

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

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

1.1 Product identifier

Product name

Repel-Silane ES, 500 ml

Catalogue Number

17133201



Product description

Not available.

Product type

Liquid.

Other means of identification

Not available.

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

Identified uses

Analytical chemistry.

Laboratory chemicals

Scientific research and development

Consumer use

-

1.3 Details of the supplier of the safety data sheet

Supplier

Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Hours of operation

08.30 - 17.00

Person who prepared the SDS : sds_author@cytiva.com

1.4 Emergency telephone number

Switzerland

Pall (Schweiz) GmbH
Schaeferweg 16
4057 Basel
Switzerland
t: 0848 8028 10

Call INFOTRAC 24 Hour number:
001-352-323-3500 (Call Collect).

National advisory body/Poison Centre

Switzerland

Vergiftungsnotruf
Tel: 145

Aus dem Ausland oder bei technischen Problemen: +41 44 251 51 51

<https://www.toxinfo.ch/notruf-145>

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition

Mixture

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

Flam. Liq. 3, H226

Repr. 2, H361f

Aquatic Chronic 1, H410

PBT, EUH440

vPvB, EUH441

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.



Ingredients of unknown toxicity 100 percent of the mixture consists of component(s) of unknown acute oral toxicity
100 percent of the mixture consists of component(s) of unknown acute dermal toxicity

Ingredients of unknown ecotoxicity Contains 2% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word

Danger

Hazard statements

Flammable liquid and vapour.
Suspected of damaging fertility.
Very toxic to aquatic life with long lasting effects.
Strongly accumulates in the environment and living organisms including in humans.

Precautionary statements

| | |
|-----------------------------|---|
| General | Not applicable. |
| Prevention | Obtain special instructions before use. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. |
| Response | Collect spillage. IF exposed or concerned: Get medical advice or attention. |
| Storage | Not applicable. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | Not applicable. |

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Special packaging requirements

| | |
|---|-----------------|
| Containers to be fitted with child-resistant fastenings | Not applicable. |
|---|-----------------|

| | |
|---------------------------|-----------------|
| Tactile warning of danger | Not applicable. |
|---------------------------|-----------------|

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.

Other hazards which do not result in classification None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Mixture

| Product/ingredient name | Identifiers | % | Classification Regulation (EC) No. 1272/2008 [CLP] | Type |
|------------------------------|--|----|--|---|
| Octamethylcyclotetrasiloxane | REACH #: 01-2119529238-36 EC: 209-136-7 CAS: 556-67-2 Index: 014-018-00-1 | 98 | Flam. Liq. 3, H226 Repr. 2, H361f Aquatic Chronic 1, H410 PBT, EUH440 vPvB, EUH441 | M [Chronic] = 10 [1] [2] [3] |
| dimethyldichlorosilane | REACH #: 01-2119437250-51 EC: 200-901-0 CAS: 75-78-5 Index: 014-003-00-X | 2 | Flam. Liq. 2, H225 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 | ATE [Inhalation (gases)] = 930 ppm [1] |

See Section 16 for the full text of the H statements declared above.



9 5 1 7 1 3 3 2 0 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a physical, health or environmental hazard
- [2] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [3] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

| | |
|-----------------------------------|--|
| Eye contact | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Skin contact | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

| | |
|---------------------|---|
| Eye contact | No specific data. |
| Inhalation | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Skin contact | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Ingestion | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |

4.3 Indication of any immediate medical attention and special treatment needed

| | |
|----------------------------|---|
| Notes to physician | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | No specific treatment. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

| | |
|-------------------------------------|--|
| Suitable extinguishing media | Use dry chemical, CO ₂ , water spray (fog) or foam. |
|-------------------------------------|--|

Unsuitable extinguishing media Do not use water jet.

5.2 Special hazards arising from the substance or mixture

| | |
|--|---|
| Hazards from the substance or mixture | Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. This material strongly accumulates in the environment and living organisms including in humans. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
|--|---|



| | |
|--|--|
| Hazardous combustion products | Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides |
| 5.3 Advice for firefighters | |
| Special precautions for fire-fighters | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

| | |
|------------------------------------|---|
| For non-emergency personnel | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| For emergency responders | If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |

| | |
|--------------------------------------|--|
| 6.2 Environmental precautions | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage. |
|--------------------------------------|--|

6.3 Methods and material for containment and cleaning up

| | |
|--------------------|--|
| Small spill | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. |

| | |
|--|---|
| 6.4 Reference to other sections | See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information. |
|--|---|

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

| | |
|---|--|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 20 to 30°C (68 to 86°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria



| Category | Notification and MAPP threshold | Safety report threshold |
|---|--|-------------------------|
| P5c | 5000 | 50000 |
| E1 | 100 | 200 |
| 7.3 Specific end use(s) | | |
| Recommendations | Analytical chemistry. Laboratory chemicals. Scientific research and development. | |
| Industrial sector specific solutions | Not available. | |

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario (s).

