

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 1/5/2015 Revision date: 3/4/2024 Supersedes version of: 5/18/2022 Version: 3.0

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

1.1. Product identifier

Product form : Substance

Substance name : CYCLOHEXYLMETHYLDIMETHOXYSILANE
Chemical name : CYCLOHEXYLDIMETHOXYMETHYLSILANE

 EC Index-No.
 : 014-011-00-3

 EC-No.
 : 402-140-1

 CAS-No.
 : 17865-32-6

 Product code
 : SIC2469.0

 Formula
 : C9H20O2Si

Synonyms : DIMETHOXYMETHYLSILYLCYCLOHEXANE

Product group : Trade product

Other means of identification : cyclohexyldialkoxyalkylsilane 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

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]

Skin corrosion/irritation, Category 2 H315
Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411

Full text of H- and EUH-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) :





GHS07 GHS09

Signal word (CLP) : Warning

Hazard statements (CLP) : H315 - Causes skin irritation.

H411 - Toxic to aquatic life with long lasting effects.

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Precautionary statements (CLP) : P264 - Wash hands, forearms and face thoroughly after handling.

P273 - Avoid release to the environment.

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

protection.

P302+P352 - IF ON SKIN: Wash with plenty of water.

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

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

2.3. Other hazards

Other hazards which do not result in classification : GHS UN classification. Acute toxicity (oral), Category 5. May be harmful if swallowed.

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type Mono-constituent

Name CYCLOHEXYLMETHYLDIMETHOXYSILANE

CAS-No. 17865-32-6 EC-No. 402-140-1 EC Index-No. : 014-011-00-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Cyclohexylmethyldimethoxysilane	CAS-No.: 17865-32-6 EC-No.: 402-140-1 EC Index-No.: 014-011-00-3	> 95	Skin Irrit. 2, H315 Aquatic Chronic 2, H411

Full text of H- and EUH-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. If you feel unwell, seek

medical advice

First-aid measures after skin contact Wash immediately 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, both acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache.

Nausea

Symptoms/effects after skin contact : May cause skin irritation. Symptoms/effects after eye contact : Causes serious eye irritation.

May be harmful if swallowed. Oral toxicity is associated with methanol, the solvent and a Symptoms/effects after ingestion

hydrolysis product which causes nausea, vomiting, headache, visual effects including

blindness. Onset of symptoms may be delayed up to 48 hours.

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.

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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 spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : Avoid water spray.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid. Irritating fumes and organic acid vapors may develop when material is

exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

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 vapour and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. 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. Wear suitable protective clothing, gloves and

eyes or face 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. Remove

sources of ignition.

6.4. Reference to other sections

See Section 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 vapour and mist. Provide good ventilation

in process area to prevent formation of vapour. Take precautionary measures against static

discharge. Use only non-sparking tools.

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

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Keep container tightly closed.

Incompatible materials : Moisture. Water :

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

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

CYCLOHEXYLMETHYLDIMETHOXYSILANE (17865-32-6)		
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal 2.3 mg/kg bodyweight/day		
Long-term - systemic effects, inhalation	16.2 mg/m³	
DNEL/DMEL (General population)		
Long-term - systemic effects,oral 1.15 mg/kg bodyweight/day		

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

8.2.2. Personal protection 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.

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles. Contact lenses should not be worn

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. Impermeable clothing

Hand protection:

Neoprene or nitrile rubber gloves. Wear impervious gloves

Other skin protection

Materials for protective clothing:

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

8.2.2.3. Respiratory protection

Respiratory protection:

NIOSH-certified organic vapor (black cartridge) respirator.

8.2.2.4. Thermal hazards

No additional information available

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Boiling point

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Straw.
Appearance : Clear liquid.
Molecular mass : 188.34 g/mol
Odour : Mild.

Odour threshold : Not available
Melting point : Not available
Freezing point : <-40 °C

Flammability : Combustible liquid : No data available. Explosive properties Oxidising properties : Non oxidizing. Explosive limits Not available : Not available Lower explosion limit : Not available Upper explosion limit : 66 °C Flash point Auto-ignition temperature : 235 (>) °C Decomposition temperature : Not available

pH : Not available
Viscosity, kinematic : Not available

Solubility : Insoluble in water. Reacts with water.

