

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the product****Product number:** U6006**Name of material:** Urea**CAS No.:** 57-13-6**1.2 Recommended use and restriction on use**

General use : For experimental, research and industrial use.

Restriction on use : Never drink, Not used except for experimental, research and industrial applications.

1.3 Manufacturer / Supplier / Distributor information**Importer/distributors identification**

Company : ASIA CHEMIE (THAILAND) CO., LTD.

Address : 44/27 Moo.4 T.Huaykapi A.Muangchonburi, Chonburi, Thailand. 20130

Telephone number : +66 3838 7988

Fax number : +66 3838 7989

E-mail : asiachemie@gmail.com, natchakot@asiachemie.com, natchakot@gmail.com

2. Hazards identification**2.1 GHS Classification**

Skin corrosion/irritation : Category2

Serious eye damage/irritation : Category2A

Germ cell mutagenicity: Category2

Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)

2.2 GHS label elements**Hazard symbols****Signal word:** Warning**Hazard Statements**

- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects o Precautionary statements

Precautionary Statements

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust/fume.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

2.3 Other hazards which do not result in classification : (NFPA Classification)**NFPA grade (O ~ 4 level)**

- Health :2, Flammability: 1, Reactivity: 0

3. Composition/information on ingredients

Chemical Name	Synonyms	CAS Number	Concentration %
Urea	Carbamide; Carbamide Resin; Carbamimidic acid; Carbonyldiamide; Carbonyldiamine;	57-13-6	100

4. First aid measures**4.1 Eye contact**

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Remove contact lenses if worn.

4.2 Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms (flare, irritate) occur.
- Wash thoroughly after handling.

4.3 Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.

4.4 Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

4.5 Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

4.6 Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. Fire-fighting measures**5.1 Suitable (Unsuitable) extinguishing media**

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray.
- Avoid use of water jet for extinguishing.

5.2 Specific hazards arising from the chemical

- Not available

5.3 Special protective actions for firefighters

- Move containers from fire area, if you can do without the risk.
- Avoid inhalation of materials or combustion by-products.
- Do not approach the tank surrounded by fire until it is extinguished.
- Use appropriate extinguishing measure suitable for surrounding fire.
- Wear appropriate protective equipment.
- Keep containers cool with water spray.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

- Ventilate closed spaces before entering.
- Move container to safe area from the leak area.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment.
- Avoid skin contact and inhalation.
- Cleanup and disposal under expert supervision is advised.
- Keep unauthorized people away, isolate hazard area and deny entry.

6.2 Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.

- If large amounts have been spilled, inform the relevant authorities.

6.3 Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notify the central and local government if the emission reach the standard threshold.
- Disposal of waste shall be in compliance with the Wastes Control Act.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area.

7. Handling and storage

7.1 Precautions for safe handling

- Since emptied containers retain product residue (vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Avoid contact with incompatible materials.
- Get the manual before use.
- Do not handle until all safety precautions have been read and understood.
- Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities

- Save in cool, dry and well ventilated place.
- Do not apply any physical shock to container.
- Avoid direct sunlight. - Keep sealed when not in use.
- No open fire.
- Collected them in sealed containers.

8. Exposure controls/personal protection

8.1 Exposure limits

ACGIH TLV

- Not available

OSHA PEL

- Not available

8.2 Engineering controls

Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection

- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
- Respiratory protection is ranked in order from minimum to maximum.
- Consider warning properties before use.
- Dust, mist, fume-purifying respiratory protection.
- Air-purifying respirator with high-efficiency particulate filtering.
- Any respiratory protection with a electromotion fan (for dust, mist, fume-purifying).
- Self-contained breathing apparatus with a corpuscle filter of high efficiency.
- For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.

Eye protection

- Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.

Hand protection

- Wear appropriate glove.

Skin protection

- Wear appropriate clothing.

Others

- Not available

9. Physical and chemical properties

A. Appearance	
- Appearance	Solid (Other)
- Color	white
B. Odor	ammonia odor
C. Odor threshold	Not available
D. pH	7.2 (10% water solution)
E. Melting point/Freezing point	132.7 °C
F. Initial Boiling Point/Boiling Ranges	135 °C
G. Flash point	73 °C
H. Evaporation rate	Not available
I. Flammability (solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Not available
K. Vapour pressure	0.000012 mmHg (at 25 °C)
L. Solubility	5450000 mg/l (in water at 25 °C)
M. Vapour density	Not available
N. Specific gravity (Relative density)	1.335 (20 °C)
O. Partition coefficient of n-octanol/water	-2.11
P. Autoignition temperature	Not available
Q. Decomposition temperature	135 °C
R. Viscosity	1.78 mPa-s (46% solution at 20 °C); 1.81 mPa-s (at 137°C); 1.90 mPa -s (saturated solution at 20°C)
S. Molecular weight	60.06

10. Stability and reactivity**10.1 Chemical Stability**

- This material is stable under recommended storage and handling conditions.

