

CYCLOHEXYLMETHYLDIMETHOXSILANE

Safety Data Sheet SIC2469.0

Date of issue: 05/01/2015 Version: 1.0

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

1.1. Product identifier

| | |
|-----------------|--|
| Product form | : Substance |
| Physical state | : Liquid |
| Substance name | : CYCLOHEXYLMETHYLDIMETHOXSILANE |
| Product code | : SIC2469.0 |
| Formula | : C ₉ H ₂₀ O ₂ Si |
| Synonyms | : DIMETHOXYMETHYLSILYLCYCLOHEXANE |
| Chemical family | : ORGANOMETHOXSILANE |

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

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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 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.

Precautionary statements (CLP) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.

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P302+P352 - IF ON SKIN: Wash with plenty of water.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P273 - Avoid release to the environment.

2.3. Other hazards

Other hazards not contributing to the classification : GHS UN classification. Acute toxicity (oral), Category 5. May be harmful if swallowed.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : CYCLOHEXYLMETHYLDIMETHOXYISILANE
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 |
| Methanol | (CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X | | Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370 |

Specific concentration limits:

| Name | Product identifier | Specific concentration limits |
|----------|--|--|
| Methanol | (CAS-No.) 67-56-1 (EC-No.) 200-659-6 (EC Index-No.) 603-001-00-X | (3 =<C < 10) STOT SE 2, H371 (10 =<C < 100) STOT SE 1, H370 |

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. If you feel unwell, seek medical advice.

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

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. 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.

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

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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.

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.

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

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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Methanol (67-56-1) | | |
|--------------------|---|------------------------|
| EU | IOELV TWA (mg/m ³) | 260 mg/m ³ |
| EU | IOELV TWA (ppm) | 200 ppm |
| Austria | MAK (mg/m ³) | 260 mg/m ³ |
| Austria | MAK (ppm) | 200 ppm |
| Austria | MAK Short time value (mg/m ³) | 1040 mg/m ³ |
| Austria | MAK Short time value (ppm) | 800 ppm |
| Belgium | Limit value (mg/m ³) | 266 mg/m ³ |
| Belgium | Limit value (ppm) | 200 ppm |
| Belgium | Short time value (mg/m ³) | 333 mg/m ³ |
| Belgium | Short time value (ppm) | 250 ppm |
| Bulgaria | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Bulgaria | OEL TWA (ppm) | 200 ppm |

