Samchun Chemicals

Material Safety Data Sheet

Urea

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

1. Product Identifier Urea; Carbamide

2. Recommended Use & Uses advised against Uses for Laboratory and R&D only

3. Information of Supplier

SAMCHUN PURE CHEMICAL CO.,LTD
ADDRESS; (Mogok-dong) 117, Sandan-ro 16Beon-gil, Pyeongtaek-si, Gyeonggi-do, Korea
Emergency Phone; 82-31-668-0700/3
Department; Safety & Environment dep.
Web site; http://www.samchun.com

Section 2 – HAZARDS and DANGER IDENTIFICATION

1.GHS Classification· Identification

Skin Corrosion/Skin Irritation	Category2
Serious Eye Damage/Eye Irritation	Category2

2. Label and Mark including Precautionary Statement

◦**Label elements**

◦**Signal word** Warning

◦**Hazard ·Danger statement**
H315 Causes skin irritation
H319 Causes serious eye irritation

◦**Precautionary statement**

Precaution
P264 Wash ... thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection

Measures
P321 Specific treatment (see Seciton 4. on this label).
P302+P352 IF ON SKIN: Wash with plenty of water / (...)
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash before reuse
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention.

Storage N/A

Dispose N/A

3. Other Hazard-Risk which are not included in the classification criteria

NFPA index(0~4steps) : Health=2, Fire=1, Reaction=0

Section 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	Other Name	CAS No.	Content (%)
Urea	Carbamide	57-13-6	99 <

Section 4 – FIRST AID MEASURES

1. Eye Contact Rinse with plenty of water for at least 15minutes and get medical

attention immediately.

2. Skin Contact	Take off contaminated cloths and shoes immediately, wash with plenty of water and soap for at least 15minutes.
3. Inhalation	Move victim to fresh air. If breathing is difficult, give artificial respiration and get medical attention immediately.
4. Ingestion	Do not induce vomiting. Get medical advice/attention immediately.
5. Immediate medical attention and Notes for physician	Keep the medical personnel aware of the materials involved and take protective action.

Section 5 – FIRE-FIGHT MEASURES

1. Suitable extinguish media	Powder, carbon dioxide, water, foam Extinguishing media Inappropriate Extinguishing Media: N/A
2. Special hazards arising from the substance	Thermal decomposition products: organic compounds, cyanides, ammonia, carbon, nitrogen oxides
3. Special protective equipment and Precautions for fire-fighters	Move containers from fire area if you can do it without risk. When extinguishing a fire, be sure to wear personal protective equipment. If it is not possible to extinguish the fire, withdraw immediately. Keep containers cool by spraying with water for a long time, even after the fire is out. Isolate hazardous areas and deny access to people.

Section 6 – ACCIDENTIAL RELEASE MEASURES

1.Personal precautions and Emergency procedures	Do not touch spilled material. Avoid inhalation and skin contact. In case of confined space, wear air respirator and ventilate and remove all sources of ignition.
2. Environmental precautions	Minimize leak/spill, collect and keep leak/spill in container
3. Methods and material for containment and cleaning up	Remove residue with high-efficient cleaner

Section 7 – HANDING AND STORAGE

1. Precautions for safe Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. All containers should be grounded.
2. Conditions for safe storage	Minimize dust generation and accumulation Keep container tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials.

Section 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

1.Occupational exposure limit, biological exposure limit
National law of Safety management of
N/A

2. Appropriate Engineering controls	Ensure compliance with applicable exposure limits and operate local exhaust ventilation when working. If the substance is at risk of explosion, ventilation equipment should be explosion-resistant.

