

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Mixture
Product name	: 40-50% Urea Solution
CAS No	: 57-13-6
Formula	: CH <sub>4</sub> N <sub>2</sub> O
BIG no	: 43182

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

Use of the substance/mixture	: Industrial use
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#### 1.3. Details of the supplier of the safety data sheet

Two Rivers Terminal, LLC  
PO Box 2327  
Pasco, WA 99302  
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
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### SECTION 2: Hazards identification

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

##### Classification (GHS-US)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

No labeling applicable

#### 2.3. Other hazards

No additional information available

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

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Remove clothing before washing. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Information Centre ( <a href="http://www.big.be/antigif.htm">www.big.be/antigif.htm</a> ). Consult a doctor/medical service if you feel unwell.

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

Symptoms/injuries	: If you feel unwell, seek medical advice (show the label where possible).
Symptoms/injuries after inhalation	: May cause slight irritation.

# 40-50% Urea Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/injuries after skin contact	: Unlikely to cause harmful effects.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: Give large quantities of water. No effects known.

### 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	: Adapt extinguishing media to the environment.
Unsuitable extinguishing media	: No unsuitable extinguishing media known.

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

Fire hazard	: DIRECT FIRE HAZARD. Non combustible.
Explosion hazard	: DIRECT EXPLOSION HAZARD. Not applicable. INDIRECT EXPLOSION HAZARD. Not applicable.
Reactivity	: On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide). Reacts with (strong) oxidizers. Reacts with (some) compounds: release of corrosive gases/vapours (ammonia).

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit. See "Material-Handling" to select protective clothing.
Emergency procedures	: Mark the danger area. No naked flames. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Wash contaminated clothes.

#### 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".
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### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment	: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.
Methods for cleaning up	: Take up liquid spill into absorbent material. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information	: Dispose of materials or solid residues at an authorized site.

### 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	: Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep away from naked flames/heat. Observe normal hygiene standards. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

# 40-50% Urea Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Storage conditions	: Store in a well-ventilated place. Keep cool.
Incompatible products	: Strong oxidizers.
Storage temperature	: < 70 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases.
Storage area	: Ventilation at floor level. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: stainless steel. synthetic material. polyethylene. glass. MATERIAL TO AVOID: carbon steel. copper. bronze.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

40-50% Urea Solution (57-13-6)	
ACGIH	Not applicable
OSHA	Not applicable

### 8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Materials for protective clothing	: GIVE GOOD RESISTANCE: neoprene. PVC.
Hand protection	: Gloves.
Eye protection	: Safety glasses.
Skin and body protection	: Protective clothing.
Respiratory protection	: Respiratory protection not required in normal conditions.
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
Appearance	: Liquid.
Color	: Colourless
Odor	: Ammonia odour
Odor threshold	: No data available
pH	: 9 - 10 (10 %)
pH solution	: 10 %
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: 105 - 125 °C
Flash point	: Not applicable
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	: 1.1 - 1.2
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 1080 - 1163 kg/m <sup>3</sup>
Molecular mass	: 60.07 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in acetic acid.

# 40-50% Urea Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Log Pow	: -2.59 - -1.59
Log Kow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 150 °C
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

### 9.2. Other information

Minimum ignition energy	: Not applicable
VOC content	: 0 %
Other properties	: Substance has basic reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide). Reacts with (strong) oxidizers. Reacts with (some) compounds: release of corrosive gases/vapours (ammonia).

### 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 oxidizers.

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

40-50% Urea Solution (57-13-6)	
LD50 oral rat	> 14300 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

Skin corrosion/irritation	: Not classified pH: 9 - 10 (10 %)
Serious eye damage/irritation	: Not classified pH: 9 - 10 (10 %)
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
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause slight irritation.
Symptoms/injuries after skin contact	: Unlikely to cause harmful effects.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: Give large quantities of water. No effects known.

# 40-50% Urea Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 12: Ecological information

#### 12.1. Toxicity

- Ecology - general : Classification concerning the environment: not applicable.
- Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
- Ecology - water : Mild water pollutant (surface water). Ground water pollutant. Not harmful to fishes. Not harmful to invertebrates (Daphnia). Not harmful to algae. pH shift. Nitrification of activated sludge isn't inhibited.

40-50% Urea Solution (57-13-6)	
LC50 fish 1	> 6810 mg/l (96 h; Leuciscus idus; Pure substance)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Pure substance)
LC50 fish 2	17500 mg/l (96 h; Poecilia reticulata; Pure substance)
EC50 Daphnia 2	> 10000 mg/l (24 h; Daphnia magna; Pure substance)
TLM fish 1	17500 ppm (96 h; Poecilia reticulata; Pure substance)
Threshold limit other aquatic organisms 1	120000 mg/l (Bacteria; Pure substance)
Threshold limit other aquatic organisms 2	> 10000 mg/l (16 h; Pseudomonas putida; Pure substance)
Threshold limit algae 1	> 10000 mg/l (168 h; Scenedesmus quadricauda; Pure substance)

#### 12.2. Persistence and degradability

40-50% Urea Solution (57-13-6)	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water. No (test)data on mobility of the components available.
ThOD	0.27 g O <sub>2</sub> /g substance

#### 12.3. Bioaccumulative potential

40-50% Urea Solution (57-13-6)	
BCF fish 1	1 (72 h; Brachydanio rerio; Pure substance)
BCF other aquatic organisms 1	117000 (Chlorella sp.; Pure substance)
Log Pow	-2.59 - -1.59
Bioaccumulative potential	Bioaccumulation: not applicable.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste disposal recommendations : Refer to supplier/manufacturer. Dehydrate. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Do not discharge into drains or the environment.
- Additional information : LWCA (the Netherlands): KGA category 03. Can be considered as non hazardous waste according to Directive 2008/98/EC.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT  
Not regulated for transport

#### Additional information

Other information : No supplementary information available.

#### ADR

No additional information available

#### Transport by sea

No additional information available

# 40-50% Urea Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 40-50% Urea Solution (57-13-6)

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

### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### National regulations

No additional information available

### 15.3. US State regulations

## SECTION 16: Other information

SDS US (GHS HazCom 2012)

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