10.2 Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

10.3 Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces.

10.4 Incompatible materials

- Not available

10.5 Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. Toxicological information**11.1 Information on the likely routes of exposure****Respiratory tracts**

- May cause respiratory irritation.

Oral

- Not available

Eye · Skin

- Causes serious eye irritation
- Causes skin irritation

11.2 Delayed and immediate effects and also chronic effects from short and long term exposure**Acute toxicity**

*** Oral**

- [Urea] : LD50 = 14300 mg/kg Rat (male)(SIDS)

*** Dermal**

- [Urea] : LD50 = 8200 mg/kg Rat (IUCLID)

*** Inhalation**

- Not available

Skin corrosion/irritation

- Causes skin irritation

Serious eye damage/irritation

- Causes serious eye irritation

Respiratory sensitization

- Not available

Skin sensitization

- Not available

Carcinogenicity*** IARC**

- Not available

*** OSHA**

- Not available

*** ACGIH**

- Not available

*** NTP**

- Not available

*** EU CLP**

- Not available

Germ cell mutagenicity

- Suspected of causing genetic defects

Reproductive toxicity

- Not available

STOT-single exposure

- May cause respiratory irritation.

STOT-repeated exposure

- Not available

Aspiration hazard

- Not available

12. Ecological information**12.1 Ecotoxicity****Fish**

- [Urea] : LC50 = 22500 mg/l 96 hr (OECD Screening Information Data Set)

Crustaceans

- [Urea] : EC50 = 10000 mg/l 24 hr Daphnia magna (SIDS)

Algae

- [Urea]: EC50 = 42184 mg/l 96 hr (Estimate)

12.2 Persistence and degradability**Persistence**

- [Urea] : log Kow=-2.11

Degradability

- Not available

12.3 Bioaccumulative potential**Bioaccumulative potential**

- [Urea] : BCF = 1 (IUCLID)

Biodegradation

- [Urea] : Biodegradability = 96 (%) 16 day (IUCLID)

12.4 Mobility in soil

Not available

12.5 Other adverse effects

Not available

13. Disposal considerations

13.1 Disposal methods

- Stabilization and minimization treatment by incineration or similar method can be applied, if more than two kinds of designated wastes are in mixture state and it is impractical to separate them.
- Oil water separation technology shall be applied as pre-waste treatment if it is applicable
- It shall be treated by incineration

13.2 Special precautions for disposal

- Anyone with business license number who generates industrial wastes shall treat the waste by him/herself or by entrusting to the legal entities who treat the wastes, recycle the wastes of others or install and operate the waste treatment facilities according to the Wastes Control Act
- Dispose of waste in accordance with all applicable laws and regulations.

14. Transport information

14.1 UN No. (IMDG CODE/IATA DGR)

- Not applicable

14.2 Proper shipping name

- Not applicable

14.3 Hazard Class

- Not applicable

14.4 IMDG CODE/IATA DGR Packing group

- Not applicable

14.5 Marine pollutant

- Not applicable

14.6 Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- EmS FIRE SCHEDULE : Not available
- EmS SPILLAGE SCHEDULE : Not available
- Air transport(IATA): Not subject to IATA regulations.

15. Regulatory information

15.1 National and/or international regulatory information

POPs Management Law

- Not applicable

Information of EU Classification

* Classification

- Not applicable

U.S. Federal regulations

* OSHA PROCESS SAFETY (29CFR1910.119)

- Not applicable

* CERCLA Section 103 (40CFR302.4)

- Not applicable

* EPCRA Section 302 (40CFR355.30)

- Not applicable

* EPCRA Section 304 (40CFR355.40)

- Not applicable

* EPCRA Section 313 (40CFR372.65)

- Not applicable

Rotterdam Convention listed ingredients

- Not applicable

Stockholm Convention listed ingredients

- Not applicable

Montreal Protocol listed ingredients

- Not applicable

16. Other information

Reason for the revision: General update.

Date: 13/7/2014

SDS : U6006 Urea

Contact : info@qrec.asia, info@asiachemie.com

Revision #3

Date: 10/01/2020

No warranty, expressed or implied for a particular purpose or otherwise is made, except the products herein discussed comply to the chemical description on the labels. Buyer assumes risks of the use, storage and handling. Producer or distributors shall not be liable for any incidental or consequential damages arising directly or indirectly in connection with the purchase, use, storage or handling of this product. The information contained herein is, to the best of our knowledge, true and accurate. However, all recommendations or suggestions are made without guarantee, since the conditions of use are beyond our control. We disclaim any liability incurred in connection with the use of these data or suggestions.

QRëC