 pints of Quali-Pro 3-D per acre per application. Wait a minimum of 30 days between applications.

For control of woody plants, apply to both stems and foliage any time from the time foliage is completely matured until the time plants start to go dormant. All leaves, stems, and suckers must be completely wet to the ground line for effective control. Regrowth may be anticipated on the more resistant species. Add 6.0 to 13.0 pints of Quali-Pro 3-D to 100 gallons of water applying 200 to 600 gallons of spray mixture per 43,500 square feet depending upon the height and thickness of the brush. Mix thoroughly before spraying. **Postemergence applications (woody plants):** Limited to 1 application per year. Use a maximum of 13.0 pints Quali-Pro 3-D (4.0 lbs ae 2,4-D) per acre per year. Applications to noncropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use or for commercial seed production or for research purposes.

Use Precautions: Do not apply this product to St. Augustinegrass unless it is in the dormant stage. Care should be taken to avoid overdosing bentgrass, as injury may result. Some hybrid bermudagrass may be sensitive to this product. Contact your local Extension Service Weed Control Specialist for sensitive grasses in your area. Large volumes of spray water (i.e., one fluid ounce in 5 gallons water per 1500 square feet) will aid in obtaining uniform coverage. If hand-type sprayers are used, it is preferable to use a single nozzle sprayer rather than a multiple nozzle boom as sideways application with a boom where the spray from more than one nozzle is allowed to fall on the same area will result in heavy local over-application and subsequent turf discoloration or injury.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: KEEP FROM FREEZING. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength. Personnel should use clothing and equipment consistent with good pesticide handling. Do not store under conditions which might adversely affect the container or its ability to function properly.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

Nonrefillable Container (five gallons or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Nonrefillable Container (greater than five gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS**, **DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Makhteshim Agan of North America, Inc. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Makhteshim Agan of North America, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Makhteshim Agan of North America, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Makhteshim Agan of North America, Inc.'s election, the replacement of product.

Safety Data Sheet

Issue Date: 11-Nov-2010 **Revision Date:** 06-Apr-2015 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name **Quali-Pro 3-D**

Other means of identification

SDS # ADAMA-136

Registration Number(s) Reg. No. 66222-225

UN/ID No UN3082

Recommended use of the chemical and restrictions on use

Recommended Use EPA registered insecticide.

Details of the supplier of the safety data sheet

Manufacturer Address

Makhteshim Agan of North America, Inc. (d/b/a ADAMA)
3120 Highwoods Blvd., Suite 100
Raleigh, NC 27604

Emergency Telephone Number

Company Phone Number 1-919-256-9300

Emergency Telephone (24 hr) For fire, spill and/or leak contact INFOTRAC:
1-800-535-5053 (North America) 1-352-323-3500 (International)
For medical emergencies and health/safety inquiries, contact PROSAR:
1-877-250-9291

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

Appearance Clear amber liquid **Physical State** Liquid **Odor** Typical phenoxy herbicide odor

Classification

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2

Signal Word

Danger

Hazard Statements
Harmful if swallowed
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
Suspected of causing cancer

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Do not induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
2,4-D Amine	2008-39-1	29.64-31.48
Mecoprop-p, DMA Salt	32351-70-5	7.76-8.58
(R)-2-(4-Chloro-2-methylphenoxy)propionic acid	16484-77-8	5-10
Dimethylamine	124-40-3	3.90-4.31

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact In case of contact, wash skin thoroughly with soap and water. Remove any contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek medical attention for further treatment.

Ingestion Do not induce vomiting, unless directed by medical personnel. Get immediate medical attention. If conscious, give 1 glass of water to dilute. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Symptoms Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide (CO2). Dry chemical. Water spray (fog). Foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Not determined.

Hazardous Combustion Products Oxides of nitrogen. Ammonia. Chlorine compounds. Other unidentified toxic and/or irritating compounds. Hydrogen chloride. Carbon monoxide. Asphyxiants.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. Dike far ahead of spill; use dry sand to contain the flow of material.

Methods for Clean-Up Collect and reuse if possible. Absorb with inert material and then place in suitable container for chemical waste. Wash down area and collect water for disposal. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Follow all product label instructions. Use only as directed. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store at ambient conditions. Do not contaminate water, food, or feed by storage or disposal. Store locked up. Keep/store only in original container. Keep from freezing. Protect container from physical damage. Store in accordance with all state, local, and federal regulations.

Packaging Materials Do not reuse container.

Incompatible Materials Strong oxidizing agents. Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Dimethylamine 124-40-3	STEL: 15 ppm TWA: 5 ppm	TWA: 10 ppm TWA: 18 mg/m^3 (vacated) TWA: 10 ppm (vacated) TWA: 18 mg/m^3	IDLH: 500 ppm TWA: 10 ppm TWA: 18 mg/m^3

Appropriate engineering controls

Engineering Controls THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS OF END USE PRODUCTS CONTAINING THIS MATERIAL, CONSULT THE SDS OR PRODUCT LABEL FOR THE END USE PRODUCT.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Use splash goggles or face shield when contact may occur.

Skin and Body Protection Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Clear amber liquid	**Odor**	Typical phenoxy herbicide odor
Color	Clear amber	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	8.5-9.0 (neat)	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	100 °C / 212 °F	
Flash Point	Does not flash	
Evaporation Rate	Lower than butyl acetate	(butyl acetate = 1)
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	None established	
Lower Flammability Limit	None established	
Vapor Pressure	0.021 mmHg	
Vapor Density	Not determined	
Specific Gravity	Not determined	
Water Solubility	Miscible in water	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Density	1.13 g/mL	
Bulk Density	9.42 lb/gal	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions. However, may decompose if heated.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Material is not known to polymerize.

Conditions to Avoid
See Sec. 7 Handling & Storage.

Incompatible Materials
Strong oxidizing agents. Acids.

Hazardous Decomposition Products
Nitrogen oxides (NOx). Ammonia. Chlorine compounds. Other potentially hazardous fumes. Hydrogen chloride. Incomplete combustion may produce monoxide and other asphyxiates.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye damage.

Skin Contact Causes skin irritation.

Inhalation Avoid breathing vapors or mists.

Ingestion Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,4-D Amine 2008-39-1	= 625 mg/kg (Rat)	= 2115 mg/kg (Rabbit)	-
(R)-2-(4-Chloro-2-methylphenoxy)propionic acid 16484-77-8	= 1050 mg/kg (Rat)	> 4 g/kg (Rat)	-
Dimethylamine 124-40-3	= 698 mg/kg (Rat)	= 3900 mg/kg (Rat)	= 4540 ppm (Rat) 6 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity Suspected of causing cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
(R)-2-(4-Chloro-2-methylphenoxy)propionic acid 16484-77-8		Group 2B		X

Legend
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects. This product is toxic to fish and aquatic invertebrates and may adversely affect non-target plants. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Dimethylamine 124-40-3	9: 96 h Pseudokirchneriella subcapitata mg/L EC50	111 - 125: 96 h Oncorhynchus mykiss mg/L LC50 120: 96 h Oncorhynchus mykiss mg/L LC50 static 210: 96 h Poecilia reticulata mg/L LC50 static 127 - 349: 96 h Poecilia reticulata mg/L LC50 semi-static 396: 96 h Brachydanio rerio mg/L LC50 static	EC50 = 26.8 mg/L 15 min	88.7: 48 h Daphnia magna Straus mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Dimethylamine 124-40-3	-0.274

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
2,4-D Amine 2008-39-1	U240			U240
Dimethylamine 124-40-3				U092

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Dimethylamine 124-40-3	Toxic Ignitable

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Package size <35 gallons is not regulated by D.O.T. ground
- **UN/ID No** UN3082
- **Proper Shipping Name** Environmentally Hazardous Substance, Liquid, N.O.S. (2,4-dichlorophenoxyacetic acid)
- **Hazard Class** 9
- **Packing Group** III

IATA Not regulated

IMDG
- **Marine Pollutant** This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,4-D Amine				Present			X		X	X
Mecoprop-p, DMA Salt				Present			X			
(R)-2-(4-Chloro-2-methylphenoxy)propionic acid				Present						
Dimethylamine	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

AICS *- Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
2,4-D Amine 2008-39-1	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ
Dimethylamine 124-40-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Dimethylamine - 124-40-3	124-40-3	3.90-4.31	1.0

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Dimethylamine	1000 lb			X

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Dimethylamine 124-40-3	X	X	X

EPA Pesticide Registration Number Reg. No. 66222-225

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Signal Word: Danger

Corrosive. Causes irreversible eye damage. Do not get in eyes or on skin or clothing. Harmful if swallowed.

