

Safety Data Sheet

Urea



SDS Revision Date:

02/21/2017

1. Identification

1.1. Product identifier

Product Identity

Urea

Alternate Names

ACL-002, Carbamide, Carbonyldiamide, Urea

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use

See Technical Data Sheet.

Application Method

See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name

7420 Airport Road - Unit 202

Mississauga, ON L4T 4E5

Emergency

24 hour Emergency Telephone No.

AGRICO (MISSISSAUGA) EMERGENCY ASSISTANCE
(905) 672-5700

CANUTEC 24 HOUR EMERGENCY 1-888-CAN-UTEC
(226-8832)

Customer Service:

(502)842 2633

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Irrit. 3;H316

Causes mild skin irritation (This category was not adopted by Canada)

2.2. Label elements

Warning

H316 Causes mild skin irritation.

[Prevention]:

No GHS prevention statements

[Response]:

P332+313 If skin irritation occurs: Get medical advice / attention.

[Storage]:

No GHS storage statements

[Disposal]:

No GHS disposal statements

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3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the Controlled Products Regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Urea CAS Number: 0000057-13-6	97.55	Not classified	[1]
Imidodicarbonic diamide CAS Number: 0000108-19-0	1.05	Skin Irrit. 2;H315 Eye Irrit. 2;H319 STOT SE 3;H335	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion

Induce vomiting if conscious. Never give anything by mouth to an unconscious person. Consult physician.

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

Overview

At high dust concentrations, irritation of eyes, skin, and mucous membranes by chemical or mechanical action may occur.

Skin

Causes mild skin irritation.

5. Fire-fighting measures

5.1. Extinguishing media

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Use water to control surrounding fire, if water is compatible with burning product.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Ammonia, biuret, nitrogen oxides and carbon oxides. May react with hypochlorites to form explosive nitrogen trichloride.

5.3. Advice for fire-fighters

At elevated temperature, urea may decompose to form cyanuric acid, ammonia, biuret and nitrogen oxides. Wear self-contained breathing apparatus (positive pressure, if available) and full protective clothing.

ERG Guide No. ---

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

EMERGENCY ACTION: Keep unnecessary people away, and isolate hazard area. Sweep or shovel into containers for reclaim or disposal.

SMALL SPILLS: Flush with water; urea has low aquatic toxicity.

LARGE SPILLS: Contain spill for later disposal. Notify government authorities if spill is significant.

7. Handling and storage

7.1. Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

Keep dry. Avoid contact with the eye, dust inhalation and repeated or prolonged contact with the skin or clothes.

7.2. Conditions for safe storage, including any incompatibilities

Spilled urea, wet or dry, can cause slippery conditions. May be toxic to cattle (ruminants) when ingested.

Incompatible materials: Nitric acid, sodium nitrite, nitrosyl perchlorate, gallium perchlorate, hypochlorites, phosphorus pentachloride. Avoid contact with strong oxidizers, acids or bases. May react with sodium or calcium hypochlorite to form nitrogen trichloride which explodes spontaneously in air.

7.3. Specific end use(s)

No data available.

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8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000057-13-6	Urea	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	AIHA Workplace Environmental Exposure Limit (WEEL): 10mg/m3, 8-hr TWA
0000108-19-0	Imidodicarbonic diamide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

The exposure limits for nuisance dust are: OSHA PEL: 15 mg/m3 (50 mppcf*) TWA, ACGIH 10 mg/m3.

8.2. Exposure controls

Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes

Protective safety glasses recommended

Skin

No protection required. If irritation occurs, long sleeves and impervious gloves should be worn.

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices

Washing stations should be available. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

9. Physical and chemical properties

Appearance

White, Granular Solid

Odor

No odor or slight odor of ammonia.

Odor threshold

Not determined

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pH	7.2 (10% sol.)
Melting point / freezing point	132.7°C
Initial boiling point and boiling range	Decomposes at 135°C
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	80 Pa at 20°C (calc)
Vapor Density	Not Measured
Specific Gravity	Not Applicable
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured
Density	44 - 49 lbs/cu. ft.

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Nitric acid, sodium nitrite, nitrosyl perchlorate, gallium perchlorate, hypochlorites, phosphorus pentachloride. Avoid contact with strong oxidizers, acids or bases. May react with sodium or calcium hypochlorite to form nitrogen trichloride which explodes spontaneously in air.

10.6. Hazardous decomposition products

Ammonia, biuret, nitrogen oxides and carbon oxides. May react with hypochlorites to form explosive nitrogen trichloride.

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11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Urea - (57-13-6)	14,300.00, Rat - Category: NA	No data available	No data available	No data available	No data available
Imidodicarbonic diamide - (108-19-0)	No data available	No data available	No data available	No data available	No data available

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000057-13-6	Urea	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000108-19-0	Imidodicarbonic diamide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	3	Causes mild skin irritation.
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

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12. Ecological information

12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Urea - (57-13-6)	6,810.00, Fish	22,998.00, Daphnia magna	5,001.00 (72 hr), Algae
Imidodicarbonic diamide - (108-19-0)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

When released to soil, urea will hydrolyze into ammonium in a matter of days to several weeks. When released into water, this material may biodegrade to a moderate extent. When released into water, urea is expected to evaporate significantly bioaccumulation. When released into the air, urea is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, urea is expected to have a half-life of less than 1 day.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Whatever cannot be saved for recovery or recycling should be managed in appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport information

DOT (Domestic Surface
Transportation)

IMO / IMDG (Ocean
Transportation)

ICAO/IATA

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14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No;		
14.6. Special precautions for user			
No further information			

15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Components are DSL Listed, NDSL Listed and/or are exempt from listing.

WHMIS Classification Not Regulated

16. Other information

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

The information contained herein is furnished without warranty of any kind. The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide. Users should make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

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