TRIMETHOXYSILANE, 95%

Safety Data Sheet SIT8392.0

Date of issue: 17/11/2014 Revision date: 31/08/2015 Version: 2.0

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

1.1. Product identifier

Product form	:	Substance
Physical state	:	Liquid
Substance name	:	TRIMETHOXYSILANE, 95%
Product code	:	SIT8392.0
Formula	:	C3H10O3Si
Synonyms	:	TRIMETHOXYSILYL HYDRIDE
Chemical family	:	ORGANOMETHOXYSILANE

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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

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Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 2	H225
Acute toxicity (oral), Category 3	H301
Acute toxicity (dermal), Category 3	H311
Acute toxicity (inhalation:vapour) Category 1	H330
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS05 GHS06

Signal word (CLP) : Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapour.
H301+H311 - Toxic if swallowed or in contact with skin
H315 - Causes skin irritation.
H318 - Causes serious eye damage.
H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P284 - Wear respiratory protection.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P260 - Do not breathe vapours.
P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

Other hazards not contributing to the classification : Additional methanol may be formed by reaction with moisture and water. The US OSHA PEL (TWA) for methanol is 200 ppm.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Multi-constituent

Name : TRIMETHOXYSILANE, 95%

CAS-No. : 2487-90-3

EC-No. : 219-637-2

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Trimethoxysilane	(CAS-No.) 2487-90-3 (EC-No.) 219-637-2	95 - 100	Flam. Liq. 2, H225 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Tetramethoxysilane	(CAS-No.) 681-84-5 (EC-No.) 211-656-4	1 - 5	Flam. Liq. 2, H225 Acute Tox. 1 (Inhalation:vapour), H330 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Methoxychlorosilanes	(CAS-No.) Not found	1 - 5	Skin Corr. 1C, H314 Eye Dam. 1, H318

Full text of 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.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : Wash with plenty of water/…. Get 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/doctor.

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

Symptoms/effects after inhalation : Fatal if inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye damage. Even mild exposures can cause conjunctivitis and corneal scarring. Initial symptoms of exposure may include a “scratchy” feeling in the eyes. Trimethoxysilane causes severe eye injuries, as well as necrosis of corneal cells, which can progress long after exposure has ceased. These destructive effects resist treatment and permanent blindness is possible from exposure.

Symptoms/effects after ingestion : May be harmful if swallowed.

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

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

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: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame. Vapors of trimethoxysilane cause corneal injury and blindness on even short exposures.

Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid exposure of eyes to vapors. Fire fighters must wear positive pressure self-contained breathing apparatus.

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 vapour 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.

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. 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 vapours are flammable.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Containers must be properly grounded before beginning transfer. Provide good ventilation in process area to prevent formation of vapour. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Check containers for pressure build-up, by periodically venting and then inerting with dry nitrogen.

Hygiene measures : Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : Oxidizing agent.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TRIMETHOXYSILANE, 95% (2487-90-3)		
Australia	TWA (mg/m³)	6 mg/m³
Australia	TWA (ppm)	1 ppm

Tetramethoxysilane (681-84-5)		
Austria	MAK (mg/m³)	6 mg/m³
Austria	MAK (ppm)	1 ppm
Austria	MAK Short time value (mg/m³)	12 mg/m³
Austria	MAK Short time value (ppm)	2 ppm
Belgium	Limit value (mg/m³)	6 mg/m³
Belgium	Limit value (ppm)	1 ppm
France	VME (mg/m³)	6 mg/m³
France	VME (ppm)	1 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	2 mg/m³
Germany	TRGS 900 Occupational exposure limit value (ppm)	0.3 ppm
Greece	OEL TWA (mg/m³)	6 mg/m³
Greece	OEL TWA (ppm)	1 ppm
Greece	OEL STEL (mg/m³)	30 mg/m³
Greece	OEL STEL (ppm)	5 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m³)	6 mg/m³
USA NIOSH	NIOSH REL (TWA) (ppm)	1 ppm
Spain	VLA-ED (mg/m³)	6.3 mg/m³
Spain	VLA-ED (ppm)	1 ppm
Switzerland	MAK (mg/m³)	6 mg/m³
Switzerland	MAK (ppm)	1 ppm
Finland	HTP-arvo (8h) (mg/m³)	32 mg/m³
Finland	HTP-arvo (8h) (ppm)	5 ppm
Finland	HTP-arvo (15 min)	63 mg/m³
Finland	HTP-arvo (15 min) (ppm)	10 ppm
Ireland	OEL (8 hours ref) (mg/m³)	6 mg/m³
Ireland	OEL (8 hours ref) (ppm)	1 ppm
Ireland	OEL (15 min ref) (mg/m3)	30 mg/m³
Ireland	OEL (15 min ref) (ppm)	5 ppm
Norway	Grenseverdier (AN) (mg/m³)	6 mg/m³
Norway	Grenseverdier (AN) (ppm)	1 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	6 mg/m³
Norway	Grenseverdier (Korttidsverdi) (ppm)	1 ppm
Canada (Quebec)	VEMP (mg/m³)	6 mg/m³
Canada (Quebec)	VEMP (ppm)	1 ppm
Australia	TWA (mg/m³)	6 mg/m³
Australia	TWA (ppm)	1 ppm
Portugal	OEL TWA (ppm)	1 ppm

