

**SECTION 1: Identification**

**1.1. Identification**

Product form : Mixture  
Product name : 15-0-0-16 (S)

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Use of the substance/mixture : Various industrial applications

**1.3. Details of the supplier of the safety data sheet**

Two Rivers Terminal  
3300 North Glade Road  
Pasco, Wa. 99302 - USA  
T 509-547-7776 - F 509-546-9508  
[www.tworiversterminal.com](http://www.tworiversterminal.com)

**1.4. Emergency telephone number**

Emergency number : 24 Hour Emergency HAZMAT Response: (800) 229-5252; EPA National Response Center (800) 424-8802

**SECTION 2: Hazard(s) identification**

**2.1. Classification of the substance or mixture**

**Classification (GHS-US)**

Acute toxicity (oral) H302  
Category 4  
Skin corrosion/irritation H314  
Category 1A

Full text of H statements : see section 16

**2.2. Label elements**

**GHS-US labeling**

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) : Danger  
Contains : Monocarbamide dihydrogen sulfate  
Hazard statements (GHS-US) : H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
Precautionary statements (GHS-US) : P260 - Do not breathe fume, spray, vapors, mist  
P264 - Wash skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear eye protection, face protection, protective clothing, protective gloves  
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell  
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a doctor  
P321 - Specific treatment (see the first aid section on this label)  
P330 - Rinse mouth  
P363 - Wash contaminated clothing before reuse  
P405 - Store locked up  
P501 - Dispose of contents/container to an authorized waste collection point

**2.3. Other hazards**

No additional information available

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### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Monocarbamide dihydrogen sulfate	(CAS No) 21351-39-3	56.25 - 80	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
urea	(CAS No) 57-13-6	1 - 5	Eye Irrit. 2B, H320

Full text of H-phrases: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Burns.
- Symptoms/injuries after eye contact : Serious damage to eyes.
- Symptoms/injuries after ingestion : Burns.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapor/spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection" .

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

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### 6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Do not breathe spray or mist.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.
- Incompatible products : Strong bases.
- Storage area : Store in a well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Monocarbamide dihydrogen sulfate (21351-39-3)

Not applicable

#### urea (57-13-6)

Not applicable

### 8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Mixture contains one or more component(s) which have the following colour(s):  
Blue White
- Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.  
Mixture contains one or more component(s) which have the following odour(s):  
Odourless In moist air: Ammonia odour
- Odor threshold : No data available
- pH : < 1
- Melting point : Not applicable
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : No data available
- Explosion limits : No data available
- Explosive properties : No data available
- Oxidizing properties : No data available
- Vapor pressure : No data available
- Relative density : No data available
- Relative vapor density at 20 °C : No data available
- Specific gravity / density : 1.52 g/ml

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Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

Strong bases.

### 10.6. Hazardous decomposition products

ammonia. Cyanuric acid. HCN. nitrogen oxides (NOx) and sulphur oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Likely routes of exposure	: Skin and eyes contact
Acute toxicity	: Oral: Harmful if swallowed.

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ATE US (oral)	443.750 mg/kg body weight

<b>Monocarbamide dihydrogen sulfate (21351-39-3)</b>	
LD50 oral rat	355 mg/kg
LD50 dermal rat	>= 2000 mg/kg
LD50 dermal rabbit	May be corrosive to skin
ATE US (oral)	355.000 mg/kg body weight

<b>urea (57-13-6)</b>	
LD50 oral rat	8471 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3200 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 21000 mg/kg (Rabbit; Literature study)
ATE US (oral)	8471.000 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: < 1
Serious eye damage/irritation	: Not classified pH: < 1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

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Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause respiratory irritation.
Symptoms/injuries after skin contact	: Burns.
Symptoms/injuries after eye contact	: Serious damage to eyes.
Symptoms/injuries after ingestion	: Burns.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Monocarbamide dihydrogen sulfate (21351-39-3)	
LC50 fish 1	≈ 80 mg/l <i>Gasterosueus Aculeatus</i>
EC50 Daphnia 1	433 g/l
urea (57-13-6)	
LC50 fish 1	> 6810 mg/l (96 h; <i>Leuciscus idus</i> ; Nominal concentration)
EC50 Daphnia 1	> 10000 mg/l (48 h; <i>Daphnia magna</i> ; Nominal concentration)
LC50 fish 2	17500 mg/l (96 h; <i>Poecilia reticulata</i> )
EC50 Daphnia 2	> 10000 mg/l (24 h; <i>Daphnia magna</i> )
TLM fish 1	17500 ppm (96 h; <i>Poecilia reticulata</i> )
Threshold limit other aquatic organisms 1	120000 mg/l (16 h; Bacteria; Toxicity test)
Threshold limit other aquatic organisms 2	> 10000 mg/l ( <i>Pseudomonas putida</i> )
Threshold limit algae 1	> 10000 mg/l (168 h; <i>Scenedesmus quadricauda</i> ; Growth rate)
Threshold limit algae 2	47 mg/l (192 h; <i>Microcystis aeruginosa</i> ; Growth rate)

#### 12.2. Persistence and degradability

urea (57-13-6)	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water. Highly mobile in soil.
ThOD	0.27 g O <sub>2</sub> /g substance

#### 12.3. Bioaccumulative potential

urea (57-13-6)	
BCF fish 1	1 (72 h; <i>Brachydanio rerio</i> ; Fresh water)
BCF other aquatic organisms 1	11700 ( <i>Chlorella</i> sp.)
Log Pow	< -1.73 (Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Bioaccumulation: not applicable.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Sewage disposal recommendations	: Prevent liquid from entering sewers, watercourses, underground or low areas.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1760 Corrosive liquids, n.o.s. (Monocarbamide dihydrogensulfate), 8, III

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UN-No.(DOT) : UN1760  
Proper Shipping Name (DOT) : Corrosive liquids, n.o.s.  
Monocarbamide dihydrogensulfate  
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : III - Minor Danger  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203  
DOT Packaging Bulk (49 CFR 173.xxx) : 241  
DOT Symbols : G - Identifies PSN requiring a technical name  
DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672)  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling  
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP  
DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L  
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel  
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"  
Other information : DOT Corrosive to Aluminum. Not regulated if transported by motor vehicle or railcar in packaging that will not react or be degraded by this material - 49 CFR 173.154(d). If this exemption is not used, shipments should be shipped: UN1760, Corrosive Liquid, NOS, (Monocarbamide Dihydrogensulfate), 8, PG III.

### TDG

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Monocarbamide dihydrogen sulfate (21351-39-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### urea (57-13-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

No additional information available

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### EU-Regulations

No additional information available

### National regulations

No additional information available

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Revision date : 06/08/2017

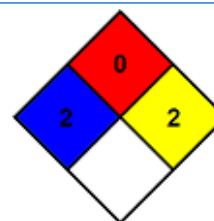
Full text of H-phrases:

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H320	Causes eye irritation

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



SDS US (GHS HazCom 2012)

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