

Safety Data Sheet SIT8717.0

Issue date: 01/13/2015 Revision date: 11/17/2023 Version: 2.1

### **SECTION 1: Identification**

#### 1.1. Identification

Product name : TRIS(3-TRIMETHOXYSILYLPROPYL)ISOCYANURATE, tech

Product code : SIT8717.0
Product form : Substance
Physical state : Liquid

Formula : C21H45N3O12Si3

Synonyms : 1,3,5-TRIS[3-(TRIMETHOXYSILYL)PROPYL]-1,3,5-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE

Chemical family : ORGANOMETHOXYSILANE

#### 1.2. Recommended use and restrictions on use

Recommended use Chemical intermediate

#### 1.3. Supplier

#### GELEST, INC.

11 East Steel Road Morrisville. PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com

## 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

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

## 2.1. Classification of the substance or mixture

#### **GHS US classification**

Acute toxicity (oral) Category 4 H302 Harmful if swallowed

Skin corrosion/irritation Category 2 H315 Causes skin irritation

Serious eye damage/eye irritation Category 2A H319 Causes serious eye irritation

Specific target organ toxicity – Single exposure, H335 May cause respiratory irritation

Category 3, Respiratory tract irritation Full text of H statements : see section 16

### 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

Hazard pictograms (GHS US)



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H302 - Harmful if swallowed H315 - Causes skin irritation

> H319 - Causes serious eye irritation H335 - May cause respiratory irritation

Precautionary statements (GHS US) : P261 - Avoid breathing vapors.

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 1/10

## Safety Data Sheet

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.

P302+P352 - If on skin: Wash with plenty of water.

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

 ${\tt P305+P351+P338-IF\ IN\ EYES: Rinse\ cautiously\ with\ water\ for\ several\ minutes.\ Remove}$ 

contact lenses, if present and easy to do. Continue rinsing

P312 - Call a doctor if you feel unwell.

P321 - Specific treatment (see supplemental first aid instruction on this label).

P330 - Rinse mouth.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

P501 - Dispose of contents/container to licensed waste disposal facility...

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

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

Not applicable

## **SECTION 3: Composition/Information on ingredients**

#### 3.1. Substances

Substance type : Mono-constituent

Name : TRIS(3-TRIMETHOXYSILYLPROPYL)ISOCYANURATE, tech

CAS-No. : 26115-70-8

Name		Product identifier	%	GHS US classification
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)prop	yl]-	CAS-No.: 26115-70-8	99	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Methanol		CAS-No.: 67-56-1	< 1	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Eye Dam. 1, H318 STOT SE 1, H370 STOT SE 3, H336

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

#### **SECTION 4: First-aid measures**

#### 4.1. Description of first aid measures

First-aid measures general

: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 2/10

## Safety Data Sheet

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory irritation. Overexposure may cause: Coughing. Headache. Nausea.

Symptoms/effects after skin contact : Causes skin irritation. May cause sensitization by skin contact.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : May be harmful if swallowed. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness.

Chronic symptoms : On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in

persistent or recurring headaches or impaired vision.

#### 4.3. Immediate medical attention and special treatment, if necessary

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

## **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable (and unsuitable) extinguishing media

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

### 5.2. Specific hazards arising from the chemical

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid

all eye and skin contact and do not breathe vapor and mist.

### **SECTION 6: Accidental release measures**

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 3/10

Safety Data Sheet

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in

process area to prevent accumulation of vapors.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Wash contaminated clothing before reuse.

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

Storage conditions : Keep container tightly closed.

Incompatible materials : Acids. Alcohols. Oxidizing agent. Peroxides. Moisture. Water. Storage area : Store in a well-ventilated place. Store away from heat.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

Methanol (67-56-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2023
USA - ACGIH - Biological Exposure Indices	
Local name	METHANOL
BEI (BLV)	15 mg/l (Medium: urine - Time: end of shift - Parameter: Methanol (background, nonspecific)
Regulatory reference	ACGIH 2023
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL (TWA) [1]	260 mg/m³
OSHA PEL (TWA) [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH [ppm]	6000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	260 mg/m³
NIOSH REL TWA [ppm]	200 ppm
NIOSH REL (STEL)	325 mg/m³
NIOSH REL STEL [ppm]	250 ppm

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 4/10

## Safety Data Sheet

Methanol (67-56-1)	
US-NIOSH chemical category	Potential for dermal absorption

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

#### Hand protection:

Neoprene or nitrile rubber gloves

#### Eye protection:

Chemical goggles. Contact lenses should not be worn

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - amine gas (brown cartridge) respirator.

## **SECTION 9: Physical and chemical properties**

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

Physical state : Liquid

Appearance : Clear liquid. Viscous.

Molecular mass : 615.86 g/mol

Color : Straw.

Odor : No data available
Odor threshold : No data available

pH : No data available Relative evaporation rate (butyl acetate=1) : No data available Melting point : No data available

Freezing point : < 0 °C

Boiling point :  $> 250 \, ^{\circ}\text{C} \, @ 0.1 \, \text{mm Hg}$ 

Flash point : 102 °C

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : < 0.1 mm Hg @ 25°C

Relative vapor density at 20°C : > 1
Relative density : 1.17

Reacts with water. Solubility Partition coefficient n-octanol/water (Log Pow) No data available Partition coefficient n-octanol/water (Log Kow) No data available Viscosity, kinematic 150 - 350 cSt Viscosity, dynamic : No data available : No data available Explosive properties Oxidizing properties No data available **Explosion limits** : No data available

## 9.2. Other information

No additional information available

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 5/10

Safety Data Sheet

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable when stored in sealed containers.