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

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 worker's goggles must be worn. Safety glasses are not adequate eye protection. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. NIOSH-certified organic vapor (black 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	:	122.2 g/mol
Colour	:	No data available
Odour	:	characteristic. Slight. Antiseptic. Floral.
Odour threshold	:	No data available
Refractive index	:	1.3687
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	> 1
Melting point	:	-114 °C
Freezing point	:	No data available
Boiling point	:	86 - 87 °C
Flash point	:	-24 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Highly flammable liquid and vapour.
Vapour pressure	:	> 25 mm Hg
Relative vapour density at 20 °C	:	> 4
Relative density	:	0.86
% Volatiles	:	100 %
Solubility	:	Reacts with water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Material decomposes slowly in contact with moist air or with water liberating methanol. Strong bases including amines can cause disproportion of this material to pyrophoric products. Platinum, platinum and iron salts and other Lewis acids can cause generation of flammable hydrogen gas in the presence of moisture.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Methanol. Organic acid vapors. Silicon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin. Fatal if inhaled.

TRIMETHOXYSILANE, 95% (2487-90-3)	
LD50 oral rat	1560 µl/kg
ATE CLP (oral)	100 mg/kg bodyweight
ATE CLP (dermal)	300 mg/kg bodyweight
ATE CLP (vapours)	0.055 mg/l/4h

Tetramethoxysilane (681-84-5)	
LD50 dermal rabbit	17 ml/kg
LC50 inhalation rat (mg/l)	0.393 mg/l/4h
LDLo oral rat	700 mg/kg
LCLo inhalaion rat	250 ppm/4h
LCLo inhalation mouse	1000 mg/m³ /10M
ATE CLP (vapours)	0.393 mg/l/4h
ATE CLP (dust,mist)	0.393 mg/l/4h

Trimethoxysilane (2487-90-3)	
LD50 oral rat	8024 mg/kg
LD50 dermal rat	6300 µl/kg
LC50 inhalation rat (ppm)	42 ppm/4h
ATE CLP (oral)	8024 mg/kg bodyweight
ATE CLP (gases)	42 ppmv/4h
ATE CLP (vapours)	0.05 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Skin Irritation - rabbit: 500 mg open: mild irritant effect

Serious eye damage/irritation : Causes serious eye damage.
Eye Irritation - rabbit: 20 mg/24H: moderate irritation effect

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.
Under experimental conditions, the kidney was found to be the target organ. Overexposure can cause lung damage - pulmonary toxin.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : The hydrolysis product of this compound is methanol.

Symptoms/effects after inhalation : Fatal if inhaled. May cause respiratory irritation.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye damage. Even mild exposures can cause conjunctivitis and corneal scarring. Initial symptoms of exposure may include a “scratchy” feeling in the eyes. Trimethoxysilane causes severe eye injuries, as well as necrosis of corneal cells, which can progress long after exposure has ceased. These destructive effects resist treatment and permanent blindness is possible from exposure.

Symptoms/effects after ingestion : May be harmful if swallowed.