Difference between SDS and EPA pesticide label

	EPA	OSHA
Signal Word	Danger	Danger
Acute toxicity - Oral	Harmful if swallowed	Harmful if swallowed
Skin corrosion/irritation	N/A	Causes skin irritation
Serious eye damage/eye irritation	Causes irreversible eye damage	Causes serious eye damage
Skin sensitization	N/A	May cause an allergic skin reaction

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	3	0	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	3	0	0	H

Issue Date: 11-Nov-2010
Revision Date: 06-Apr-2015
Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

QUALI-PRO®

QUINCLORAC 75 DF

HERBICIDE

ACTIVE INGREDIENTS:	% BY WT.
Quinclorac: 3,7-dichloro-8-quinolinecarboxylic acid	75.0%
OTHER INGREDIENTS:	25.0%
TOTAL:	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

For additional precautionary, handling, and use statements, see inside of this booklet.

Si usted no entiende la estiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Reg. No: 66222-160
EPA Est. No.: 37429-GA-001[BT;]
EPA Est. No.: 37429-GA-002[BO]
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

CONTENTS: 1 POUND

0 72693 36208 6

13639 EPA101909/REV A

ADAMA

Manufactured for:
Control Solutions Inc.
A member of Adama
Consumer and Professional Solutions
5903 Genoa-Red Bluff, Pasadena, TX 77507

QUALI-PRO®

QUINCLORAC 75 DF

HERBICIDE

ACTIVE INGREDIENTS:	% BY WT.
Quinclorac: 3,7-dichloro-8-quinolinecarboxylic acid	75.0%
OTHER INGREDIENTS:	25.0%
TOTAL:	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

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ADAMA

Manufactured for:
Control Solutions Inc.
A member of Adama
Consumer and Professional Solutions
5903 Genoa-Red Bluff, Pasadena, TX 77507

FIRST AID	
IF SWALLOWED:	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye. Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prosar at 1-877-250-9291 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as butyl rubber ≥ 14 mils, natural rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS: When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, and water is:

- Coveralls
- Chemical-resistant gloves such as butyl rubber ≥ 14 mils, natural rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow others to enter until sprays have dried.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees. Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the aerial drift reduction advisory information presented below.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see **Wind, Temperature and Humidity,** and **Temperature Inversion** sections of this label).

Controlling Droplet Size

- **Volume-**Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. Apply Quali-Pro Quinclorac 75 DF in 3-10 gallons of spray volume per acre.
- **Pressure-**Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE HIGHER FLOW RATE NOZZLES INSTEAD OF INCREASING PRESSURE. Use a maximum of 40 psi (measured at the boom, not at the pump or in the line).
- **Number of Nozzles-**Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation-**Orienting nozzles so that the spray is released backward (the downward angle of the nozzles on fixed wing aircraft should not be greater than 20°) or parallel to the airstream on helicopters will produce larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type**-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Some nozzle examples are CP Lund or flat fans with angles of 25°-65°. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types. If using nozzle screens, do not use screens finer than the 50-mesh size as nozzle plugging is possible.
- **Boom Length**-For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height**-Applications may not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment
When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).
Wind
Drift potential is lowest between wind speeds of 2-10 mph; however, many factors including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. Do not apply Quali-Pro Quinclorac 75 DF when wind is blowing more than 8 mph. **Note**: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.
Temperature and Humidity
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when wind conditions are both hot and dry.
Temperature Inversions
Applications may not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
Sensitive Areas
This pesticide may only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

TURFGRASS

Used as a postemergence spray, Quali-Pro Quinclorac 75 DF controls many broadleaf and grass weeds in turfgrasses growing in sites including, but not limited to grounds or lawns around residential and commercial establishments, multi-family dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, and sod farms (except Arizona).

The weed foliage and roots absorb Quali-Pro Quinclorac 75 DF and translocate it throughout the weed. Treated weeds will show signs of leaf and stem curling or twisting, stunting, change color from green to white (chlorosis), finally to red, and become necrotic before finally dying. Refer to the tables below for information on **WEEDS CONTROLLED** and **TOLERANT TURFGRASS SPECIES**.

Restrictions and Limitations

- **DO NOT** apply more than 2 pounds of Quali-Pro Quinclorac 75 DF per acre per year (equivalent to 0.73 oz per 1000 sq ft per year or 1.5 lbs ai per acre per year).
- **DO NOT** apply to golf course collars or greens.
- **DO NOT** make applications of Quali-Pro Quinclorac 75 DF to turfgrass under stress from drought. Optimum results are obtained if weeds are not under stress from lack of water, excessive water, low fertility, mowing shock, excessive hot or cold temperatures, or injury from other herbicide applications.
- **DO NOT** apply to fine fescue unless it is part of a seed blend.
- **DO NOT** apply to Bahiagrass, carpetgrass, St. Augustinegrass, Centipedegrass, dichondra, or lawns or turf where desirable clovers are present.
- **DO NOT** apply within 4 weeks after seedling emergence of Kentucky bluegrass, creeping bentgrass, fine fescue blends, and perennial ryegrass.
- **DO NOT** apply to exposed feeder roots of trees or ornamentals. Be particularly careful within the drip line of trees and other ornamental species.
- **DO NOT** apply into any ornamental bed.
- **DO NOT** use clippings as mulch or compost around flowers, ornamentals, trees, or in vegetable gardens.
- **DO NOT** plant eggplant or tobacco within 12 months on fields treated with Quali-Pro Quinclorac 75 DF.
- **DO NOT** plant tomatoes or carrots within 24 months on fields treated with Quali-Pro Quinclorac 75 DF.
- **DO NOT** apply when conditions favor drift from target area. Apply when wind speed is less than 10 mph as drift may cause damage or death of nontarget area vegetation.
- Use a lawn-type sprayer with coarse spray to reduce drift from wind.
- Avoid spray mist from contacting vegetables, flowers, ornamentals, shrubs, trees, and other desirable plants, especially plants belonging to the *Solanaceae* family (tomatoes, eggplant, and bell peppers). **DO NOT** pour spray solutions near these plants.

- **DO NOT** use to formulate or reformulate any other pesticide product which is not registered by EPA.
- **DO NOT** apply by air or through any type of irrigation equipment.

APPLICATION INFORMATION

Use broadcast or spot sprays to apply Quali-Pro Quinclorac 75 DF postemergence to actively growing weeds. The use rates and tolerant turfgrasses are listed in the tables below. **DO NOT** apply more than the labeled rates. Follow all use restrictions listed above under **Restrictions and Limitations**.

Mowing: DO NOT MOW 2 DAYS BEFORE OR AFTER APPLYING QUALI-PRO QUINCLORAC 75 DF. This practice will maximize weed control and minimize potential turf injury. **Leave clippings from the first three mowings on the treated area.**

Irrigation and Rainfall: If soil is dry before a Quali-Pro Quinclorac 75 DF application, irrigation of the turfgrass may improve weed control. For best results, **DO NOT** water or irrigate for 24 hours after a Quali-Pro Quinclorac 75 DF application. Irrigate the treated turfgrass with at least ½ inch of water 2 to 7 days after application if no rainfall is received within that period.

TOLERANT TURFGRASS SPECIES (ESTABLISHED)

Highly Tolerant	Moderately Tolerant	Susceptible
Bermudagrass, Common*	Bentgrass, Creeping*	Bahiagrass
Bluegrass, Annual	Bermudagrass, Hybrid*	Bentgrass, Colonial
Bluegrass, Kentucky	Bluegrass, Rough (*Poa trivialis*)	Bentgrass, Seaside
Buffalograss	Fescue, Chewing's	Centipedegrass
Fescue, Tall	Fescue, Fine**	Dichondra
Ryegrass, Annual	Fescue, Hard	St. Augustinegrass
Ryegrass, Perennial	Fescue, Red	
Zoysiagrass	Paspalum, Seashore	

*** To reduce yellowing on these species, add chelated iron or sprayable soluble nitrogen fertilizers (refer to the ADJUVANTS section below).**

**** Apply Quali-Pro Quinclorac 75 DF herbicide to fine fescue only when it is part of a blend. DO NOT use on golf course greens and collars. See additional information for fine fescue in blends under the section on SEEDING, OVERSEEDING, AND SPRIGGING.**

ADJUVANTS

To achieve consistent weed control, include an adjuvant in the spray solution with Quali-Pro Quinclorac 75 DF. Applied in combination with Quali-Pro Quinclorac 75 DF, adjuvants may cause slight turfgrass leaf burn; however, new growth will resume, and turf vigor is not reduced. To prevent leaf burn and turfgrass damage, do not apply Quali-Pro Quinclorac 75 DF when relative humidity and temperatures are high. Keep the mowing heights higher to avoid turf stress and the possibility of turf injury. Some turfgrass species will be less affected by leaf burn or yellowing if a chelated iron or sprayable soluble nitrogen fertilizer is added to the Quali-Pro Quinclorac 75 DF tank solution.

