SAFETY DATA SHEET

Creation Date 17-May-2010
Revision Date 25-Apr-2019
Revision Number 8

1. Identification

Product Name Urea
Cat No. : U15-3, U15-50, U15-500, U16-3, U16-50, U16SAM1, U17-12, U17-212, U17SAM1, NC1417991
CAS-No 57-13-6
Synonyms Carbamide
Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements
None required

Hazard Statements
Causes skin irritation
Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion Get medical attention if symptoms occur. Do NOT induce vomiting.

Most important symptoms and effects None reasonably foreseeable.

Notes to Physician Treat symptomatically

5. Fire-fighting measures


Unsuitable Extinguishing Media No information available

Flash Point Method - No information available

Autoignition Temperature No information available

Explosion Limits Upper No data available
Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂), Ammonia.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA
6. Accidental release measures

**Personal Precautions**
Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

**Environmental Precautions**
Should not be released into the environment.

**Methods for Containment and Clean Up**
Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

**Handling**
Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

**Storage**
Keep in a dry, cool and well-ventilated place. Refer product specification and/or product label for specific storage temperature requirement. Keep container tightly closed.

8. Exposure controls / personal protection

**Exposure Guidelines**
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures**
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection**
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 and body protection**
Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Ammonia-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>7.5-9.5 10% aq. solution</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>131 - 135 °C / 267.8 - 275 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>Upper: No data available, Lower: No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>1.25 mmHg @ 25 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Stable under normal conditions.

Conditions to Avoid
Incompatible products.

Incompatible Materials
Strong oxidizing agents, Chlorine, sodium hypochlorite

Hazardous Decomposition Products
Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂), Ammonia

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity
No acute toxicity information is available for this product

<table>
<thead>
<tr>
<th>Component</th>
<th>LD₅₀ Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>LD₅₀ = 8471 mg/kg ( Rat )</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
Irritating to skin

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
Mutagenic effects have occurred in experimental animals.

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known

STOT - repeated exposure
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
No information available
Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

### 12. Ecological information

#### Ecotoxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>Not listed</td>
<td>LC50: 16200 - 18300 mg/L, 96h (Poecilia reticulata)</td>
<td>= 23914 mg/L EC50 Photobacterium phosphoreum 5 min</td>
<td>EC50: &gt; 10000 mg/L, 24h (Daphnia magna Straus) EC50: = 3910 mg/L, 48h Static (Daphnia magna)</td>
</tr>
</tbody>
</table>

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available.

Mobility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>-1.59</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

### 15. Regulatory information

#### United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>X</td>
<td>ACTIVE</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
TSCA - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td>57-13-6</td>
<td>X</td>
<td>-</td>
<td>200-315-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-35144</td>
</tr>
</tbody>
</table>

#### U.S. Federal Regulations
SARA 313 | Not applicable
---|---
SARA 311/312 Hazard Categories | See section 2 for more information
CWA (Clean Water Act) | Not applicable
Clean Air Act | Not applicable
OSHA - Occupational Safety and Health Administration | Not applicable
CERCLA | Not applicable
California Proposition 65 | This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations | Not applicable
U.S. Department of Transportation Reportable Quantity (RQ): | N
DOT Marine Pollutant | N
DOT Severe Marine Pollutant | N
U.S. Department of Homeland Security | This product does not contain any DHS chemicals.
Other International Regulations |  
Mexico - Grade | No information available

### 16. Other information

Prepared By | Regulatory Affairs
---|---
Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Creation Date | 17-May-2010
Revision Date | 25-Apr-2019
Print Date | 25-Apr-2019
Revision Summary | This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of SDS