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name

Octamethylcyclotetrasiloxane

Result

DNEL - General population - Long term - Oral

3.7 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Inhalation

13 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

13 mg/m³

Effects: Systemic

DNEL - Workers - Long term - Inhalation

73 mg/m³

Effects: Local

DNEL - Workers - Long term - Inhalation

73 mg/m³

Effects: Systemic

DNEL - General population - Short term - Oral

2.5 mg/kg bw/day

Effects: Systemic

DNEL - General population - Long term - Oral

2.5 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Inhalation

4.8 mg/m³

Effects: Local

DNEL - General population - Long term - Inhalation

4.8 mg/m³

Effects: Local

DNEL - Workers - Short term - Dermal

7 mg/kg bw/day

Effects: Systemic

DNEL - Workers - Long term - Dermal

7 mg/kg bw/day

Effects: Systemic

DNEL - General population - Short term - Inhalation

8.7 mg/m³



Effects: Systemic**DNEL - General population - Long term - Inhalation**8.7 mg/m³Effects: Systemic**DNEL - Workers - Short term - Inhalation**14.2 mg/m³Effects: Local**DNEL - Workers - Long term - Inhalation**14.2 mg/m³Effects: Local**DNEL - Workers - Short term - Inhalation**49.4 mg/m³Effects: Systemic**DNEL - Workers - Long term - Inhalation**49.4 mg/m³Effects: Systemic**PNECs**

Not available.

8.2 Exposure controls**Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

Other skin protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties**Appearance****Physical state**

Liquid.

Colour

Colourless.

Odour

Not available.

Odour threshold

Not available.

Melting point/freezing point

Not available.



| | | | |
|---|--|--------------------------------|---------------|
| Boiling point or initial boiling point and boiling range | Not available. | | |
| Flammability | Not available. | | |
| Lower and upper explosion limit | Not available. | | |
| Flash point | Closed cup: 56°C | | |
| Auto-ignition temperature | Not available. | °C | Method |
| Ingredient name | | | |
| Octamethylcyclotetrasiloxane | 384 to 387 | | ASTM E 659 |
| dimethyldichlorosilane | 425 | | DIN 51794 |
| Decomposition temperature | Not available. | | |
| pH | Not applicable. | | |
| Viscosity | Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not available. | | |
| Solubility | | | |
| Media | Result | | |
| cold water | Easily soluble | | |
| hot water | Easily soluble | | |
| Solubility in water | Not available. | | |
| Partition coefficient: n-octanol/water | Not applicable. | | |
| Vapour pressure | Not available. | | |
| | | Vapour Pressure at 20°C | |
| Ingredient name | mm Hg | kPa | Method |
| dimethyldichlorosilane | 109.70432 | 14.6 | EU A.4 |
| octamethylcyclotetrasiloxane | 0.99008 | 0.13 | |
| | | Vapour pressure at 50°C | |
| | mm Hg | kPa | Method |
| | 381.01739 | 50.8 | EU A.4 |

| | |
|---------------------------------|----------------|
| Relative density | Not available. |
| Relative vapour density | Not available. |
| Particle characteristics | |

| | |
|-----------------------------|-----------------|
| Median particle size | Not applicable. |
|-----------------------------|-----------------|

9.2 Other information

9.2.1 Information with regard to physical hazard classes

| | |
|-----------------------------|--|
| Burning time | Not applicable. |
| Burning rate | Not applicable. |
| Explosive properties | Not considered to be a product presenting a risk of explosion. |
| Oxidising properties | Not available. |

9.2.2 Other safety characteristics

| | |
|-------------------------|-----------------|
| Evaporation rate | Not available. |
| | Not applicable. |

SECTION 10: Stability and reactivity

| | |
|--|---|
| 10.1 Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| 10.2 Chemical stability | The product is stable. |
| 10.3 Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| 10.4 Conditions to avoid | Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| 10.5 Incompatible materials | Reactive or incompatible with the following materials: oxidising materials |
| 10.6 Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |



SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product/ingredient name

octamethylcyclotetrasiloxane

Result

Rat - Inhalation - LC50 Vapour

36 g/m³ [4 hours]

Toxic effects: Behavioral - Excitement Lung, Thorax, or Respiration - Dyspnea Other - Hair

dimethyldichlorosilane

Rat - Inhalation - LC50 Gas.

930 ppm [4 hours]

Conclusion/Summary [Product] Not available.

Acute toxicity estimates

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|------------------------------|--------------|----------------|--------------------------|-----------------------------|-------------------------------------|
| Repel-Silane ES, 500 ml | N/A | N/A | 46500.0 | N/A | N/A |
| octamethylcyclotetrasiloxane | N/A | N/A | N/A | 36 | N/A |
| dimethyldichlorosilane | N/A | N/A | 930 | N/A | N/A |

Skin corrosion/irritation

Product/ingredient name

dimethyldichlorosilane

Result

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 20 mg

Conclusion/Summary [Product] Not available.

Serious eye damage/eye irritation

Product/ingredient name

dimethyldichlorosilane

Result

Rabbit - Eyes - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 5 mg

Conclusion/Summary [Product] Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] Not available.

Respiratory

Conclusion/Summary [Product] Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] Not available.