The preferred adjuvant is methylated seed oil (MSO). DyneAmic®, Lesco Spreader Sticker®, LI-700®, Surf King® Spreader, Target Pro® Spreader, or Thoroughbred® may also be used, but under some environmental conditions, phytotoxicity or less than optimal efficacy may be observed. When an adjuvant is to be used with this product, ADAMA, Inc. suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

Before selecting a methylated seed oil to use with Quali-Pro Quinclorac 75 DF, be sure that the MSO:

- is nonphytotoxic
- contains only EPA-exempt ingredients
- provides good mixing quality in the **Compatibility Test for Tank Mixtures** (below)
- has been successful under local experience
- contains emulsifiers to provide good mixing quality

DO NOT include additives when tank mixing with emulsifiable concentrate (EC) products as this may cause phytotoxicity. Consult your local Makhteshim Agan of North America, Inc. representative or distributor for instructions for your area.

TURFGRASS TANK MIXES WITH QUALI-PRO QUINCLORAC 75 DF

Before using other products in combination with Quali-Pro Quinclorac 75 DF, read and follow the **Restrictions and Limitations** and **Directions for Use** on all products' labels. Follow the most restrictive label. Consult tolerant turfgrass species on all labels. Do not tank mix with Quali-Pro Quinclorac 75 DF if all target weeds are not at the correct growth stage for treatment at the same time—in that case, make separate applications of the herbicides.

The spectrum of control of broadleaf weed species can be increased with Quali-Pro Quinclorac 75 DF in a tank mix with 2,4-D, triclopyr, MCPA, MCPP, Three Way®, Trimec®, or other broadleaf herbicides.

Extended residual control of annual grasses is achieved with Quali-Pro Quinclorac 75 DF in a tank mix with pendimethalin or PRE-M® herbicides.

Applications of Quali-Pro Quinclorac 75 DF in a tank mix with Basagran® SG, Basagran T/O, Lescogran® herbicides, Image® 70 DG herbicide, or MSMA can control sedge.

Some grassy weeds such as Bahiagrass or kikuyugrass are controlled by Quali-Pro Quinclorac 75 DF and MSMA tank mixes.

Quali-Pro Quinclorac 75 DF tank mixes with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers (except where noted above) have the potential for physical incompatibility, reduced weed control, or turf injury.

Before preparing a tank mix of Quali-Pro Quinclorac 75 DF with another product, perform the test **Compatibility Test for Tank Mixtures**.

SEEDING, OVERSEEDING, AND SPRIGGING

Quali-Pro Quinclorac 75 DF will not significantly interfere with turfgrass seed germination and growth of those grass types identified as tolerant or moderately tolerant in the **WEEDS CONTROLLED** table if applied before or after seeding or overseeding a turf area.

Because different bermudagrass seeds may have different germination characteristics, check the germination vigor of your seeded hybrid bermudagrass before using Quali-Pro Quinclorac 75 DF before, at seeding, and 7 days after seeding.

Additional information on the timing of Quali-Pro Quinclorac 75 DF applications in seeding, overseeding, or sprigging situations is found in the table below.

SEEDING, OVERSEEDING, AND SPRIGGING TIMING CHART[1] (SEE FOOTNOTE 1)					
TURFGRASS VARIETY	**Before Seeding[2]**	**At Seeding**	**7 Days After Emergence**	**14 Days After Emergence**	**28 Days After Emergence**
Annual Bluegrass	√	√	√	√	√
Annual Ryegrass	√	√	√	√	√
Buffalograss	√	√	√	√	√
Common Bermudagrass[3] (for sprigging see footnote 3)	√	√	√	√	√
Creeping Bentgrass	√	NO	NO	NO	√
Fine Fescue (in blend)	√	NO	NO	NO	√
Hybrid Bermudagrass[3] (for sprigging see footnote 3)	√	√	√	√	√
Kentucky Bluegrass	√	NO	NO	NO	√
Perennial Ryegrass	√	√	NO	NO	√
Seashore Paspalum[3,4] (for sprigging see footnote 3)	NO	NO	NO	√	√
Tall Fescue	√	√	√	√	√
Zoysiagrass[3] (for sprigging see footnote 3)	√	√	√	√	√

[1] Note: √ = acceptable timing for Quali-Pro Quinclorac 75 DF applications. Time applications around the seeding operations using the above table as a reference point. Do not use an adjuvant or additive when Quali-Pro Quinclorac 75 DF herbicide applications are made on newly emerged turf seedlings until 28 days after emergence (except in the case of seashore paspalum). Apply Quali-Pro Quinclorac 75 DF at an application rate of 0.367 oz/1000 sq ft to all turfgrass species listed in this table except for seashore paspalum.

[2] Apply Quali-Pro Quinclorac 75 DF seven days or more before seeding.

[3] Use Quali-Pro Quinclorac 75 DF at any time prior to, at, or after sprigging as indicated by turfgrass species in this table.

[4] Make applications of 0.18 oz to 0.367 oz Quali-Pro Quinclorac 75 DF per 1000 sq ft at the times indicated in this table.

DIRECTIONS FOR MIXING QUALI-PRO QUINCLORAC 75 DF

Follow the directions below to mix Quali-Pro Quinclorac 75 DF either alone or with tank mix partners. Directions are provided for ground application equipment and for backpack sprayers.

Before mixing Quali-Pro Quinclorac 75 DF with other products, conduct a compatibility test to determine if the spray solution is stable. Follow the directions in the section **Compatibility Test for Tank Mixtures** below.

If tank mixing with products in water-soluble pouches, allow pouches to dissolve before agitation.

Ground Driven Sprayer:

1. Use only spray tanks that have been cleaned prior to use.
2. Add ½ to ¾ the amount of required water to the spray tank.

3A. **For Quali-Pro Quinclorac 75 DF alone:**

- Make a premix (1 part Quali-Pro Quinclorac 75 DF + 2 parts water) or slowly add Quali-Pro Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

3B. **For Quali-Pro Quinclorac 75 DF and Wettable Powder Formulations (WP):**

- Slowly add the required amount of Quali-Pro Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Make a slurry of the WP (1 part WP + 2 parts water); then add to the spray tank and agitate.
- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

3C. **For Quali-Pro Quinclorac 75 DF and Flowable Formulations (F):**

- Slowly add the required amount of Quali-Pro Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Make a slurry of the F formulation (1 part F + 2 parts water); then add to the spray tank and agitate.

- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

3D. **For Quali-Pro Quinclorac 75 DF and Emulsifiable Concentrate Formulations (EC):**

- Slowly add the required amount of Quali-Pro Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Make a premix of the EC (1 part EC + 2 parts water); then add to the spray tank and agitate.
- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

3E. **For Quali-Pro Quinclorac 75 DF and Dry Flowable (Water Dispersible Granule) Formulations (WDG):**

- Slowly add the required amount of Quali-Pro Quinclorac 75 DF to the partially filled tank.
- Begin agitation until completely dispersed.
- Make a premix of the WDG (1 part WDG + 2 parts water); then add to the spray tank and agitate.
- Add the remaining amount of water to the tank and agitate to ensure a uniform distribution.
- Continue agitation until spraying is completed. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

Backpack Sprayer:

1. Use only spray tanks that have been cleaned from previous uses.
2. Add ½ the amount of required water to the spray tank.
3. Add the required amount of Quali-Pro Quinclorac 75 DF to the partially filled tank.
4. Replace the cap and agitate to completely mix the contents.
5. **Liquid Fertilizers:** add the desired amount of fertilizer product.
6. Remove the cap and add the remaining amount of water to the tank. Replace the cap and agitate to ensure a uniform distribution.

7. During the spray operation, re-agitate the mixture occasionally to ensure that the product does not settle out. If the spray solution is allowed to settle, re-agitate thoroughly to resuspend the mixture and then continue spray operations.

Liquid Fertilizers: When mixing with liquid fertilizers, perform a simple jar test with small quantities of tank mix components to ensure compatibility. Add the required amount of Quali-Pro Quinclorac 75 DF to a half-filled tank while agitating and then add the fertilizer product. Complete filling spray tank to desired level.

Compatibility Test for Tank Mixtures

Carry out this test using a one-quart jar. Add the ingredients in the order listed below. Calculate the amount to add to a one-quart jar using the following guidelines:

- For dry products applied at 1 lb per acre, add 2 teaspoons to a one-quart jar.
- For liquid products applied at 1 pint per acre, add 1 teaspoon to a one-quart jar.