3. Personal protective equipment

◦**Respiratory protection**	Because it is concerned about the harmfulness of human body due to chemical substances, it is recommended to wear respiratory protective equipment with dust mask or dust filter in consideration of physical and chemical characteristics when handling. Respiratory protection should be certified by the Health and Safety Authority. It is concerned about the harmfulness of the human body depending on the working environment, it should wear respirator, air-purifying respirator
◦**Eye-protection**	Wear safety glasses when handling as they may cause human health hazards due to chemicals. Install eye wash facilities and emergency eyewash stations near chemical handling sites
◦**Hand protection**	Wear safety gloves when handling, as it is likely to harm human health due to

	chemicals
◦**Skin and body proticion**	Wear chemical protective clothing when handling, as it is likely to harm human health due to chemicals

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

1.Physical state and color	Solid(White)	**2.Odor**	Ammonia odor
3.threshold	N/A	**4. pH**	7.5-9.5(10% aq. Sol)
5.Melting/Freezing point	131-135℃	**6.Boiling point/range**	N/A
7. Flashing point	N/A	**8. Evaporation speed**	N/A
9. Flammability(solid,gas)	N/A	**10. Flash or Explosion limit upper / lower**	N/A
11. Vapor pressure	1.25mmHg@25℃	**12. Solubility**	1080g/l(20℃)
13. Vapor density	N/A	**14.Gravity**	1.3230
15. n-octanol-water Partition coefficient	-2.11	**16. Self ignition temp(℃)**	N/A
17. Cracking temp(℃)	>135℃	**18. Viscosity**	N/A
19. Molecular Weight	60.06		

Section 10 – STABILITY AND REACTIVITY

1.Chemical stability and Possibility of Hazardous Reactions	Stable under normal temp. and pressure
2. Conditions to Avoid	Avoid contact with prohibited substances.
3. Incompatible Materials	Acids, bases, oxidants, metal salts, combustible materials
4. Hazardous Decomposition Products	Thermal decomposition products: various organic compounds, cyanide compounds, ammonia, nitrogen oxides, carbon

Section 11 – TOXICOLOGICAL INFORMAION

1. Information on the likely routes of exposure.

N/A

2. Health hazard information

◦**Acute toxic**	Oral : LD50 14300mg/kg Skin : LD50 8200mg/kg Rat Inhalation : N/A
◦**Serious skin corrosive / irritation**	Irritation, pain and irritation of skin
◦**Serious eye damage / irritation**	Irritating to eyes, causing pain, redness
◦**Respiratory sensitization**	N/A
◦**Skin sensitization**	N/A
◦ **Carcinogenicity**	N/A
◦ **Germ cell Mutagenicity**	Microbial reverse mutation test: negative Cytogenetic toxicity test: positive
◦ **Reproductive toxic**	N/A
◦**Specific target organ toxicity (single exposure)**	N/A
◦**Specific target organ toxicity (repeated exposure)**	N/A
◦**Aspiration hazard**	N/A

Section 12 – ECOLOGICAL INFORMATION

1.Acquatic and Terrestrial eco toxicity	Fish toxicity : LC50 22500 mg / l 96 hr Others (Test Species: Tilapia) Invertebrate toxicity : EC50 > 10000 ㎎/ℓ 24 hr Daphnia magna

	Sea algae : EC50 42184 ㎎/ℓ 96 hr
2.Persistence and degradability	Persistence : -2.11 Degradability : N/A
3.Bioaccumulative potential	Concentrations : BCF 1 (OECD Guide line 302) Bioaccumulative : 96 (%) 16 day (Biodegradation)
4.Mobility in soil	N/A
5.Other adverse effects	N/A

Section 13 – Disposable considerations

1.Waste methods	Dispose in accordance with local regulations.
2.Waste warning	Dispose prohibited substances and waste separately from others.

Section 14 – TRANSPORT INFORMATION

1. UN No.	Non-described
2.Proper shipping Name	Non-described
3.Hazard class	Non-described
4.Packing group	Non-described
5.Marine pollutnat	N/A
6.Particular safety Measures for transportation	Non-described

Section 15 – REGULATARY INFORMATION

1.Occupation safety and health acts	Non-described
2. Chemical Substances Control Act	Non-described
3. National law of Safety management of hazardous material	Non-described
4.National law of management of Wastes	Designated Waste
5.Other domestic and foreign law	Non-described

Section 16 – OTHER INFORMATION

1. Material source	A chemical information MSDS Safety and Health Agency National Institute of Environmental Research Chemical Information Systems Korea Industrial Technology National Fire Hazardous Materials Information System
1. The 1st edition	2002.07.30
2. Revision and The final revision	8 / 2020.11.24

. Other references

*** The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.**