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| Methanol (67-56-1) | | |
|------------------------------|---|---|
| Cyprus | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Cyprus | OEL TWA (ppm) | 200 ppm |
| France | VLE (mg/m ³) | 1300 mg/m ³ |
| France | VLE (ppm) | 1000 ppm |
| France | VME (mg/m ³) | 260 mg/m ³ (restrictive limit) |
| France | VME (ppm) | 200 ppm (restrictive limit) |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 270 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| Germany | TRGS 900 Occupational exposure limit value (ppm) | 200 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| Germany | TRGS 903 Biological limit value | 30 mg/l (Medium: urine - Time: end of shift - Parameter: Methanol) 30 mg/l (Medium: urine - Time: end of several shifts - Parameter: Methanol (for long-term exposures)) |
| Gibraltar | Eight hours mg/m ³ | 260 mg/m ³ |
| Gibraltar | Eight hours ppm | 200 ppm |
| Greece | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Greece | OEL TWA (ppm) | 200 ppm |
| Greece | OEL STEL (mg/m ³) | 325 mg/m ³ |
| Greece | OEL STEL (ppm) | 250 ppm |
| Italy - Portugal - USA ACGIH | ACGIH TWA (ppm) | 200 ppm |
| Italy - Portugal - USA ACGIH | ACGIH STEL (ppm) | 250 ppm |
| Italy | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Italy | OEL TWA (ppm) | 200 ppm |
| Latvia | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Latvia | OEL TWA (ppm) | 200 ppm |
| USA IDLH | US IDLH (ppm) | 6000 ppm |
| USA NIOSH | NIOSH REL (TWA) (mg/m ³) | 260 mg/m ³ |
| USA NIOSH | NIOSH REL (TWA) (ppm) | 200 ppm |
| USA NIOSH | NIOSH REL (STEL) (mg/m ³) | 325 mg/m ³ |
| USA NIOSH | NIOSH REL (STEL) (ppm) | 250 ppm |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 260 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (ppm) | 200 ppm |
| Spain | VLA-ED (mg/m ³) | 266 mg/m ³ (indicative limit value) |
| Spain | VLA-ED (ppm) | 200 ppm (indicative limit value) |
| Switzerland | KZGW (mg/m ³) | 1040 mg/m ³ |
| Switzerland | KZGW (ppm) | 800 ppm |
| Switzerland | MAK (mg/m ³) | 260 mg/m ³ |
| Switzerland | MAK (ppm) | 200 ppm |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 133 mg/m ³ |
| Netherlands | Grenswaarde TGG 8H (ppm) | 100 ppm |
| United Kingdom | WEL TWA (mg/m ³) | 266 mg/m ³ |
| United Kingdom | WEL TWA (ppm) | 200 ppm |
| United Kingdom | WEL STEL (mg/m ³) | 333 mg/m ³ |
| United Kingdom | WEL STEL (ppm) | 250 ppm |
| Czech Republic | Expoziční limity (PEL) (mg/m ³) | 250 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 260 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (ppm) | 200 ppm |
| Finland | HTP-arvo (8h) (mg/m ³) | 270 mg/m ³ |
| Finland | HTP-arvo (8h) (ppm) | 200 ppm |
| Finland | HTP-arvo (15 min) | 330 mg/m ³ |
| Finland | HTP-arvo (15 min) (ppm) | 250 ppm |
| Hungary | AK-érték | 260 mg/m ³ |

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| Methanol (67-56-1) | | |
|--------------------|--|--|
| Ireland | OEL (8 hours ref) (mg/m ³) | 260 mg/m ³ |
| Ireland | OEL (8 hours ref) (ppm) | 200 ppm |
| Ireland | OEL (15 min ref) (mg/m ³) | 780 mg/m ³ (calculated) |
| Ireland | OEL (15 min ref) (ppm) | 600 ppm (calculated) |
| Lithuania | IPRV (mg/m ³) | 260 mg/m ³ |
| Lithuania | IPRV (ppm) | 200 ppm |
| Malta | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Malta | OEL TWA (ppm) | 200 ppm |
| Norway | Grenseverdier (AN) (mg/m ³) | 130 mg/m ³ |
| Norway | Grenseverdier (AN) (ppm) | 100 ppm |
| Norway | Grenseverdier (Korttidsverdi) (mg/m ³) | 130 mg/m ³ |
| Norway | Grenseverdier (Korttidsverdi) (ppm) | 100 ppm |
| Poland | NDS (mg/m ³) | 100 mg/m ³ |
| Poland | NDSch (mg/m ³) | 300 mg/m ³ |
| Romania | OEL TWA (mg/m ³) | 260 mg/m ³ |
| Romania | OEL TWA (ppm) | 200 ppm |
| Romania | OEL STEL (ppm) | 5 ppm |
| Slovakia | NPHV (priemerná) (mg/m ³) | 260 mg/m ³ |
| Slovakia | NPHV (priemerná) (ppm) | 200 ppm |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 250 mg/m ³ |
| Sweden | nivågränsvärde (NVG) (ppm) | 200 ppm |
| Sweden | kortidsvärde (KTV) (mg/m ³) | 350 mg/m ³ |
| Sweden | kortidsvärde (KTV) (ppm) | 250 ppm |
| Canada (Quebec) | VECD (mg/m ³) | 328 mg/m ³ |
| Canada (Quebec) | VECD (ppm) | 250 ppm |
| Canada (Quebec) | VEMP (mg/m ³) | 262 mg/m ³ |
| Canada (Quebec) | VEMP (ppm) | 200 ppm |
| Australia | TWA (mg/m ³) | 262 mg/m ³ |
| Australia | TWA (ppm) | 200 ppm |
| Australia | STEL (mg/m ³) | 328 mg/m ³ |
| Australia | STEL (ppm) | 250 ppm |
| Portugal | OEL TWA (mg/m ³) | 260 mg/m ³ (indicative limit value) |
| Portugal | OEL TWA (ppm) | 200 ppm (indicative limit value) |
| Portugal | OEL STEL (ppm) | 250 ppm |
| Portugal | OEL chemical category (PT) | skin - potential for cutaneous exposure indicative limit value |