1. **Water:** For a spray volume of 20 gallons per acre, add 3.3 cups (800 mL) of water. Adjust the volume accordingly if other spray volumes are planned. Use water from the intended source at the source temperature.
2. **Water-soluble packages:** Slit one of the bags just wide enough for a teaspoon to remove the sample. If compatible, use the opened bag first when preparing a tank mix solution. Boron-containing fertilizers can be incompatible with water-soluble bags. Include water-soluble bags if a boron fertilizer is intended to be used. Cap the jar and invert 10 times.
3. **Water-Dispersible (WG) products** (such as dry flowables (DF) including Quali-Pro Quinclorac 75 DF, wettable powders (WP), suspension concentrates (SC), or suspoemulsions): Cap the jar and invert 10 times.
4. **Water-soluble products** (such as Basagran® T/O herbicide): Cap the jar and invert 10 times.
5. **Emulsifiable concentrates or methylated seed oil:** Cap the jar and invert 10 times.
6. **Water-soluble additives:** Cap the jar and invert 10 times.

Let the test mixture stand for 15 minutes and then evaluate for uniformity and stability. If the mixture in the jar forms crystals, flakes, sludge, gels, oily films, or layers, the components are NOT compatible. WG or WP products may result in a fine precipitate that is easily resuspended which is normal; however, if large non-dispersible particles (>300 microns) precipitate on standing, this indicates that the tank mix is not compatible. **DO NOT** use any spray solution that could clog spray nozzles.

Spraying Instructions for Quali-Pro Quinclorac 75 DF

Make applications of Quali-Pro Quinclorac 75 DF with properly calibrated ground equipment. Apply in a minimum of 20 gallons of water per acre (or a minimum of 0.5 gallons per 1000 sq ft) at pressures between 20 and 40 psi to provide uniform spray distribution.

Make sure the spray tank is continuously agitated during the application. Use nozzle screens which are no finer than 50 mesh (100 mesh is finer than 50 mesh). The use of flat fan, flood or cone nozzles is permitted, and arrange the nozzles to provide a thorough, uniform coverage of turfgrass and weeds. Adjust the boom height, nozzle selection, and pressure to provide uniform coverage and to minimize spray drift.

Check sprayer routinely to determine proper calibration.

Avoid overlaps as these lead to applying higher rates than allowed.

Do not apply if weather conditions favor drift from treated areas.

Spot Applications: Use 0.367 oz Quali-Pro Quinclorac 75 DF per 1000 sq ft of treated area for postemergence spot applications to susceptible weeds in tolerant turfgrass. Apply in at least 1 gallon spray mix per 1000 sq ft to ensure thorough, uniform spray coverage.

Apply Quali-Pro Quinclorac 75 DF to newly germinated 1-2 leaf crabgrass, to 1-tiller crabgrass, and when crabgrass has matured to 5 tillers or greater. In some situations, applications of Quali-Pro Quinclorac 75 DF made to annual grasses 2-4 tiller may not provide complete control. In such cases, apply Quali-Pro Quinclorac 75 DF as a sequential application for grass control.

Use the table below for use rates and mixing directions.

SPOT APPLICATIONS WITH QUALI-PRO QUINCLORAC 75 DF		
Spray Mix Volume (gallons)	**Amount of Quali-Pro Quinclorac 75 DF Product in Tablespoons**	**Amount of MSO Adjuvant in Tablespoons**
1	1	2
2	2	4
3	3	6

Spray Equipment Cleaning Procedure
Use a strong detergent or commercial sprayer cleaner according to the manufacturer's directions to clean the application equipment thoroughly before and after applying this product.

APPLICATION RATES
Refer to the **WEEDS CONTROLLED** table for the grasses and broadleaf weeds controlled by Quali-Pro Quinclorac 75 DF and for other weed-specific use directions.

Broadcast Applications:

- Apply 1 lb Quali-Pro Quinclorac 75 DF per acre (equivalent to 0.367 oz per 1000 sq ft or 0.75 lb ai/acre).

Spot Applications:

- Apply 0.367 oz of Quali-Pro Quinclorac 75 DF per 1000 sq ft of treated area. Refer to footnotes in the **WEEDS CONTROLLED** table and directions for application to creeping Bentgrass.

Additives:

- Apply 1.5 pints of methylated seed oil per acre (0.55 oz per 1000 sq ft) with Quali-Pro Quinclorac 75 DF applications.

Creeping Bentgrass:

- Make 2 to 3 split applications of Quali-Pro Quinclorac 75 DF at 0.123 to 0.245 oz per 1000 sq ft. Do not exceed 2 lbs of Quali-Pro Quinclorac 75 DF per acre per season (equivalent to 1.5 lb ai/A). The application(s) should be made at 21-day intervals.
- Include methylated seed oil at 0.55 oz per 1000 sq ft (1.5 pints per acre). To reduce yellowing on creeping bentgrass, add chelated iron or sprayable soluble nitrogen fertilizers (refer to the **ADJUVANTS** section). **DO NOT** use on golf course greens and collars. See additional information for creeping bentgrass under the section on **SEEDING, OVERSEEDING, AND SPRIGGING.**

WEEDS CONTROLLED

Grasses Controlled
Common Name *(Scientific Name)*
Barnyardgrass *(Echinochloa crusgalli)*
Crabgrass, Large *(Digitaria sanguinalis)*[1,4]
Crabgrass, Smooth *(Digitaria ischaemum)*[1,4]
Foxtail, Giant (*Setari faberi)*[1]
Foxtail, Green (*Setari viridis)*[1]
Foxtail, Yellow (*Setari glauca)*[1]
Kikuyugrass *(Pennisetum clandestinum)*[2,3]
Signalgrass, Broadleaf *(Brachiaria platyphylla)*[1]
Torpedograss *(Panicum repens)*[3]
Broadleaf Weeds Controlled
Common Name *(Scientific Name)*
Bindweed, Field *(Convolvulus arvensis)*
Clover, Hop *(Trifolium aureum Pollich)*
Clover, Red *(Trifolium pretense)*
Clover, White *(Trifolium repens)*
Daisy, English *(Bellis perenne)*[2,5]
Dandelion, Common *(Taraxacum officinale)*[2]
Dollarweed *(Hydrocotyle umbellate)*
Geranium, Carolina *(Geranium carolinium)*
Medic, Black *(Medicago lupuline)*
Morning glory spp. *(Ipomea* sp.)
Speedwell, Common *(Veronica officinalis)*
Speedwell, Slender *(Veronica filiformis)*
Speedwell, Thymeleaf *(Veronica serpyllifolia)*
Violet, Wild *(Viola* sp.)

[1] Complete control may not be achieved under certain conditions when Quali-Pro Quinclorac 75 DF is applied to annual grasses at 2 – 4 tiller stage. In these cases, make a sequential application for grass control. For best results, apply Quali-Pro Quinclorac 75 DF + methylated seed oil either before the second tiller stage or as the weed grasses mature.

[2] For these weeds, the use of a tank mix partner or sequential application will be required.

[3] For these weeds, apply 0.245 oz of Quali-Pro Quinclorac 75 DF per 1000 sq ft as 3 sequential applications at 14 – 21 day intervals.

[4] In California, some large and smooth crabgrass biotypes have shown varied responses to Quali-Pro Quinclorac 75 DF. If failure to control this weed occurs following a full or split application, **DO NOT** reapply Quali-Pro Quinclorac 75 DF. Instead, use a herbicide with a different mode of action.

[5] **DO NOT USE** to control this weed in California.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store in a cool, dry, and well-ventilated area. **DO NOT** store under wet conditions.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

Nonrefillable Container (flexible-bag-all weights): Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid-fifty lbs or less): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid-greater than fifty lbs): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Refillable Container: Refillable container. Refill this container with quinclorac only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES** and **LIMITATIONS OF LIABILITY**.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ADAMA. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, ADAMA makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of ADAMA is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, ADAMA disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at ADAMA election, the replacement of product.

QUALI-PRO

QUINCLORAC 75 DF

HERBICIDE

ACTIVE INGREDIENTS:	% BY WT.
Quinclorac: 3,7-dichloro-8-quinolinecarboxylic acid	75.0%
OTHER INGREDIENTS:	25.0%
TOTAL:	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

For additional precautionary, handling, and use statements, see inside of this booklet.

Si usted no entiende la estiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

EPA Reg. No: 66222-160
EPA Est. No.: 37429-GA-001[BT;]
EPA Est. No.: 37429-GA-002[BO]
Letter(s) in lot number correspond(s) to superscript in EPA Est. No.

