

**** MATERIAL SAFETY DATA SHEET ****

Urea
24680

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Urea

Catalog Numbers:
 AC424580050, S71220, S79871, A4321285, A4321286, A4922551, A4922553,
 A4922555, A4922601, A4922603, A4922605, A4922608, BP169 10, BP169 212,
 BP169 500, BP169-10, BP169-212, BP169-500, BP1690LC, BP16910, BP169212,
 BP169500, BW155050, BW155550, U0150, U0155, U15 3, U15 50, U15 500, U15-10,
 U15-3, U15-50, U15-500, U153, U1550, U15500, U16 3, U16 50, U16-10, U16-3,
 U16-50, U163, U1650

Synonyms:

Carbamide, carbonyldiamide, aquacare, ureaphil, basodexan

Company Identification: Fisher Scientific

1 Reagent Lane

Fairlawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
57-13-6	Urea	100	200-315-5

Hazard Symbols: Xi
 Risk Phrases: 36/37/38 60

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: white.

Warning! May cause cardiac disturbances. Can cause reproductive effects. Causes eye and skin irritation. Causes digestive and respiratory tract irritation.

Target Organs: Cardiovascular system.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation.

Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause cardiac disturbances.

Inhalation:

Causes respiratory tract irritation.

Chronic:

Prolonged or repeated exposure may cause adverse reproductive effects.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid. Induce vomiting by giving one teaspoon of Syrup of Ipecac.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and supportively.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

Substance is noncombustible; use agent most appropriate to

extinguish surrounding fire. In case of fire use water spray, dry chemical, carbon dioxide, or appropriate foam.
 Autoignition Temperature: Not applicable.
 Flash Point: Not applicable.
 (estimated) Health: 1; Flammability: 0; Reactivity: 0
 Explosion Limits, Lower: Not available.
 Upper: Not available.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Use water spray to disperse the gas/vapor. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Urea	none listed	none listed	none listed

OSHA Vacated PELs:

Urea:
 No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure. Wear impervious gloves.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Solid
 Appearance: white
 Odor: ammonia-like
 pH: 7.2 (10% solution)
 Vapor Pressure: 1.2105 mm Hg @ 25C
 Vapor Density: 2
 Evaporation Rate: Not available.
 Viscosity: Not available.
 Boiling Point: Not available.
 Freezing/Melting Point: 132 deg C
 Decomposition Temperature: Not available.
 Solubility: 51.6% @ 68F
 Specific Gravity/Density: (H2O=1) 1.32
 Molecular Formula: CH4N2O
 Molecular Weight: 60.0408

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, excess heat.

Incompatibilities with Other Materials:

Reacts with calcium hypochlorite or sodium hypochlorite to form explosive nitrogen trichloride. Incompatible with sodium nitrite, gallium perchlorate, strong oxidizing agents (permanganate, dichromate, nitrate, chlorine), phosphorus pentachloride, nitrosyl perchlorate, titanium tetrachloride, and chromyl chloride.
Hazardous Decomposition Products:
Carbon monoxide, oxides of nitrogen, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Has not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 57-13-6: YR6250000
LD50/LC50:
CAS# 57-13-6: Oral, mouse: LD50 = 11 gm/kg; Oral, rat: LD50 = 8471 mg/kg.
Carcinogenicity:
Urea -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
Specific developmental abnormalities include: musculoskeletal, urogenital and cardiovascular systems.
Teratogenicity:
No information available.
Reproductive Effects:
Human reproductive effects by intraplacental route: fertility effects.
Experimental reproductive effects.
Neurotoxicity:
No information available.
Mutagenicity:
No information available.
Other Studies:
No data available.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:
No information found.
Environmental Fate:
Not expected to bioconcentrate, low biodegradation potential.
Physical/Chemical:
No information found.
Other:
No information found.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants:
None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None listed.
RCRA F-Series: None listed.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
No information available
IMO
Not regulated as a hazardous material.
IATA
Not regulated as a hazardous material.
RID/ADR
Not regulated as a hazardous material.
Canadian TDG
No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
CAS# 57-13-6 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
Section 302 (RQ)
None of the chemicals in this material have an RQ.
Section 302 (TPQ)
None of the chemicals in this product have a TPQ.
SARA Codes

CAS # 57-13-6: acute.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
Urea can be found on the following state right to know lists:
Minnesota.
California No Significant Risk Level:
None of the chemicals in this product are listed.
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XI
Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 60 May impair fertility.
Safety Phrases:
WGK (Water Danger/Protection)
CAS# 57-13-6: 1
Canada
CAS# 57-13-6 is listed on Canada's DSL/NDL List.
This product has a WHMIS classification of D2B.
CAS# 57-13-6 is not listed on Canada's Ingredient Disclosure List.
Exposure Limits

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 12/22/1994 Revision #12 Date: 5/20/1998

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.