

MATERIAL SAFETY DATA SHEET (MSDS)**MATERIAL SAFETY DATA SHEET****EM SCIENCE****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Manufacturer.....:

EM SCIENCE

A Division of EM Industries

P.O. Box 70

480 Democrat Road

Gibbstown, N.J. 08027

Preparation Date.: 2/4/97**Information Phone Number.:** 856-423-6300**Hours:** Mon. to Fri. 8:30-5**Chemtrec Emergency Number:** 800-424-9300**Hours:** 24 hrs a day**Catalog Number(s):**

0084865B 00848664 0084866C 8487 8488 9510 9530 9550

UX0065 UX0065MB UX0066 UX0068 UX0070 UX0076

Product Name:

Urea

Synonyms:

Carbamide

Chemical Family:

Amide

Formula: $\text{CH}_4\text{N}_2\text{O}$ **Molecular Weight.:**

60.06

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS #	Appr %
Urea	57-13-6	100%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to skin, eyes and mucous membranes.

Contact With Heated Material May Cause Thermal Burns.

Appearance:

White crystals

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

Symptoms of Exposure:

Irritating on contact with skin, eyes or mucous membranes. May be harmful if swallowed. Contact with heated material may cause thermal burns. Dust inhalation may irritate nasal and respiratory passages.

Medical Cond. Aggravated by Exposure:

Respiratory conditions.

Routes of Entry:

Inhalation, ingestion

Carcinogenicity:

The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

4. FIRST AID MEASURES

Emergency First Aid:

GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

Skin: Immediately flush thoroughly with large amounts of water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point (F): Noncombustible

Flammable Limits LEL (%): N/A

Flammable Limits UEL (%): N/A

Extinguishing Media:

Use any suitable for adjacent material.

Fire Fighting Procedures:

Wear self-contained breathing apparatus and protective clothing.

Fire & Explosion Hazards:

Thermal decomposition produces toxic fumes. Reacts with sodium hypochlorite or calcium hypochlorite to form the explosive nitrogen trichloride.

6. ACCIDENTAL RELEASE MEASURES

Spill Response:

Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

7. HANDLING AND STORAGE

Handling & Storage:

Keep container closed. Store at controlled room temperature. Do not breathe dust. Do not get in eyes, on skin, or on clothing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:

Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:

Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves should be worn to prevent skin contact (Butyl Rubber, Viton or equivalent) Safety glasses with side shields should be worn at all times.

Work/Hygenic Practices:

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

EXPOSURE GUIDELINES

OSHA - PEL:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Urea							

ACGIH - TLV:

Component	TWA		STEL		CL		Skin
	PPM	MG/M3	PPM	MG/M3	PPM	MG/M3	
Urea							

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (C 760 mmHg) : Decomposes

Melting Point (C) : 132C

Specific Gravity (H₂O = 1) : 1.335

Vapor Pressure (mm Hg) : N/A

Percent Volatile by vol (%): N/A
Vapor Density (Air = 1) : N/A
Evaporation Rate (BuAc = 1): N/A
Solubility in Water (%) : Soluble
Appearance :
White crystals

10. STABILITY AND REACTIVITY

Stability: Yes

Hazardous Polymerization:

Does not occur

Hazardous Decomposition:

NH₃, NO_x, CO_x

Conditions to Avoid:

Heat

Materials To Avoid:

() Water

() Acids

() Bases

() Corrosives

(X) Oxidizers

(X) Other: NaNO₂, PCl₅, nitrosyl
perchlorate

11. TOXICOLOGICAL INFORMATION

Toxicity Data

orl-rat LD50: 8471 mg/kg

Toxicological Findings:

Tests on laboratory animals indicate material may cause tumors
and produce adverse mutagenic and reproductive effects.

Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA Waste Numbers:

Treatment:

Material does not have an EPA Waste number and is not a listed waste, however consultation with a permitted waste

disposal site (TSD) should be accomplished.

ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT Proper Shipping Name:

non-regulated

DOT ID Number :

none

14. REGULATORY INFORMATION

TSCA Statement:

The CAS number of this product is listed on the TSCA Inventory.

Component	SARA EHS (302)	SARA EHS TPQ (lbs)	CERCLA RQ (lbs)
Urea			

Component	OSHA Floor List	SARA 313	DeMinimis for SARA 313 (%)
Urea			

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

15. OTHER INFORMATION

Comments:

None

NFPA Hazard Ratings:

Health : 2
Flammability : 1
Reactivity : 0
Special Hazards :

Revision History: 12/1/81 4/17/86 2/23/87 10/16/89
3/1/91 1/16/92 12/10/92 4/29/93 1/13/96 12/9/96

| = Revised Section

N/A = Not Available

N/E = None Established

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