CONTENTS: 1 POUND

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13639 EPA101909/REV A

Manufactured for:
Control Solutions Inc.
5903 Genoa-Red Bluff, Pasadena, TX 77507
A member of Adama
Consumer and Professional Solutions

ADAMA

PEEL BACK HERE

SAFETY DATA SHEET

Revision date 08-May-2024 **Revision Number** 1

1. Identification

Product identifier

Product Name QUINCLORAC 75DF SELECT

Other means of identification

Product Code(s) 89442-25

Synonyms None

Registration Number(s) 89442-25

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Follow label instructions

Details of the supplier of the safety data sheet

Company Address
PrimeSource, A Division of Albaugh LLC.
1525 NE 36th St
Ankeny, IA 50021 USA

Emergency telephone number

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident:
• Call CHEMTREC Day or Night within USA and Canada: 1-800-424-9300, Outside USA and Canada: +1 703-741-5970 (collect calls accepted)
For Medical Emergencies Only:
• Call Albaugh LLC Day or Night within USA and Canada: 1-888-347-6732

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by US EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. Hazard(s) identification

Classification

Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin sensitization	Category 1

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Warning

Hazard statements

Harmful in contact with skin
Harmful if inhaled
May cause an allergic skin reaction

Appearance granules **Physical state** Solid **Odor** Faint nut-like

Precautionary Statements - Prevention
Wear protective gloves/protective clothing
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Contaminated work clothing must not be allowed out of the workplace

IF ON SKIN: Wash with plenty of water and soap
Call a doctor if you feel unwell
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a doctor if you feel unwell

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other information
May be harmful if swallowed. Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Active Ingredient
Quinclorac	84087-01-4	72.75-77.25	X
Kaolin clay	1332-58-7	11.75-12.99	
Stepwet DF 95	151-21-3	5.70-6.30	
Other Ingredients	PROPRIETARY	>5.0	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms	Itching. Rashes. Hives. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Kaolin clay 1332-58-7	TWA: 2 mg/m³ particulate matter containing no asbestos and <1% crystalline silica, respirable particulate matter	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust

Biological occupational exposure limits
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid
Appearance	granules
Color	tan
Odor	Faint nut-like
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	3.69 - 4.69	
pH (as aqueous solution)		
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Flash point	No data available	
Evaporation rate	No data available	
Flammability	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	<0.01 mPa (20°C) (quinclorac)	
Relative vapor density	No data available	
Relative density	No data available	
Water solubility	No data available	
Solubility(ies)	No data available	
Partition coefficient	log Pow = -1.15 (pH 7) (quinclorac)	
Autoignition temperature	No data available	
Decomposition temperature		
Kinematic viscosity	No data available	
Dynamic viscosity	No data available	

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	0.62 – 0.66 g/ml (5.17 – 5.51 lb/gl)*
Bulk density	No information available

**Listed density is an approximate value and does not necessarily represent that of a specific batch*

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Excessive heat.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).

Eye contact Specific test data for the substance or mixture is not available.

Skin contact May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May be absorbed through the skin in harmful amounts. Harmful in contact with skin.

Ingestion May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2,376.70 mg/kg
ATEmix (dermal) 1,414.50 mg/kg
ATEmix (inhalation-dust/mist) 1.15 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Quinclorac 84087-01-4	= 2190 mg/kg (Rat)	> 2 g/kg (Rat)	-
Kaolin clay 1332-58-7	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Stepwet DF 95 151-21-3	= 1288 mg/kg (Rat)	= 200 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Respiratory system, Gastrointestinal tract (GI).

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Stepwet DF 95 151-21-3	EC50: =53mg/L (72h, Desmodesmus subspicatus) EC50: 30 - 100mg/L (96h, Desmodesmus subspicatus) EC50: =117mg/L (96h, Pseudokirchneriella subcapitata) EC50: 3.59 - 15.6mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 15 - 18.9mg/L (96h, Pimephales promelas) LC50: 8 - 12.5mg/L (96h, Pimephales promelas) LC50: 22.1 - 22.8mg/L (96h, Pimephales promelas) LC50: 4.3 - 8.5mg/L (96h, Oncorhynchus mykiss) LC50: =4.62mg/L (96h, Oncorhynchus mykiss) LC50: =4.2mg/L (96h, Oncorhynchus mykiss) LC50: 10.2 - 22.5mg/L (96h, Pimephales promelas) LC50: 6.2 - 9.6mg/L (96h, Pimephales promelas) LC50: 13.5 - 18.3mg/L (96h, Poecilia reticulata) LC50: 10.8 - 16.6mg/L (96h, Poecilia reticulata) LC50: =1.31mg/L (96h, Cyprinus carpio) LC50: =7.97mg/L (96h, Brachydanio rerio) LC50: 9.9 - 20.1mg/L (96h, Brachydanio rerio) LC50: 4.06 - 5.75mg/L (96h, Lepomis macrochirus) LC50: 4.2 - 4.8mg/L (96h, Lepomis macrochirus) LC50: =4.5mg/L (96h, Lepomis macrochirus) LC50: 5.8 - 7.5mg/L (96h, Pimephales promelas)	-	EC50: =1.8mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Stepwet DF 95 151-21-3	1.6

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused Dispose of in accordance with local regulations. Dispose of waste in accordance with

products	environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. Transport information

DOT Not regulated

15. Regulatory information

U.S. EPA Label Information

EPA Pesticide Registration Number	89442-25
EPA Pesticide Label	CAUTION. Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation.

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AIIC	Does not comply

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Kaolin clay 1332-58-7	X	X	X
Water 7732-18-5	-	-	X

16. Other information

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 08-May-2024
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of

Albaugh's knowledge. Albaugh makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

End of Safety Data Sheet

SPECIMEN LABEL

QUINCLORAC	GROUP	4	HERBICIDE

Quintessential®

SELECTIVE HERBICIDE

POWERED BY Value Technology

ACTIVE INGREDIENT:	**WT. BY %**
Dimethylamine salt of quinclorac; 3,7-dichloro-8-quinolinecarboxylic acid	18.92%
OTHER INGREDIENTS:	81.08%
TOTAL:	**100.00%**

Equivalent to 1.5 lbs. quinclorac: 3,7-dichloro-8-quinolinecarboxylic acid equivalent (ae) per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See label booklet for complete First Aid, Precautionary Statements, Directions For Use, and Storage and Disposal.

Manufactured For:
Prime Source, a division of Albaugh, LLC
1525 NE 36th Street, Ankeny, IA 50021

ALBAUGH® SPECIALTY PRODUCTS

EPA Reg. No. 89442-57

AD122823

FIRST AID	
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product label with you when calling a poison control center (888-347-6732) or doctor, or going for treatment. For 24-hour emergency assistance, chemical spill, leak, fire, exposure or accident call CHEMTREC toll free at 1-800-424-9300.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Protective eyewear
- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of butyl rubber ≥14 mils, natural rubber ≥14 mils, neoprene rubber ≥14 mils, or nitrile rubber ≥14 mils
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides 40 CFR 170.607(d-e), the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Applicators and other handlers should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Keep out of lakes, ponds, and streams. DO NOT apply directly to water, areas where surface water is present, or to intertidal areas below the mean high-water mark. DO NOT contaminate water by cleaning of equipment or disposal of rinsate.

PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow to come in contact with any oxidizing agent. Hazardous chemical reaction may occur.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with this labeling.

All applicable directions, restrictions, and precautions must be followed. This labeling must be in the possession of the user at time of application. Prime Source, A Division of Albaugh, LLC does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the specified area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval.

The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, and water, is:

- Coveralls
- Chemical-resistant gloves, made of butyl rubber $\geq$14 mils, natural rubber $\geq$14 mils, neoprene rubber $\geq$14 mils, or nitrile rubber $\geq$14 mils
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, nurseries, or greenhouses.

- DO NOT enter or allow others to enter the treated area until sprays have dried.

PRODUCT INFORMATION

QUINTESSENTIAL® may be applied post-emergence to residential, non-residential and other listed turfgrass sites (refer to **Table 1. Turf Resistance Established**) for the control of many broadleaf and grass weeds. Use sites include:

- Grounds or lawns around residential and commercial establishments
- Multi-family dwellings
- Military and other institutions
- Parks
- Airports
- Roadsides
- Schools
- Picnic grounds
- Athletic fields
- Houses of worship
- Cemeteries
- Golf courses
- Sod farms

USE PRECAUTIONS

- Use a lawn-type sprayer with coarse spray as wind drift is less likely.
- Avoid mist and spray onto vegetables, flowers, ornamentals, shrubs, trees, and other desirable plants, especially plants belonging to the Solanaceae family, such as tomatoes, eggplants, and bell peppers.

