



## Safety Data Sheet

### Section 1: Identification

#### Product identifier

- Product Name** • Urea (Granular, Prilled, Micro-Prilled)
- Synonyms** • 46-0-0 (NPK); Urea (Carbamide)
- SDS Number/Grade** • 0001

#### Relevant identified uses of the substance or mixture and uses advised against

- Recommended use** • Fertilizer, Feed, Fire Retardant
- Restrictions on use** • For uses as identified only

#### Details of the supplier of the safety data sheet

- Manufacturer** • Gavilon Fertilizer LLC  
1331 Capital Avenue  
Omaha, NE 68102  
United States  
<http://www.gavilon.com>  
[sds@gavilon.com](mailto:sds@gavilon.com)
- Telephone (General)** • 402-889-4004 - 7:00 A.M. - 5:00 P.M. CT

#### Emergency telephone number

- Manufacturer** • 800-424-9300 - CHEMTREC

### Section 2: Hazard Identification

#### United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

#### Classification of the substance or mixture

- OSHA HCS 2012** • Skin Irritation 2  
Eye Irritation 2  
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

#### Label elements

OSHA HCS 2012

#### WARNING



- Hazard statements** • Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation

#### Precautionary statements

- Prevention** • Avoid breathing dust.  
Wash thoroughly after handling.

- Use only outdoors or in a well-ventilated area.  
Wear protective gloves/protective clothing/eye protection/face protection.
- Response • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
If on skin: Wash with plenty of water.  
Specific treatment, see supplemental first aid information.  
Take off contaminated clothing and wash before reuse.  
If skin irritation occurs: 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.  
If eye irritation persists: Get medical advice/attention.
- Storage/Disposal • Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

### Canada

According to: WHMIS

### Classification of the substance or mixture

WHMIS

- Other Toxic Effects - D2B

### Label elements

WHMIS



- Other Toxic Effects - D2B

### Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

## Section 3 - Composition/Information on Ingredients

### Substances

- Material does not meet the criteria of a substance.

### Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Urea	CAS:57-13-6	92.625% TO 99.7%	Ingestion/Oral-Rat LD50 • 8471 mg/kg	OSHA HCS 2012: Skin Irrit. 2; Eye Irrit. 2; STOT SE 3: Resp. Irrit.	NDA
Methylenediurea	CAS:13547-17-6	0% TO 2.5%	NDA	OSHA HCS 2012: Eye Irrit. 2A	NDA
Biuret	CAS:108-19-0	0% TO 1.5%	NDA	OSHA HCS 2012: Skin Irrit. 2; Eye Irrit. 2A	NDA

## Section 4: First-Aid Measures

### Description of first aid measures

- |            |   |
|------------|---|
| Inhalation | <ul style="list-style-type: none"><li>• Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. If signs/symptoms continue, get medical attention.</li></ul> |
| Skin       | <ul style="list-style-type: none"><li>• Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention.</li></ul>                                  |
| Eye        | <ul style="list-style-type: none"><li>• In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.</li></ul>                   |
| Ingestion  | <ul style="list-style-type: none"><li>• Rinse mouth. Do not give anything by mouth to an unconscious person. Get medical attention if symptoms occur.</li></ul>   |

### Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

### Indication of any immediate medical attention and special treatment needed

- |                    |  |
|--------------------|--|
| Notes to Physician | <ul style="list-style-type: none"><li>• All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.</li></ul> |
|--------------------|--|

## Section 5: Fire-Fighting Measures

### Extinguishing media

- |                                |  |
|--------------------------------|--|
| Suitable Extinguishing Media   | <ul style="list-style-type: none"><li>• In case of fire use media as appropriate for surrounding fire.</li></ul> |
| Unsuitable Extinguishing Media | <ul style="list-style-type: none"><li>• None known.</li></ul>  |

### Special hazards arising from the substance or mixture

- |                                    |  |
|------------------------------------|--|
| Unusual Fire and Explosion Hazards | <ul style="list-style-type: none"><li>• Urea is non-combustible under most conditions. However, during a fire, irritating/toxic gases may be generated. The dust can be ignited at very high temperatures, but not expected to explode (minimum ignition temperature cloud = 900°C).</li></ul> |
| Hazardous Combustion Products      | <ul style="list-style-type: none"><li>• No data available</li></ul>  |

### Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Move containers from fire area if you can do it without risk.

## Section 6 - Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

- |                      |  |
|----------------------|--|
| Personal Precautions | <ul style="list-style-type: none"><li>• Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment.</li></ul>  |
| Emergency Procedures | <ul style="list-style-type: none"><li>• As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. Keep unauthorized personnel away.</li></ul> |

### Environmental precautions

- Avoid run off to waterways and sewers.

### Methods and material for containment and cleaning up

**Containment/Clean-up Measures**

- Avoid generating dust.  
SMALL DRY SPILLS: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.  
LARGE SPILLS: Cover powder spill with plastic sheet or tarp to minimize spreading.

**Section 7 - Handling and Storage****Precautions for safe handling****Handling**

- Use good safety and industrial hygiene practices. Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

**Conditions for safe storage, including any incompatibilities****Storage**

- Store in a cool, dry, well-ventilated place.

**Section 8 - Exposure Controls/Personal Protection****Control parameters****Exposure Limits/Guidelines**

- No applicable exposure limits available for product or components.