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 goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

NIOSH-certified organic vapor (black cartridge) respirator.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|--|
| Physical state | : Liquid |
| Appearance | : Clear liquid. |
| Molecular mass | : 188.34 g/mol |
| Colour | : Straw. |
| Odour | : Mild. |
| Odour threshold | : No data available |
| Refractive index | : 1.4354 |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : < -40 °C |
| Boiling point | : 196 °C |
| Flash point | : 66 °C |
| Auto-ignition temperature | : 235 °C |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Combustible liquid |
| Vapour pressure | : 12 mm Hg @ 20°C |
| Relative vapour density at 20 °C | : > 1 |
| Relative density | : 0.9472 |
| Solubility | : Insoluble in water. 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 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

Moisture. Water :

10.6. Hazardous decomposition products

Methanol. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Methanol (67-56-1)

| | |
|---------------------------|--------------------------------|
| LC50 inhalation rat (ppm) | 22500 ppm (Exposure time: 8 h) |
| ATE CLP (oral) | 100 mg/kg bodyweight |
| ATE CLP (dermal) | 300 mg/kg bodyweight |
| ATE CLP (vapours) | 3 mg/l/4h |

Cyclohexylmethyldimethoxysilane (17865-32-6)

| | |
|---------------|------------|
| LD50 oral rat | 3000 mg/kg |
|---------------|------------|

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Cyclohexylmethyldimethoxysilane (17865-32-6)

LD50 dermal rat > 2000 mg/kg

| | |
|-------------------------------------|---|
| 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 |
| Aspiration hazard | : Not classified |
| 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. |
| 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. 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. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|--------------------------|--|
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Toxic to aquatic life with long lasting effects. |

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]) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Methanol (67-56-1)

| | |
|------------|-------|
| BCF fish 1 | < 10 |
| Log Pow | -0.77 |

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

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

SECTION 13: Disposal considerations

13.1. Waste treatment 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. |

SECTION 14: Transport information

14.1. UN number

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

14.1. UN number

| | |
|---------------|------------------|
| UN-No. (ADR) | : Not applicable |
| UN-No. (IMDG) | : Not applicable |
| UN-No. (IATA) | : Not applicable |
| UN-No. (ADN) | : Not applicable |

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UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable
:



IMDG

Transport hazard class(es) (IMDG) : Not applicable
:



IATA

Transport hazard class(es) (IATA) : Not applicable
:



ADN

Transport hazard class(es) (ADN) : Not applicable
:



RID

Transport hazard class(es) (RID) : Not applicable
:



14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : 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.

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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

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

CYCLOHEXYLMETHYLDIMETHOXYSILANE is not on the REACH Candidate List

CYCLOHEXYLMETHYLDIMETHOXYSILANE is not on the REACH Annex XIV List

CYCLOHEXYLMETHYLDIMETHOXYSILANE 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.

CYCLOHEXYLMETHYLDIMETHOXYSILANE 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

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to VwVwS, Annex 3; ID No. 5200)

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

Class for fire hazard : Class III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

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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

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

| | |
|----------------------------------|---|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment — Chronic Hazard, Category 2 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 1 | Specific target organ toxicity — single exposure, Category 1 |
| STOT SE 2 | Specific target organ toxicity — Single exposure, Category 2 |
| H225 | Highly flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H315 | Causes skin irritation. |
| H331 | Toxic if inhaled. |
| H370 | Causes damage to organs. |
| H371 | May cause damage to organs. |
| H411 | Toxic to aquatic life with long lasting effects. |

SDS EU (REACH Annex II) - Custom

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