#### 10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating methanol.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

#### 10.5. Incompatible materials

Acids. Alcohols. Oxidizing agent. Peroxides. Moisture. Water.

#### 10.6. Hazardous decomposition products

Methanol. Organic acid vapors.

## **SECTION 11: Toxicological information**

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

TRIS(3-TRIMETHOXYSILYLPROPYL)ISOCYANURATE, tech (26115-70-8)					
LD50 oral rat	9280 mg/kg				
ATE US (oral)	1474.747 mg/kg body weight				

## 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyI)propyI]- (26115-70-8)

LD50 oral rat 1460 µl/kg

## **Methanol (67-56-1)**

LD50 oral rat	100 mg/kg Source: National Institute of Environmental Research NCIS
LD50 dermal rabbit	300 mg/kg Source: ECHA
LC50 Inhalation - Rat [ppm]	22500 ppm (Exposure time: 8 h)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

#### 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]- (26115-70-8)

NOAEL (oral,rat,90 days)	≈ 300 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated
	Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 6/10

## Safety Data Sheet

Symptoms/effects after ingestion

Symptoms/effects after inhalation	: Ma	y cause respiratory irritation.	. Overexposure may	y cause: Coughing	j. Headache. Nausea.
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Symptoms/effects after skin contact : Causes skin irritation. May cause sensitization by skin contact.

Symptoms/effects after eye contact : Causes serious eye irritation.

: May be harmful if swallowed. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness.

: On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system. Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.

### **SECTION 12: Ecological information**

#### 12.1. Toxicity

Chronic symptoms

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]- (26115-70-8)			
LC50 - Fish [1]	> 100 mg/l Test organisms (species): not specified		
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna		
Methanol (67-56-1)			
LC50 - Fish [1]	28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])		
LC50 - Fish [2]	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])		
EC50 96h - Algae [1]	22000 mg/l Source: ECHA		
NOEC (chronic)	208 mg/l Test organisms (species): Daphnia magna Duration: '21 d'		
NOEC chronic fish	446.7 mg/l Test organisms (species): Pimephales promelas Duration: '28 d'		

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]- (26115-70-8)				
Partition coefficient n-octanol/water (Log Pow)	2.4 Source: ECHA			
Methanol (67-56-1)				
BCF - Fish [1]	< 10			
Partition coefficient n-octanol/water (Log Pow)	-0.77			

## 12.4. Mobility in soil

Methanol (67-56-1)	
Mobility in soil	2.75 Source: HSDB

#### 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

## **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

Product/Packaging disposal recommendations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations.

Dispose of contents/container to licensed waste disposal facility...

Ecology - waste materials : Avoid release to the environment.

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 7/10

Safety Data Sheet

## **SECTION 14: Transport information**

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA		
14.1. UN number					
Not regulated for transport					
14.2. Proper Shipping Name					
Not applicable	Not applicable	Not applicable	Not applicable		
Transport document description					
Not applicable	Not applicable	Not applicable	Not applicable		
14.3. Transport hazard class(es	3)				
Not applicable	Not applicable	Not applicable	Not applicable		
14.4. Packing group					
Not applicable	Not applicable	Not applicable	Not applicable		
14.5. Environmental hazards					
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No		
No supplementary information availab	ble				

## 14.6. Special precautions for user

#### DOT

No data available

#### **TDG**

No data available

#### **IMDG**

No data available

#### **IATA**

No data available

## 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## **SECTION 15: Regulatory information**

### 15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]-	26115-70-8	Present	Active	
Methanol	67-56-1	Present	Active	

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 8/10

## Safety Data Sheet

#### Methanol (67-56-1)

Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ

5000 lb

#### 15.2. International regulations

#### **CANADA**

#### 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]- (26115-70-8)

Listed on the Canadian DSL (Domestic Substances List)

#### Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

#### 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]- (26115-70-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Methanol (67-56-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

#### 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(trimethoxysilyl)propyl]- (26115-70-8)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

#### Methanol (67-56-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Poisonous and Deleterious Substances Control Law

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on TECI (Thailand Existing Chemicals Inventory)

Listed on the NCI (Vietnam - National Chemical Inventory)

### 15.3. US State regulations



This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 9/10

Safety Data Sheet

Methanol (67-56-1)						
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)	
No	Yes	No	No		47000 μg/day (inhalation); 23,000 μg/day (oral)	

### Methanol (67-56-1)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) List

## **SECTION 16: Other information**

#### Full text of H-phrases::

10/11 01 11 0111 0100011	
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H370	Causes damage to organs

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Health Flammability

Physical

Ith : 2 Moderate Hazard - Temporary or minor injury may occur

ammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high

1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

Issue date: 01/13/2015 Revision date: 11/17/2023 Version: 2.1

SDS US (GHS HazCom 2012) - Custom

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

Print date: 11/17/2023 EN (English US) SDS ID: **SIT8717.0** 10/10