USE RESTRICTIONS

- DO NOT apply more than 128 fl. oz. of **QUINTESSENTIAL®** per acre (or 2.9 fl. oz. per 1,000 sq. ft.) in 1 year (1.5 lbs. ae per acre per year).
- DO NOT exceed the maximum single application rate of 48-64 fl. oz. of **QUINTESSENTIAL®** per acre (1.10-1.45 fl. oz. of **QUINTESSENTIAL®** per 1,000 sq. ft.) or 0.56-0.75 lb. ae per acre.
- DO NOT use clippings as mulch or compost around flowers, ornamentals, trees, or in vegetable gardens.
- DO NOT plant eggplants or tobacco within 12 months to areas treated with **QUINTESSENTIAL®**.
- DO NOT plant tomatoes or carrots within 24 months to areas treated with **QUINTESSENTIAL®**.
- Do not apply when wind speeds are greater than 10 mph at the application site.
- Apply as a medium or coarser spray (ASABE standard S-572).
- Do not release spray at a height greater than 30 inches above the ground.

- DO NOT discard rinsate on or near desirable plants.
- DO NOT apply by air or through any type of irrigation system.
- DO NOT use to formulate or reformulate any other pesticide product that is not registered by EPA.
- DO NOT apply to golf course collars or greens.
- DO NOT make applications of **QUINTESSENTIAL®** to drought-stressed turfgrass and/or drought-stressed weeds.
- DO NOT apply to fine fescue unless it is part of a seed blend.
- DO NOT make application to areas where desirable clovers are present.
- DO NOT apply to exposed feeder roots of trees or ornamentals. Be particularly careful within the drip line of trees and other ornamental species.
- DO NOT apply into any ornamental bed.
- DO NOT apply within 4 weeks after seedling emergence of Kentucky bluegrass, creeping bentgrass, fine fescue blends, and perennial ryegrass.
- DO NOT apply **QUINTESSENTIAL®** prior to and within 2 weeks after seeding seashore paspalum.
- **DO NOT apply in New York State, except by spot treatment only.**

Mode of Action

QUINTESSENTIAL® is an auxin agonist and is classified as a quinoline carboxylic acid. It is absorbed by foliage and roots and translocated throughout the plant. The control symptoms exhibited by broadleaf weeds include leaf and stem curl or twisting, and chlorosis. Susceptible grasses demonstrate stunting, chlorosis, and gradual reddening followed by necrosis and death. Refer to Tables 1, 2, and 3 for turfgrass resistance and susceptible weed species.

Resistance Management

Quinclorac, the active ingredient in this product, is a Group 4 herbicide. Some pests are known to develop resistance to herbicides that have been used repeatedly. Herbicide resistance is defined as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. In a plant, resistance may be naturally occurring or induced by such techniques as genetic engineering or selection of variants produced by tissue culture or mutagenesis. Any weed population may contain or develop plants that are naturally resistant to **QUINTESSENTIAL®** and other Group 4 herbicides. Weed species with acquired resistance to Group 4 herbicides may eventually dominate the weed population if Group 4 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **QUINTESSENTIAL®** or other Group 4 herbicides.

To delay herbicide resistance, consider the below best practices for resistance management:

- Plant into weed-free fields and keep fields as weed-free as possible.
- To the extent possible, use a diversified approach toward weed management. Whenever possible, incorporate multiple weed-control practices such as mechanical cultivation, biological management practices, and crop rotation.
- Fields with difficult to control weeds should be rotated to crops that allow the use of herbicides with alternative mechanisms of action or different management practices.
- To the extent possible, do not allow weed escapes to produce seeds, roots or tubers. Manage weed seeds at harvest and post-harvest to prevent a buildup of the weed seed-bank.
- Prevent field-to-field and within-field movement of weed seed or vegetative propagules. Thoroughly clean plant residues from equipment before leaving fields.
- Prevent an influx of weeds into the field by managing field borders.
- Identify weeds present in the field through scouting and field history and understand their biology. The weed-control program should consider all of the weeds present.
- Difficult to control weeds may require sequential applications of herbicides with differing mechanisms of action.
- Apply this herbicide at the correct timing and rate needed to control the most difficult weed in the field.
- Use a broad-spectrum soil-applied herbicide with a mechanism of action that differs from this product as a foundation in a weed-control program. Do not use more than two applications of this or any other herbicide with the same mechanism of action within a single growing season unless mixed with an herbicide with another mechanism of action with an overlapping spectrum for the difficult-to-control weeds.
- If resistance is suspected, treat weed escapes with an herbicide with a different MOA or use non-chemical methods to remove escapes.
- Monitor treated weed populations for loss of field efficacy.
- Scout field(s) before and after application.
- Report lack of performance to registrant or their representative.

Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species.

Contact your local sales representative, extension agent, or certified crop advisors to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

APPLICATION INFORMATION

Apply **QUINTESSENTIAL®** to actively growing weeds as post-emergence broadcast or spot sprays using the turf species, rate and growth stages indicated in Tables 1, 2, and 3.

DO NOT exceed the labeled application rate or fail to comply with use restrictions listed in **QUINTESSENTIAL® USE RESTRICTIONS**.

For best results, weeds should not be under stress from lack of water, excessive water, low fertility, mowing shock, excessive hot or cold temperatures, or injury from other herbicide applications.

To achieve consistent weed control, use methylated seed oil. Refer to Tables 2 and 3 for rates.

Adding adjuvants may cause slight leaf burn, but new growth is normal, and turf vigor is not reduced. The potential for leaf burn is increased when relative humidity and temperature are high. Additional stress from low mowing heights may also increase the possibility of turf injury. Chelated iron or sprayable soluble nitrogen fertilizer will reduce a slight yellowing that may occur on some turfgrass species. Not all chelated iron or sprayable nitrogen fertilizers are compatible with **QUINTESSENTIAL®**. Always perform a compatibility test to ensure proper mixing. See **COMPATIBILITY TEST FOR MIX COMPONENTS** section of label for directions.

FOR ALL TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Spot Applications:
Post-emergence spot applications may be made to susceptible weeds in turfgrass that is resistant to **QUINTESSENTIAL®** (see Tables 1 and 2). Apply 1.10-1.45 fluid ounces of **QUINTESSENTIAL®** per 1,000 square feet (0.56-0.75 lb. ae/A) of treated area. Spray coverage must be uniform and complete. See Table 5 for spot spray mix instructions.

- **FOR USE IN NEW YORK AS SPOT TREATMENT ONLY** - Spray individual weeds only. Adjust the sprayer to coarse spray to minimize wind drift. Apply to the center of the weed and spray to lightly cover.

Mowing Information:
Do not mow 2 days before or after applying **QUINTESSENTIAL®** to maximize weed control and minimize potential turf injury. Clippings from the first 3 mowings after application must be left on the treated area.

Irrigation and Rainfall:
If soil moisture is not sufficient prior to **QUINTESSENTIAL®** application, irrigation may improve weed control. For best results, do not water or irrigate for 24 hours after application. If rainfall does not occur in 2 to 7 days after application, irrigation of at least 1/2 inch is desirable.

Extended Grass Control:
To extend grass control, **QUINTESSENTIAL®** can be tank mixed with a preemergent herbicide to provide residual control of annual grasses. Consult the respective tank mix labels for additional weeds controlled.

Seeding/Overseeding/Sprigging:
The use of **QUINTESSENTIAL®** before or after seeding or over-seeding a turf area will not significantly interfere with the turfgrass seed germination and growth of those grass types identified as resistant or moderately resistant in Table 1. Consult Table 4 for timing of applications concerning any seeding, overseeding or sprigging situation.

ADDITION OF ADJUVANTS

Additives in Spray Mix to Achieve Control
Methylated seed oil is the preferred adjuvant for post-emergence applications. However, if an MSO is not available in your region, the use of a crop oil concentrate or other high-quality surfactant must be used in the spray tank at the time of application. (Refer to actual product label for use rates and directions.)

Additives must not be used when tank mixing with Emulsifiable Concentrate (EC) products as turf phytotoxicity may occur.

The methylated seed oil or crop oil concentrate used as the adjuvant with **QUINTESSENTIAL®** must meet all the following criteria:

- Nonphytotoxic
- Contain only EPA-exempt ingredients
- Provide good mixing quality in the jar test
- Successful in local experience

The exact composition of suitable products will vary; however, any methylated seed oil or crop oil concentrate used must contain emulsifiers to provide good mixing quality.

When an adjuvant (or a specific adjuvant product, such as a drift control agent) is to be used with this product, the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant is recommended.

Consult your local Prime Source, A Division of Albaugh, LLC representative or distributor for instructions for your area.

MIXING INSTRUCTIONS FOR QUINTESSENTIAL®

1. Water: Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water.
2. Agitation: Maintain constant agitation throughout mixing and application.
3. Inductor: If an inductor is used, rinse it thoroughly after each component has been added.
4. Products in PVA bags: Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
5. Water-dispersible products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
6. Water-soluble products (such as **QUINTESSENTIAL®**).
7. Emulsifiable concentrates (such as methylated seed oil or crop oil concentrate).
8. Water-soluble additives (such as chelated iron or soluble nitrogen fertilizer when applicable; not all chelated iron or sprayable nitrogen fertilizers are compatible with **QUINTESSENTIAL®**. Always perform a compatibility test to ensure proper mixing. See **COMPATIBILITY TEST FOR MIX COMPONENTS** section of label for directions).
9. Remaining quantity of water.