Exposure Limits/Guidelines			
	Result	ACGIH	OSHA
Urea (Granular, Prilled, Micro-Prilled)	TWAs	10 mg/m <sup>3</sup> TWA (inhalable particles, recommended); 3 mg/m <sup>3</sup> TWA (respirable particles, recommended)	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)
		as Particulates not otherwise classified (PNOC)	as Particulates not otherwise classified (PNOC)

**Exposure controls****Engineering****Measures/Controls**

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment).

**Personal Protective Equipment****Respiratory**

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

**Eye/Face**

- Wear safety goggles.

**Skin/Body**

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

**Environmental Exposure Controls**

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

**Key to abbreviations**

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

**Section 9 - Physical and Chemical Properties****Information on Physical and Chemical Properties**

Material Description			
Physical Form	Solid	Appearance/Description	White prill or granules with a slight ammonia odor.
Color	White	Odor	Slight ammonia odor.
Odor Threshold	No data available		
General Properties			
Boiling Point	Decomposes	Melting Point/Freezing Point	270.9 °F(132.7222 °C)
Decomposition Temperature	270.9 °F(132.7222 °C)	pH	7.2 10% Sol
Specific Gravity/Relative Density	No data available	Bulk Density	44 to 52 lb(s)/ft <sup>3</sup>
Water Solubility	Moderately soluble 1 to 10 %	Viscosity	No data available
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

## Section 10: Stability and Reactivity

### Reactivity

- No dangerous reaction known under conditions of normal use.

### Chemical stability

- Stable under normal temperatures and pressures.

### Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### Conditions to avoid

- Avoid generating dust.

### Incompatible materials

- Strong acids, strong bases, Strong oxidizers.

### Hazardous decomposition products

- Under conditions of fire this material may produce: Nitrogen oxides; Biuret; Carbon oxides.

## Section 11 - Toxicological Information

### Information on toxicological effects

Components		
Urea (92.625% TO 99.7%)	57-13-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 8471 mg/kg; Irritation: Skin-Human • 20 % 24 Hour(s) • Moderate irritation; Mutagen: DNA damage • Unreported Route-Human • Liver (Somatic cell) • 31.6 µmol/L 48 Hour(s); Reproductive: Intraplental-Woman TDLo • 1400 mg/kg (16W preg); Reproductive Effects: Effects on Fertility: Abortion; Tumorigen / Carcinogen: Ingestion/Oral-Rat TDLo • 821 g/kg 1 Year(s)-Continuous; Tumorigenic: Neoplastic by

RTECS criteria; Blood:Tumors; Blood:Lymphoma, including Hodgkin's disease

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • No data available
Skin corrosion/Irritation	OSHA HCS 2012 • Skin Irritation 2
Serious eye damage/Irritation	OSHA HCS 2012 • Eye Irritation 2
Skin sensitization	OSHA HCS 2012 • No data available
Respiratory sensitization	OSHA HCS 2012 • No data available
Aspiration Hazard	OSHA HCS 2012 • No data available
Carcinogenicity	OSHA HCS 2012 • No data available
Germ Cell Mutagenicity	OSHA HCS 2012 • No data available
Toxicity for Reproduction	OSHA HCS 2012 • No data available
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
STOT-RE	OSHA HCS 2012 • No data available

## Potential Health Effects

### Inhalation

- Acute (Immediate) • May cause respiratory irritation.
- Chronic (Delayed) • No data available

### Skin

- Acute (Immediate) • Causes skin irritation.
- Chronic (Delayed) • No data available

### Eye

- Acute (Immediate) • Causes serious eye irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.
- Chronic (Delayed) • No data available

### Ingestion

- Acute (Immediate) • May cause discomfort if swallowed.
- Chronic (Delayed) • No data available

#### Key to abbreviations

LD = Lethal Dose

TD = Toxic Dose

## Section 12 - Ecological Information

### Toxicity

- This product is not classified as an environmental hazard. However, it a readily available source of nitrogen and can foster excessive algae growth or microorganisms in water systems.

### Persistence and degradability

- Material data lacking.

### Bioaccumulative potential

- Material data lacking.

## Mobility in Soil

- Material data lacking.

## Other adverse effects

- No studies have been found.

## Section 13 - Disposal Considerations

### Waste treatment methods

#### Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

## Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute

Inventory				
Component	CAS	Canada DSL	Canada NDSL	TSCA
Biuret	108-19-0	Yes	No	Yes
Methylenediurea	13547-17-6	No	No	No
Urea	57-13-6	Yes	No	Yes

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Uncontrolled product according to WHMIS classification criteria

## Canada - WHMIS - Ingredient Disclosure List

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## Environment

## Canada - CEPA - Priority Substances List

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## United States

## Labor

## U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - OSHA - Specifically Regulated Chemicals

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## Environment

## U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing



• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## United States - California

### Environment

#### U.S. - California - Proposition 65 - Carcinogens List

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

#### U.S. - California - Proposition 65 - Developmental Toxicity

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

#### U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

#### U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

#### U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

#### U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Biuret	108-19-0	Not Listed
• Methylenediurea	13547-17-6	Not Listed
• Urea	57-13-6	Not Listed

## Section 16 - Other Information

Revision Date	• 18/March/2016
Preparation Date	• 07/February/2014
Disclaimer/Statement of Liability	<ul style="list-style-type: none"> <li>The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended</li> </ul>

practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this SDS.

Key to abbreviations

NDA = No Data Available