

MATERIAL SAFETY DATA SHEET

Supplier:



Origination, Inc.

1300 McKnight Road North

Maplewood, MN 55119

Emergency: 1-800-625-6079

CHEMTRAC, 24-HR. Emergency Assistance 1-800-424-9300

Section 1: Chemical Product and Identification

PRODUCT NAME: UREA, 46-0-0

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Section 2: Ingredients and Composition

Common Name: Urea

Chemical Name: Carbamide, Carbonyldiamide

Chemical Family: Not applicable

Chemical Formula: NH_2CONH_2

Section 3: Hazards Identification

INGREDIENTS

PERCENTAGES

PEL(OSHA)

TLV (ACGIH)

HAZARD INDEX

UREA

45 To 46 %

Not Regulated

None

None

EFFECTS OF OVEREXPOSURE:

INHALED Dust is irritating to the nose, throat and respiratory tract, and may cause coughing and sneezing.

IN CONTACT WITH EYES May cause irritation, redness and pain.

IN CONTACT WITH SKIN Prolonged and repeated contact may cause mild irritation.

INGESTED Ingestion of large amounts of dust may cause gastrointestinal upset and abdominal pain.

OTHER HEALTH EFFECTS Forms corrosive solutions when dissolved in water (or tears). High blood concentrations of urea increase the risk of glaucoma.

Section 4: First Aid Measures

INHALED Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical advice IMMEDIATELY.

IN CONTACT WITH THE SKIN Remove contaminated clothing. Wash affected areas with soap and water. If irritation persists, obtain medical advice.

IN CONTACT WITH EYES Immediately flush eyes thoroughly for 15 minutes with running water. Hold eyelids open during flushing. If irritation persists, repeat flushing and obtain medical attention.

INGESTED If victim is alert and not convulsing, rinse mouth out and give ½ to 1 glass of water to dilute material. DO NOT induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse and administer more water. Obtain medical attention IMMEDIATELY.

Section 5: Fire Fighting Measures

Flash Point: Non flammable

Auto Ignition Temp: Non combustible

Flammable limits in air Lower Upper (% by Volume): Not applicable

Extinguishing Media: Use appropriate media for surrounding fire.

Special Fire Fighting Procedures: A self-contained breathing apparatus should be worn in a fire involving the material. Toxic gas and vapor (carbon monoxide, ammonia, nitrogen oxide) may be released by decomposition.

Unusual Fire and Explosion Hazards: Reacts with Nitrates with risk of fire and explosion. Not combustible, but urea decomposes at $>133^{\circ}\text{C}$ generating toxic Nox fumes and ammonia gas. Not combustible.

Section 6: Procedure in Chemical Spill

STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED Stop or reduce discharge if safe to do so. Contact manufacturer or supplier for advice. If possible, contain discharge by damming or water diversion. Dike to prevent runoff from rainwater or water application. Remove material by manual or mechanical means. Recover undamaged containers. Notify environmental authorities to discuss disposal and cleanup of contaminated materials.

WASTE DISPOSAL PROCEDURES Contact manufacturer or supplier for advice on disposal. Contact environmental authorities for advice on disposal. May be buried in landfill site (environmental authorities approval required).

Section 7: Chemical Storage

HANDLING Avoid contact with eyes, skin and clothing and avoid breathing dust. Use only with adequate ventilation. Do not taste or swallow. Do not eat, drink, or smoke in the work area. Wash thoroughly after handling. Wear goggles or face shield and protective clothing when handling. Any protective clothing or shoes which become contaminated with potassium carbonate should be removed and thoroughly laundered and cleaned before wearing again. Discard any footwear that has been contaminated on the inner surface. Water must always be readily accessible whenever potassium carbonate is loaded, unloaded, stored or used.

STORAGE CONDITIONS Keep containers closed and dry. Material is coated to help prevent hygroscopicity and will help prevent absorption with moisture if exposed to humidity, but care needs to be given for particles and dust not coated.

INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT Avoid contact with lime (CaO). This product will react with lime in the presence of water to produce corrosive caustic potash (KOH).

Section 8: Regulatory Standards for Exposure

RESPIRATORY EQUIPMENT:

A NIOSH/MSHA approved air purifying respirator equipped with combined ammonia and dust, fume, mist cartridges, if necessary.

EYE PROTECTION Use chemical safety goggles when there is potential for eye contact.

PROTECTIVE CLOTHING Cotton gloves and protected clothing should be used.

OTHER (Safety Showers, Eyewash Stations, etc.) Generally not required.

Section 9: Physical and Chemical Properties

Boiling Point Decomposes before boiling

Specific Gravity: Solid at 20 deg C = 1.335t/m³ Vapor Pressure:

Data not Available Percent Volatiles: Not Applicable

Vapor Density (Air=1.0) Data not available

Soluble in Water: 78 g/100 ml (5 deg); 119.3 g/100 ML (25 deg C)

Evaporation Rate Not Applicable

Appearance & Odor White Granules, odorless or slight ammonia odor.

Section 10: Stability and Reactivity

STABLE Yes

CONDITIONS TO AVOID: Heating with hydroxides forms ammonia and carbon dioxide.

INCOMPATIBILITY (MATERIALS TO AVOID): Contact with a gallium perchlorate and hypochlorites will cause a violent reaction.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes in flame or on a hot surface, giving off toxic vapors (Nitrous vapors). Decomposes when heated, giving off suffocating gas (Anhydrous ammonia). Hydrolyzes slowly on contact with air. Reacts with hypochloride, phosphorous pentachloride and many

other chlorinating agents, giving off explosive – nitrogen trichloride. Reacts with oxidants. Reacts with nitrates, with risk of fire and explosion.

HAZARDOUS POLYMERIZATION: No

Conditions to avoid: N/A

Section 11: Toxicological Information

OTHER The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (Internal Agency Research on Cancer), not regulated as carcinogens by OSHA (Occupational Safety and Health Administration), and not listed as carcinogens by NTP (National Toxicology Program).

Occupational exposure limits

TLV not established.
MAK not established.

Routes of exposure

The substance can be absorbed into the body by ingestion.

Inhalation risk

A harmful concentration of airborne particles can be reached quickly when dispersed.

Effects of short-term exposure

The substance is irritating to the eyes, the skin and the respiratory tract.

Section 12: Ecological Information

No data available on any adverse effects of this material on the environment.

Section 13: Disposal Information

Waste Management/Disposal This product does not exhibit any characteristics of a hazardous waste. The product is suitable for landfill disposal. Follow all applicable federal, state and local regulations for safe disposal.

Section 14: Transport Information

US Department of Transportation: Not regulated by DOT as hazardous material. No hazard class, no label or placard required no UN or NA number assigned.

Canadian TDG Hazard Class & PIN: Not regulated.

Section 15: Preparation of Material Safety Data Sheet

Prepared by: Origination, Inc.

Prepared: March, 2012

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