Maintain constant agitation during application.

Backpack Sprayer:
Begin with a clean spray tank. Fill the spray tank 1/2 full with clean water and add the required amount of **QUINTESSENTIAL®** to the sprayer. Cap sprayer and agitate to ensure mixing. Uncap sprayer and add appropriate amount of methylated seed oil. Cap sprayer and agitate once again. Uncap sprayer and finish filling tank to desired level. During application, it is desirable to agitate the mixture on occasion to ensure mixing.
If the mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

SPRAYING INSTRUCTIONS FOR QUINTESSENTIAL®

Apply with properly calibrated ground equipment in sufficient water per acre to provide uniform spray distribution (at least 10 gallons of water per acre or at least 0.25 gallon per 1,000 sq. ft.). Use low pressure sprayers at 20 to 40 PSI. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Nozzle screens must be no finer than 50-mesh (100-mesh is finer than 50-mesh). Check sprayer routinely to determine proper calibration. Flat fan, flood, or cone nozzles may be used. Nozzles must be arranged to obtain uniform coverage for turf and weeds to be controlled. Boom height, nozzle selection, and pressure must be adjusted to provide uniform coverage and minimize spray drift.

Avoid overlaps that will increase rates above those labeled for use. Avoid application when winds may cause drift.

Clean spray application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions before and after applying this product.

COMPATIBILITY TEST FOR MIX COMPONENTS

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled rate per acre.

1. Water - For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
2. Products in PVA bags - Cut an opening in the water-soluble PVA bag just large enough to use a teaspoon for measuring purposes. Use the opened, water-soluble PVA bag first when preparing spray solution. Boron-containing fertilizers can be incompatible with PVA material. Include PVA material if a boron fertilizer is intended to be used. Cap the jar and invert 10 cycles.
3. Water-dispersible products (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions) - Cap the jar and invert 10 cycles.
4. Water-soluble products (**QUINTESSENTIAL®**) - Cap the jar and invert 10 cycles.
5. Emulsifiable concentrates (methylated seed oil) - Cap the jar and invert 10 cycles.
6. Water-soluble additives - Cap the jar and invert 10 cycles.
7. Let the solution stand for 15 minutes.
8. Evaluate the solution for uniformity and stability. The spray solution must not have free oil on the surface nor thick (clabbered) texture. For WG or WP products, a fine precipitate that is easily resuspended is normal; large, non-dispersible particles (>300 microns) that precipitate on standing are a sign of tank mix incompatibility. DO NOT use any spray solution that could clog spray nozzles.

TURFGRASS TANK MIXES

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

The most restrictive labeling applies to any tank mix. To increase spectrum of control of broadleaf weed species, a tank mix with 2, 4-D, triclopyr, or other broadleaf herbicides may be used. For extended residual control, apply **QUINTESSENTIAL®** with a preemergent herbicide.

For sedge control, applications of **QUINTESSENTIAL®** with herbicides that contain the active ingredients bentazon, halosulfuron, imazaquin, sulfentrazone or MSMA may be made. Combinations with MSMA will aid in control of certain grassy weeds, such as Bahiagrass or kikuyugrass. Consult labels for turfgrass resistance when tank mixing. Separate applications must be made if all target weeds are not at the correct growth stage for treatment at the same time.

Physical incompatibility, reduced weed control, or turf injury may result from mixing **QUINTESSENTIAL®** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

Before tank mixing, a simple jar test is required to ensure compatibility of herbicides or other pesticides and/or additives.

Table 1. Turf Resistance (Established)

Highly Resistant	Moderately Resistant	Susceptible
Bermudagrass, common[1]	Bentgrass, creeping[1]	Bahiagrass
Bluegrass, annual	Bermudagrass, hybrid[1]	Bentgrass, colonial
Bluegrass, Kentucky	Bluegrass, rough (*Poa trivialis*)	Bentgrass, seaside
Buffalograss	Fescue, Chewing's	Centipedegrass
Fescue, tall	Fescue, fine[2]	Dichondra
Ryegrass, annual	Fescue, hard	St. Augustinegrass
Ryegrass, perennial	Fescue, red	
Zoysiagrass	Paspalum, seashore	

[1]Yellowing that occurs on these species can be reduced by the addition of chelated iron or sprayable soluble nitrogen fertilizer (see **APPLICATION INFORMATION** and **ADDITION OF ADJUVANTS**).
[2]Apply **QUINTESSENTIAL®** to fine fescue only when it is part of a blend.

DO NOT use on golf course GREENS and COLLARS.

For Seeding/Overseeding/Sprigging application information, consult Table 4.

Table 2. QUINTESSENTIAL® Application to Establish Creeping Bentgrass

Turfgrass Species	Application Rate/Timing	Additive Rate
Bentgrass, creeping[1,2]	**QUINTESSENTIAL®** must be applied in 2 to 3 split applications at 0.5 to 1.0 fl. oz. per 1,000 sq. ft. (0.25 to 0.51 lb. ae/A) (not to exceed 128 fl. oz. of product per acre [2.9 fl. oz. of product per 1,000 sq. ft.] per year or 1.5 lbs. ae/A/year). Time sequential application(s) 14 to 21 days apart.	Use methylated seed oil at 0.55 fl. oz. per 1,000 sq. ft. (1.5 pts. per acre).
Bentgrass, creeping[1,3]	**QUINTESSENTIAL®** must be applied in 2 to 3 split applications at 0.65 to 1.0 fl. oz. per 1,000 sq. ft. (0.33 to 0.51 lb. ae/A) (not to exceed 128 fl. oz. of product per acre [2.9 fl. oz. of product per 1,000 sq. ft.] per year or 1.5 lbs. ae/A/year). Time sequential application(s) 14 to 21 days apart.	Use methylated seed oil at 0.55 fl. oz. per 1,000 sq. ft. (1.5 pts. per acre).

[1]Yellowing that occurs on these species can be reduced by the addition of chelated iron or sprayable soluble nitrogen fertilizer (see **APPLICATION INFORMATION** and **ADDITION OF ADJUVANTS**).
[2]Not for use at this rate range in California.
[3]This rate range for use only in California.

DO NOT use on golf course GREENS and COLLARS.

For Seeding/Overseeding/Sprigging application information, consult Table 4.

Table 3. Application Rates and Timing for Post-Emergence Weed Control in Turf

Weed Species		QUINTESSENTIAL© Rate	Additive Rate
Grasses Controlled			
Common Name	**Scientific Name**	**Broadcast Applications[6]** 48-64 fl. oz. of product per acre or 1.10-1.45 fl. oz. per 1,000 sq. ft. (0.56-0.75 lb. ae/A) **Spot Applications[7]** Apply 1.10-1.45 fl. oz. of **QUINTESSENTIAL®** per 1,000 sq. ft. (0.56-0.75 lb. ae/A) of treated area. Refer to footnotes in Tables 2 and 3 for specific turfgrass or weed instructions.	Apply 1.5 pts. per acre (0.55 fl. oz. per 1,000 sq. ft.) methylated seed oil
Barnyardgrass	*Echinochloa crusgalli*		
Crabgrass, large[1,4]	*Digitaria sanguinalis*		
Crabgrass, smooth[1,4]	*Digitaria ischaemum*		
Foxtail, giant[1]	*Setaria faberi*		
Foxtail, green[1]	*Setaria viridis*		
Foxtail, yellow[1]	*Setaria pumila*		
Kikuyugrass[2,3]	*Pennisetum clandestinum*		
Signalgrass, broadleaf	*Brachiaria platyphylla*		
Torpedograss[3]	*Panicum repens*		
Broadleaf Weeds Controlled			
Common Name	**Scientific Name**		
Bindweed, field	*Convolvulus arvensis*		
Clover, hop	*Trifolium aureum Pollich*		
Clover, red	*Trifolium pratense*		
Clover, white	*Trifolium repens*		
Daisy, English[2,5]	*Bellis perenne*		
Dandelion, common[2]	*Taraxacum officinale*		
Dollarweed	*Hydrocotyle Umbellata*		
Geranium, Carolina	*Geranium carolinianum*		
Medic, black	*Medicago lupulina*		
Morningglory spp.	*Ipomoea* sp.		
Speedwell, common	*Veronica officinalis*		
Speedwell, slender	*Veronica filiformis*		
Speedwell, thymeleaf	*Veronica serpyllifolia*		
Violet, wild	*Viola* spp.		

