



# TETRADECYLDIMETHYL(3-TRIMETHOXSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol

Safety Data Sheet SIT7090.0

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Version: 2.1

## SECTION 1: Identification

### 1.1. Identification

Product name	: TETRADECYLDIMETHYL(3-TRIMETHOXSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol
Product code	: SIT7090.0
Product form	: Mixture
Physical state	: Liquid
Formula	: C <sub>22</sub> H <sub>50</sub> ClNO <sub>3</sub> Si
Synonyms	: (TRIMETHOXSILYLPROPYLOCTADECYLDIMETHYLAMMONIUM CHLORIDE; DIMETHYLTETRADECYL[3-(TRIMETHOXSILYL)PROPYL]AMMONIUM CHLORIDE; N,N-DIMETHYL-N-[3-(TRIMETHOXSILYL)PROPYL]-1-TETRADECANAMINIUM, CHLORIDE
Chemical family	: ORGANOMETHOXSILANE

### 1.2. Recommended use and restrictions on use

Recommended use	: Chemical intermediate
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### 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](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

### 1.4. Emergency telephone number

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Acute toxicity (oral) Category 3	H301	Toxic if swallowed
Acute toxicity (dermal) Category 3	H311	Toxic in contact with skin
Acute toxicity (inhalation:vapor) Category 3	H331	Toxic if inhaled
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) Category 1	H370	Causes damage to organs
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) : Danger

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Hazard statements (GHS US)	: H225 - Highly flammable liquid and vapor H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled H315 - Causes skin irritation H319 - Causes serious eye irritation H370 - Causes damage to organs
Precautionary statements (GHS US)	: P210 - Keep away from heat, open flames, sparks. - No smoking. P233 - Keep container tightly closed. P240 - Ground/Bond container and receiving equipment. P241 - Use explosion-proof electrical equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P260 - Do not breathe vapors. P261 - Avoid breathing vapors. P264 - Wash hands thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P310 - If swallowed: Immediately call a POISON CENTER. P302+P352 - If on skin: Wash with plenty of water. 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 P307+P311 - If exposed: Call a poison center/doctor. P311 - Call a poison center or doctor. P312 - Call a doctor if you feel unwell. P321 - Specific treatment (see first aid instructions on this label). P322 - 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. P361+P364 - Take off immediately all contaminated clothing and wash it before reuse. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P403+P235 - Keep in a cool place 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

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Tetradecyldimethyl(3-trimethoxysilylpropyl)ammonium chloride	CAS-No.: 41591-87-1	45 – 50	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Methanol	CAS-No.: 67-56-1	45 – 50	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370
3-Chloropropyltrimethoxysilane	CAS-No.: 2530-87-2	0 – 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319

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

## 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.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get immediate medical advice/attention.
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 immediate medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

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

Symptoms/effects	: Causes damage to organs.
Symptoms/effects after inhalation	: Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Overexposure may cause: Nausea. Headache. Visual disturbances. Cough.
Symptoms/effects after skin contact	: Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. Onset of symptoms may be delayed up to 48 hours.
Chronic symptoms	: Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.

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

NOTE TO PHYSICIAN: 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.

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### SECTION 5: Fire-fighting measures

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

Suitable extinguishing media	: Water spray. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	: Do not use straight streams.

#### 5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
Explosion hazard	: May form flammable/explosive vapor-air mixture.

#### 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

General measures	: Eliminate every possible source of ignition. Use special care to avoid static electric charges.
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##### 6.1.1. For non-emergency personnel

Protective equipment	: Wear protective equipment as described in Section 8.
Emergency procedures	: Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

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

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
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. Use only non-sparking tools.

#### 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

Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Precautions for safe handling	: Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.
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.

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

Technical measures	: Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof ventilating equipment.
Storage conditions	: Keep container tightly closed. Store in sealed containers in the dark. Store locked up. Keep in a cool place.
Incompatible materials	: Oxidizing agent. Peroxides. Alcohols. Acids. 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	200 ppm
ACGIH OEL STEL	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 2024
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 2024
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL TWA	260 mg/m³ 200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH	6000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	260 mg/m³
	200 ppm
NIOSH REL (STEL)	325 mg/m³
	250 ppm
US-NIOSH chemical category	Potential for dermal absorption

### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Provide local exhaust or general room ventilation.
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### 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 or face shield. 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.
Molecular mass	: 440.18 g/mol
Color	: Straw.
Odor	: Amine. Ammonia-like.
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	: No data available
Boiling point	: 68 °C (initial, methanol)
Flash point	: 11 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: 50 mm Hg @ 25°C
Relative vapor density at 20°C	: 5.9 (methanol)
Relative density	: 0.878
Solubility	: Reacts with water. Dissolves.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: 6 – 36.5 vol % (lower; upper: methanol)

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

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### 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. Sparks. Open flame.

