



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

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

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|------------|---|
| Inhalation | <ul style="list-style-type: none">• 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. |
| Skin | <ul style="list-style-type: none">• Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention. |
| Eye | <ul style="list-style-type: none">• 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. |
| Ingestion | <ul style="list-style-type: none">• Rinse mouth. Do not give anything by mouth to an unconscious person. Get medical attention if symptoms occur. |

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

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| Notes to Physician | <ul style="list-style-type: none">• 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. |
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Section 5: Fire-Fighting Measures

Extinguishing media

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

Special hazards arising from the substance or mixture

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|------------------------------------|--|
| Unusual Fire and Explosion Hazards | <ul style="list-style-type: none">• 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). |
|------------------------------------|--|

- | | |
|-------------------------------|---|
| Hazardous Combustion Products | <ul style="list-style-type: none">• No data available |
|-------------------------------|---|

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

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|----------------------|--|
| Personal Precautions | <ul style="list-style-type: none">• Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment. |
| Emergency Procedures | <ul style="list-style-type: none">• 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. |

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 ³ TWA (inhalable particles, recommended); 3 mg/m ³ TWA (respirable particles, recommended)	15 mg/m ³ TWA (total dust); 5 mg/m ³ 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)/ft³
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
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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