[1]Under certain conditions, application of **QUINTESSENTIAL®** made to annual grasses at 2- to 4-tiller may not provide complete control. A sequential application will be required for grass control in these situations. Optimum control is achieved when applications of **QUINTESSENTIAL®** + methylated seed oil are applied either before second tiller or as weed grasses mature.

[2]Tank mix partner or sequential application required.

[3]Make 2 sequential applications of 1.0 fl. oz. (0.51 lb. ae/A) of **QUINTESSENTIAL®** per 1,000 sq. ft. and an additional sequential application up to 0.90 fl. oz. (0.46 lb. ae/A) of **QUINTESSENTIAL®** per 1,000 sq. ft. at 14- to 21-day intervals.

[4]Biotypes of large and smooth crabgrass in California have shown varied response to **QUINTESSENTIAL®**. If control failure occurs following a full or split application, DO NOT reapply **QUINTESSENTIAL®**. Change to a herbicide with a different mode of action.

[5]NOT FOR USE to control this weed in California.

[6]For California Broadcast Applications, use 64 fl. oz. of product per acre or 1.45 fl. oz. per 1,000 sq. ft. (0.75 lb. ae/A).

[7]For California Spot Applications, use 1.45 fl. oz. per 1,000 sq. ft. of treated area.

Table 4. Seeding/Overseeding/Sprigging Timing Chart[1]

Variety	Before seeding[2]	At seeding	7 days after emergence	14 days after emergence	28 days after emergence
Annual bluegrass	OK	OK	OK	OK	OK
Annual ryegrass	OK	OK	OK	OK	OK
Buffalograss	OK	OK	OK	OK	OK
Common Bermudagrass[3] (for sprigging see footnote 3)	OK	OK	OK	OK	OK
Creeping bentgrass	OK	NO	NO	NO	OK
Fine fescues (in blend)	OK	NO	NO	NO	OK
Hybrid Bermudagrass[3] (for sprigging see footnote 3)	OK	OK	OK	OK	OK
Kentucky bluegrass	OK	NO	NO	NO	OK
Perennial ryegrass	OK	OK	NO	NO	OK
Seashore paspalum[3,4] (for sprigging see footnote 3)	NO	NO	NO	OK	OK
Tall fescue	OK	OK	OK	OK	OK
Zoysiagrass[3] (for sprigging see footnote 3)	OK	OK	OK	OK	OK

[1]**NOTE:** Adjuvant or additives must not be used when **QUINTESSENTIAL®** applications are made on newly emerged turf seedlings until 28 days after emergence; with the exception of seashore paspalum, a **QUINTESSENTIAL®** application rate of 1.45 fl. oz./1,000 sq. ft. (0.75 lb. ae/A) can be made to all other turfgrass species above.
[2]**QUINTESSENTIAL®** can be applied 7 days or greater prior to seeding.
[3]**QUINTESSENTIAL®** can be used any time prior to, at, or after sprigging as indicated by turfgrass species above.
[4]0.75 fl. oz. to 1.45 fl. oz./1,000 sq. ft. (0.37 to 0.75 lb. ae/A) application can be made at times indicated above.

Application of **QUINTESSENTIAL®** must be timed around the seeding operations using the above chart as a reference point.

Table 5. Spot Spraying with QUINTESSENTIAL®

Spray Mix Volume (gallons)	QUINTESSENTIAL® Product in Mix (tablespoons)	MSO Adjuvant in Mix (tablespoons)
1	3	1.5
2	6	3.0
3	9	4.5

• Apply at the rate of 1 gal. per 1,000 sq. ft. 1 tablespoon = 0.5 fl. oz. (0.25 lb. ae/A) of **QUINTESSENTIAL®** product.
NOTES: For consistent results, make **QUINTESSENTIAL®** application to newly germinated, to 1-tiller crabgrass, and when crabgrass has matured to 5-tillers or greater. Under certain conditions, applications of **QUINTESSENTIAL®** made to annual grasses 2- to 4-tiller may not provide complete control. A sequential application will be required for grass control in these situations.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in a dry well-ventilated area.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on-site or at an approved waste disposal facility.

CONTAINER HANDLING:
For plastic containers ≤ 5 gallons: Nonrefillable Container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.
For plastic containers > 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Recap and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Prime Source, A Division of Albaugh, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Prime Source, A Division of Albaugh, LLC and Seller harmless for any claims relating to such factors. Prime Source, A Division of Albaugh, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Prime Source, A Division of Albaugh, LLC, and to the extent consistent with applicable law, Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, PRIME SOURCE, A DIVISION OF ALBAUGH, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither Prime Source, A Division of Albaugh, LLC nor Seller shall be liable for any incidental, consequential, or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF PRIME SOURCE, A DIVISION OF ALBAUGH, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF PRIME SOURCE, A DIVISION OF ALBAUGH, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Prime Source, A Division of Albaugh, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Prime Source, A Division of Albaugh, LLC.

SAFETY DATA SHEET

Revision date 30-Sep-2021 **Revision Number** 1

1. Identification

Product identifier

Product Name QUINTESSENTIAL

Other means of identification

Product Code(s) 000115

Synonyms None

Registration Number(s) 89442-57

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Follow label instructions

Details of the supplier of the safety data sheet

Company Address
PrimeSource, A Division of Albaugh LLC.
1525 NE 36th St
Ankeny, IA 50211

Emergency telephone number

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call
CHEMTREC Day or Night

- Within USA and Canada: 1-800-424-9300
- Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by US EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. Hazard(s) identification

Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2B

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

Warning

Hazard statements
Harmful if inhaled
Causes eye irritation

Appearance Liquid **Physical state** Liquid **Odor** Pungent

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell

Other information
No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Active Ingredient
Ethylene Glycol	107-21-1	48.21-51.19	
Dimethylamine salt of quinclorac	84087-48-9	17.98-19.86	X
Other Ingredients	PROPRIETARY	>20.0	

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention if irritation develops and persists. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin contact Wash skin with soap and water.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Avoid breathing vapors or mists.

Other information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Ethylene Glycol 107-21-1	STEL: 50 ppm vapor fraction STEL: 10 mg/m³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³	-

Biological occupational exposure limits
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields. None required for consumer use.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Color	dark brown; opaque
Odor	Pungent
Odor threshold	No data available

Property	**Values**	**Remarks • Method**
pH	9.0 - 10.0	
Melting point / freezing point	No data available	
Boiling point / boiling range	No data available	
Flash point	>103.8°C °C / °F	
Evaporation rate	No data available	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability or explosive	No data available	

limits	
Lower flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Water solubility	No data available
Solubility(ies)	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Decomposition temperature	
Kinematic viscosity	21.76 (20°C: 9.954 (40°C)
Dynamic viscosity	No data available

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No data available
Molecular weight	No data available
VOC Content (%)	No information available
Liquid Density	1.139
Bulk density	No data available

**Listed density is an approximate value and does not necessarily represent that of a specific batch*

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Excessive heat.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).

Eye contact Specific test data for the substance or mixture is not available. Causes eye irritation. May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Coughing and/ or wheezing.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50 > 5,000 mg/kg
Dermal LD50 > 5,000 mg/kg
Inhalation LC50 > 2.28 mg/L

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene Glycol 107-21-1	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation Irritating to eyes.

Respiratory or skin sensitization Did not cause sensitization on laboratory animals.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Respiratory system, Eyes, Skin, Central nervous system.

Aspiration hazard No information available.

Other adverse effects No data available.

Interactive effects No data available.

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylene Glycol 107-21-1	EC50: 6500 - 13000mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =41000mg/L (96h, Oncorhynchus mykiss) LC50: 14 - 18mL/L (96h, Oncorhynchus mykiss) LC50: =27540mg/L (96h, Lepomis macrochirus) LC50: =40761mg/L (96h, Oncorhynchus mykiss) LC50: 40000 - 60000mg/L (96h, Pimephales promelas) LC50: =16000mg/L (96h, Poecilia reticulata)	-	EC50: =46300mg/L (48h, Daphnia magna)

Persistence and degradability No data available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Ethylene Glycol 107-21-1	-1.93

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT Not regulated

15. Regulatory information

U.S. EPA Label Information

EPA Pesticide Registration Number 89442-57

EPA Pesticide Label CAUTION Causes moderate eye irritation.

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %

Ethylene Glycol - 107-21-1	1.0

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Ethylene Glycol 107-21-1	5000 lb	-

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:.

Chemical name	California Proposition 65
Ethylene Glycol - 107-21-1	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethylene Glycol 107-21-1	X	X	X
Water 7732-18-5	-	-	X

16. Other information

NFPA	**Health hazards** 2	**Flammability** 0	**Instability** 0	**Special hazards** -
HMIS	**Health hazards** 2 *	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Key or legend to abbreviations and acronyms used in the safety data sheet
Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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End of Safety Data Sheet