Chronic symptoms	:	On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.
Reason for classification	:	RTECS Number: VV6750000

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	:	Not classified
Chronic aquatic toxicity	:	Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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 vapours are flammable.
Ecology - waste materials	:	Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	:	3384
UN-No. (IMDG)	:	3384
UN-No. (IATA)	:	3384
UN-No. (ADN)	:	3384
UN-No. (RID)	:	3384

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.
Proper Shipping Name (IMDG)	:	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.
Proper Shipping Name (IATA)	:	Toxic by inhalation liquid, flammable, n.o.s.
Proper Shipping Name (ADN)	:	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S.
Proper Shipping Name (RID)	:	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S
Transport document description (ADR)	:	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIMETHOXYSILANE), 6.1 (3), I, (C/D)
Transport document description (IMDG)	:	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIMETHOXYSILANE), 6.1 (3), I
Transport document description (IATA)	:	UN 3384 Toxic by inhalation liquid, flammable, n.o.s. (TRIMETHOXYSILANE), 6.1
Transport document description (ADN)	:	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. (TRIMETHOXYSILANE), 6.1 (3), I
Transport document description (RID)	:	UN 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S (TRIMETHOXYSILANE), 6.1 (3), I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	:	6.1 (3)
Danger labels (ADR)	:	6.1, 3

: 

IMDG

Transport hazard class(es) (IMDG) : 6.1 (3)

Danger labels (IMDG) : 6.1, 3

: 

IATA

Transport hazard class(es) (IATA) : 6.1 (3)

ADN

Transport hazard class(es) (ADN) : 6.1 (3)

Danger labels (ADN) : 6.1, 3

: 

RID

Transport hazard class(es) (RID) : 6.1 (3)

Danger labels (RID) : 6.1, 3

: 

14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : Not applicable

Packing group (ADN) : I

Packing group (RID) : I

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : Domestic (US) Shipping Instructions Only

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : TF1

Special provisions (ADR) : 274

Limited quantities (ADR) : 0

Excepted quantities (ADR) : E0

Packing instructions (ADR) : P602

Mixed packing provisions (ADR) : MP8, MP17

Portable tank and bulk container instructions (ADR) : T20

Portable tank and bulk container special provisions (ADR)	:	TP2
Tank code (ADR)	:	L10CH
Tank special provisions (ADR)	:	TU14, TU15, TE19, TE21
Vehicle for tank carriage	:	FL
Transport category (ADR)	:	1
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV1, CV13, CV28
Special provisions for carriage - Operation (ADR)	:	S2, S9, S14
Hazard identification number (Kemler No.)	:	663
Orange plates	:	
Tunnel restriction code (ADR)	:	C/D

- Transport by sea

Special provisions (IMDG)	:	274
Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P602
Tank instructions (IMDG)	:	T20
Tank special provisions (IMDG)	:	TP2, TP13
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-D
Stowage category (IMDG)	:	D
Stowage and handling (IMDG)	:	SW2
Properties and observations (IMDG)	:	A variety of toxic liquids which present a highly toxic inhalation hazard as well as being flammable. Highly toxic if swallowed, by skin contact or by inhalation.

- Air transport

PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	Forbidden
PCA max net quantity (IATA)	:	Forbidden
CAO packing instructions (IATA)	:	Forbidden
CAO max net quantity (IATA)	:	Forbidden
ERG code (IATA)	:	6F

- Inland waterway transport

Classification code (ADN)	:	TF1
Special provisions (ADN)	:	274, 802
Limited quantities (ADN)	:	0
Excepted quantities (ADN)	:	E0
Equipment required (ADN)	:	PP, EP, EX, TOX, A
Ventilation (ADN)	:	VE01, VE02
Number of blue cones/lights (ADN)	:	2

- Rail transport

Classification code (RID)	:	TF1
Special provisions (RID)	:	274
Limited quantities (RID)	:	0
Excepted quantities (RID)	:	E0
Packing instructions (RID)	:	P602
Mixed packing provisions (RID)	:	MP8, MP17
Portable tank and bulk container instructions (RID)	:	T20
Portable tank and bulk container special provisions (RID)	:	TP2
Tank codes for RID tanks (RID)	:	L10CH

Special provisions for RID tanks (RID)	:	TU14, TU15, TU38, TE21, TE22
Transport category (RID)	:	1
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW28, CW31
Hazard identification number (RID)	:	663

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

TRIMETHOXYSILANE, 95% is not on the REACH Candidate List

TRIMETHOXYSILANE, 95% is not on the REACH Annex XIV List

TRIMETHOXYSILANE, 95% is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

TRIMETHOXYSILANE, 95% is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

% Volatiles	:	100 %

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	The substance is not listed

Denmark

Classification remarks	:	Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	:	Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Acute Tox. 1 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 1
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2

Skin Corr. 1C	Skin corrosion/irritation, Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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