### 10.5. Incompatible materials

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

### 10.6. Hazardous decomposition products

Methanol. Organic acid vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.  
Acute toxicity (dermal) : Toxic in contact with skin.  
Acute toxicity (inhalation) : Inhalation:vapor: Toxic if inhaled.

TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol (41591-87-1)	
ATE US (oral)	200 mg/kg body weight
ATE US (dermal)	594.003 mg/kg body weight
ATE US (vapors)	6 mg/l/4h
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)
3-Chloropropyltrimethoxysilane (2530-87-2)	
LD50 oral rat	> 2000 mg/kg Source: SIDS
LD50 dermal rat	> 2000 mg/kg Source: SIDS
LD50 dermal rabbit	2830 µl/kg

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 : Causes damage to organs.  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Potential Adverse human health effects and symptoms : This material liberates small amounts of methanol on contact with moisture. Material generates methanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue.

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Symptoms/effects after inhalation	: Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation. May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Overexposure may cause: Nausea. Headache. Visual disturbances. Cough.
Symptoms/effects after skin contact	: Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. Onset of symptoms may be delayed up to 48 hours.
Chronic symptoms	: Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision. On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.
Reason for classification	: Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

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'
3-Chloropropyltrimethoxysilane (2530-87-2)	
LC50 - Fish [1]	> 100 mg/l Source: SIDS
EC50 - Crustacea [1]	869 mg/l Source: SIDS
EC50 72h - Algae [1]	> 833 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	> 883 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	> 883 mg/l Source: SIDS
LOEC (chronic)	> 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 66 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

Methanol (67-56-1)	
BCF - Fish [1]	< 10
Partition coefficient n-octanol/water (Log Pow)	-0.77
3-Chloropropyltrimethoxysilane (2530-87-2)	
Partition coefficient n-octanol/water (Log Pow)	0.56



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### 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.
Effect on the ozone layer	: No additional information available







## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility..
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecological information	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1992	Not applicable	1992	1992
14.2. Proper Shipping Name			
Flammable liquids, toxic, n.o.s. ((TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol))	Not applicable	FLAMMABLE LIQUID, TOXIC, N.O.S. (TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol)	Flammable liquid, toxic, n.o.s. (TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol)
Transport document description			
UN1992 Flammable liquids, toxic, n.o.s. (TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol), 3 (6.1), II	Not applicable	UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol), 3 (6.1), II	UN 1992 Flammable liquid, toxic, n.o.s. (TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol), 3 (6.1), II
14.3. Transport hazard class(es)			
3 (6.1)	Not applicable	3 (6.1)	3 (6.1)
 	Not applicable	 	 
14.4. Packing group			
II	Not applicable	II	II

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DOT	TDG	IMDG	IATA
<b>14.5. Environmental hazards</b>			
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 available			

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT)	: UN1992
DOT Special Provisions (49 CFR 172.102)	: IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). 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. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP13 - Self-contained breathing apparatus must be provided when this hazardous material is transported by sea.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 243
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"

#### TDG

Emergency Response Guide (ERG) Number	: 131
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#### IMDG

Special provision (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2, TP13
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Properties and observations (IMDG)	: Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

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IATA	
PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3
ERG code (IATA)	: 3HP

### 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
Tetradecyldimethyl(3-trimethoxysilylpropyl)ammonium chloride	41591-87-1	Present	Active	
Methanol	67-56-1	Present	Active	
3-Chloropropyltrimethoxysilane	2530-87-2	Present	Active	

#### 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
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### 15.2. International regulations

#### CANADA

##### Tetradecyldimethyl(3-trimethoxysilylpropyl)ammonium chloride (41591-87-1)

Listed on the Canadian NDSL (Non-Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

#### 3-Chloropropyltrimethoxysilane (2530-87-2)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

##### Tetradecyldimethyl(3-trimethoxysilylpropyl)ammonium chloride (41591-87-1)

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

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### Methanol (67-56-1)

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

### 3-Chloropropyltrimethoxysilane (2530-87-2)

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

### National regulations

#### Tetradecyldimethyl(3-trimethoxysilylpropyl)ammonium chloride (41591-87-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

### 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 Thailand Existing Chemicals Inventory (DIW)  
Listed on the NCI (Vietnam - National Chemical Inventory)

### 3-Chloropropyltrimethoxysilane (2530-87-2)

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)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)  
Listed on Thailand Existing Chemicals Inventory (DIW)  
Listed on the NCI (Vietnam - National Chemical Inventory)

### 15.3. US State regulations



#### WARNING:

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](http://www.P65Warnings.ca.gov).

### 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)

# TETRADECYLDIMETHYL(3-TRIMETHOXYSILYLPROPYL)AMMONIUM CHLORIDE, 50% in methanol

## Safety Data Sheet

### 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::

H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H331	Toxic if inhaled
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.: Chemical 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

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability

: 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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Version: 2.1

SDS US (GHS HazCom 2012) - Custom

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

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