: 196 °C

Partition coefficient n-octanol/water (Log Kow) : Not available

Partition coefficient n-octanol/water (Log Pow) : 2.85 Source: EPISUITE, estimate

Vapour pressure : 12 mm Hg @20 C
Vapour pressure at 50°C : Not available
Density : Not available
Relative density : 0.9472
Relative vapour density at 20°C : > 1

Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Refractive index : 1.4354

SECTION 10: Stability and reactivity

10.1. Reactivity

Forms explosive mixtures with air on intense heating.

10.2. Chemical stability

Stable 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.

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10.5. Incompatible materials

Moisture. Water:

10.6. Hazardous decomposition products

Methanol. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

CYCLOHEXYLMETHYLDIMETHOXYSILANE (1	7865-32-6)
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.53 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Cyclohexylmethyldimethoxysilane (17865-32-	6)
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat. Guideline: OECD Guideline 401 (Acute Oral

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: other:
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.53 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

OVOLOLIEVVI		DIMETLIOVA	.ANE (17865-32-6)
CYCLOHEXY	$M \vdash I \vdash Y I$	I HIVIE I HI IX Y SII	$\Delta N = (1/865 - 3/61)$

NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose
	28-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.7 (Repeated Dose (28
	Days) Toxicity (Oral))

Cyclohexylmethyldimethoxysilane (17865-32-6)

NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose
	28-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.7 (Repeated Dose (28
	Days) Toxicity (Oral))

Aspiration hazard : Not classified

Cyclohexylmethyldimethoxysilane (17865-32-6)

Viscosity, kinematic	1.7 mm ² /s Temp.: '20°C' Parameter:	'kinematic viscosity (in mm²/s)'
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11.2. Information on other hazards

No additional information available

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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term :

(acute)

m : Not classified

Hazardous to the aquatic environment, long-term

: Toxic to aquatic life with long lasting effects.

(chronic)

CYCLOHEXYLMETHYLDIMETHOXYSILANE (17865-32-6)			
LC50 - Fish [1]	.602 mg/l Source: EPISUITE		
LC50 - Fish [2]	24 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)		
EC50 - Crustacea [1]	6.677 mg/l Source: EPISUITE		
EC50 - Crustacea [2]	13 mg/l Test organisms (species): Daphnia magna		
EC50 72h - Algae [1]	35 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)		
EC50 96h - Algae [1]	0.665 mg/l Source: EPISUITE		
Cyclohexylmethyldimethoxysilane (17865-32-6)			
LC50 - Fish [1] 1.602 mg/l Source: EPISUITE			
LC50 - Fish [2]	24 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)		
EC50 - Crustacea [1]	6.677 mg/l Source: EPISUITE		
EC50 - Crustacea [2]	13 mg/l Test organisms (species): Daphnia magna		
EC50 72h - Algae [1]	35 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)		
EC50 96h - Algae [1]	0.665 mg/l Source: EPISUITE		

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

CYCLOHEXYLMETHYLDIMETHOXYSILANE (17865-32-6)		
Partition coefficient n-octanol/water (Log Pow) 2.85 Source: EPISUITE, estimate		
Cyclohexylmethyldimethoxysilane (17865-32-6)		
Partition coefficient n-octanol/water (Log Pow) 2.85 Source: EPISUITE, estimate		

12.4. Mobility in soil

CYCLOHEXYLMETHYLDIMETHOXYSILANE (17865-32-6)		
Mobility in soil 297.2		
Cyclohexylmethyldimethoxysilane (17865-32-6)		
Mobility in soil	297.2	

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

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12.7. Other adverse effects

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Ecological information

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...

: Avoid release to the environment.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID n	umber			
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping	g name			
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard c	lass(es)			
Not applicable	9	9	Not applicable	Not applicable
***	****	***	¥2	¥2
14.4. Packing group	,			
Not applicable	III	III	Not applicable	Not applicable
14.5. Environmental haz	ards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes

This product is Combustible as defined by the US Department of Transportation (DOT). It is regulated for transport in the US in container > 119 gallons (450 liters). The product is not regulated for transport by the IATA, ADR/RID, ADNR or the IMDG regulations. Therefore, no UN# is applicable to this product.

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

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14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	CYCLOHEXYLMETHYLD IMETHOXYSILANE; Cyclohexylmethyldimetho xysilane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	CYCLOHEXYLMETHYLD IMETHOXYSILANE; Cyclohexylmethyldimetho xysilane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on the Canadian DSL (Domestic Substances List)

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

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Other information

: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:		
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
H315	Causes skin irritation.	
H411	Toxic to aquatic life with long lasting effects.	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	

SDS EU (REACH Annex II) - Custom v22

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