

## MATERIAL SAFETY DATA SHEET

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Version 1.3

## Section 1 - Product and Company Information

Product Name (3-(TRI(ETHOXY/METHOXY)SILYL)PROPYL)UREA  
, 50 WT. % SOLUTION IN METHANOL  
Product Number 413372  
Brand ALDRICH  
Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US  
Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
(3-(TRI(ETHOXY/METHOXY)SILYL)PROPYL) )UREA,50 WT. % SOLUTION IN METHYL ALCOHOL	116912-64-2	No
Formula	C9H22N2O4Si	

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Flammable (USA) Highly Flammable (EU). Toxic.  
Danger: Poison. Causes irritation. May be fatal or cause blindness  
if swallowed. Vapor harmful. Cannot be made nonpoisonous. Target  
organ(s): Eyes. Nerves.

## HMIS RATING

HEALTH: 3  
FLAMMABILITY: 3  
REACTIVITY: 0

## NFPA RATING

HEALTH: 3  
FLAMMABILITY: 3  
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is  
conscious. Call a physician.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give  
artificial respiration. If breathing is difficult, give oxygen.

#### EYE EXPOSURE

Assure adequate flushing of the eyes by separating the eyelids with fingers.

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#### Section 5 - Fire Fighting Measures

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##### FLAMMABLE HAZARDS

Flammable Hazards: Yes

##### EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

##### FLASH POINT

58 °F 14 °C Method: closed cup

##### AUTOIGNITION TEMP

N/A

##### FLAMMABILITY

N/A

##### EXTINGUISHING MEDIA

Suitable: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

##### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.  
Vapor may travel considerable distance to source of ignition and flash back. Flammable liquid.  
Specific Method(s) of Fire Fighting: Keep down vapors with water spray.

##### EXPOSURE HAZARD(S)

Material: Poison. Irritant.

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#### Section 6 - Accidental Release Measures

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##### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

##### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

##### METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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#### Section 7 - Handling and Storage

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##### HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not

use if skin is cut or scratched. Wash thoroughly after handling.

#### STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place. Store under nitrogen.

#### SPECIAL REQUIREMENTS

Moisture sensitive.

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### Section 8 - Exposure Controls / PPE

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#### ENGINEERING CONTROLS

Mechanical exhaust required. Safety shower and eye bath.

#### PERSONAL PROTECTIVE EQUIPMENT

Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

#### GENERAL HYGIENE MEASURES

Discard contaminated clothing and shoes.

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### Section 9 - Physical/Chemical Properties

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Molecular Weight	250.4 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	0.91 g/cm <sup>3</sup>	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	58 °F 14 °C	Method: closed cup
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.39	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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### Section 10 - Stability and Reactivity

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#### STABILITY

Stable: Stable.

Conditions to Avoid: Moisture.

Materials to Avoid: Acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Reducing agents, Alkali metals.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Silicon oxide.

#### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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#### Section 11 - Toxicological Information

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##### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Eye Contact: Can cause blindness.

Ingestion: May be fatal if swallowed.

Multiple Routes: Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract. Harmful if inhaled or absorbed through skin.

##### TARGET ORGAN(S) OR SYSTEM(S)

Kidneys. Nerves. Eyes. Liver. Damage to the eyes. Damage to the heart.

##### SIGNS AND SYMPTOMS OF EXPOSURE

Damage to the eyes. Nausea, headache, and vomiting.

Gastrointestinal disturbances. Damage to the heart. Dizziness.

Irregular breathing. Weakness. Confusion. Drowsiness. Exposure

can cause: Warning: contains methanol. May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous.

Unconsciousness. Symptoms may be delayed. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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#### Section 12 - Ecological Information

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No data available.

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#### Section 13 - Disposal Considerations

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##### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

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#### Section 14 - Transport Information

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##### DOT

Proper Shipping Name: Resin solution, [flammable]

UN#: 1866

Class: 3

Packing Group: Packing Group II

Hazard Label: Flammable liquid

PIH: Not PIH

##### IATA

Proper Shipping Name: RESIN SOLUTION

IATA UN Number: 1866

Hazard Class: 3

Packing Group: II

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#### Section 15 - Regulatory Information

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EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F-T

Indication of Danger: Highly Flammable. Toxic.

R: 11

Risk Statements: Highly flammable.

S: 16-23-45

Safety Statements: Keep away from sources of ignition - no smoking. Do not breathe vapor. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable (USA) Highly Flammable (EU). Toxic.

Safety Statements: Keep away from sources of ignition - no smoking. Do not breathe vapor. Keep container tightly closed in a cool well-ventilated place.

US Statements: Danger: Poison. Causes irritation. May be fatal or cause blindness if swallowed. Vapor harmful. Cannot be made nonpoisonous. Target organ(s): Eyes. Nerves.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

NOTES: This product is subject to SARA section 313 reporting requirements. This product is subject to SARA section 313 reporting requirements.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: Yes

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Section 16 - Other Information

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DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.