Specific target organ toxicity (single exposure)

| Product/ingredient name | Result |
|-------------------------|--|
| dimethyldichlorosilane | STOT SE 3, H335 (Respiratory tract irritation) |

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

| | |
|---------------------|---|
| Inhalation | No known significant effects or critical hazards. |
| Ingestion | No known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Eye contact | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|---|
| Inhalation | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Ingestion | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Skin contact | Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations |
| Eye contact | No specific data. |

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Short term exposure**

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Long term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |

Potential chronic health effects

Not available.

Conclusion/Summary [Product] Not available.

| | |
|------------------------------|---|
| General | No known significant effects or critical hazards. |
| Carcinogenicity | No known significant effects or critical hazards. |
| Mutagenicity | No known significant effects or critical hazards. |
| Reproductive toxicity | Suspected of damaging fertility. |

11.2 Information on other hazards**11.2.1 Endocrine disrupting properties**

Not available.

Conclusion/Summary [Product] The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.



SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

Octamethylcyclotetrasiloxane

Result

Chronic - NOEC - Fresh water

Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* - Egg

Age: 2 hours

4.4 µg/l [90 days]

Effect: Multiple

Chronic - NOEC - Fresh water

Daphnia - Water flea - *Daphnia magna*

Age: <24 hours

7.9 µg/l [21 days]

Effect: Mortality

Chronic - NOEC

STDMETH

Algae - Green algae - *Selenastrum capricornutum*

1 to 29 µg/l [96 hours]

Effect: Population

Conclusion/Summary [Product] Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] Not available.

Ingredient name

dimethyldichlorosilane

Conclusion/Summary

Decomposes in water.

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|--|--------------------|-------------------------------|-------------|
| Octamethylcyclotetrasiloxane dimethyldichlorosilane | 6.488 -0.41 | 13400 [EPA OTS 797.1520] - | High Low |

12.4 Mobility in soil

Soil/water partition coefficient

| Product/ingredient name | logK _{oc} | K _{oc} |
|------------------------------|--------------------|-----------------|
| Octamethylcyclotetrasiloxane | 3.5 | 3064.9 |
| dimethyldichlorosilane | 2.1 | 117.926 |

Results of PMT and vPvM assessment

| Product/ingredient name | PMT | P | M | T | vPvM | vP | vM |
|------------------------------|-----|-----|-----|-----|------|-----|----|
| Octamethylcyclotetrasiloxane | No | Yes | No | Yes | No | Yes | No |
| dimethyldichlorosilane | No | N/A | Yes | No | No | N/A | No |

Mobility Not available.

Conclusion/Summary The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|------------------------------|-----|-----|-----|-----|------|-----|-----|
| Octamethylcyclotetrasiloxane | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| dimethyldichlorosilane | No | N/A | N/A | No | N/A | N/A | N/A |

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

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|------------------------------|-----|-----|-----|-----|------|-----|-----|
| Octamethylcyclotetrasiloxane | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| dimethyldichlorosilane | No | N/A | N/A | No | N/A | N/A | N/A |

Conclusion/Summary Strongly accumulates in the environment and living organisms including in humans.

Regulation (EC) No. 1272/2008

[CLP]

12.6 Endocrine disrupting properties

Not applicable.

Conclusion/Summary [Product] The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No. 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.



SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|--|--|--|---|--|
| 14.1 UN number | UN1993 | UN1993 | UN1993 | UN1993 |
| 14.2 UN proper shipping name | FLAMMABLE LIQUIDS, N.O.S. (octamethylcyclotetrasiloxane, dimethyldichlorosilane) | FLAMMABLE LIQUIDS, N.O.S. (octamethylcyclotetrasiloxane, dimethyldichlorosilane) | FLAMMABLE LIQUIDS, N.O.S. (octamethylcyclotetrasiloxane, dimethyldichlorosilane) | FLAMMABLE LIQUIDS, N.O.S. (octamethylcyclotetrasiloxane, dimethyldichlorosilane) |
| 14.3 Transport hazard class(es) | 3   | 3   | 3  | 3  |
| 14.4 Packing group | III | III | III | III |
| 14.5 Environmental hazards | Yes. | Yes. | No. | No. |
| Additional information | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Hazard identification number</u> 30 <u>Tunnel code</u> (D/E) | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. | <u>Emergency schedules</u> F-E, S-E | The environmentally hazardous substance mark may appear if required by other transportation regulations. |

14.6 Special precautions for user **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

| Intrinsic property | Ingredient name | Status | Reference number | Date of revision |
|--------------------|-----------------|--------|------------------|------------------|
| | | | | |



| | | | | |
|------|------------------------------|-------------|---------------------|-----------|
| PBT | octamethylcyclotetrasiloxane | Recommended | 10th recommendation | 4/14/2021 |
| vPvB | octamethylcyclotetrasiloxane | Recommended | 10th recommendation | 4/14/2021 |

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

| Product/ingredient name | % | Designation [Usage] |
|------------------------------|-----|---------------------|
| Repel-Silane ES, 500 ml | ≥90 | 3 |
| octamethylcyclotetrasiloxane | ≥90 | 70 |

Labelling Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air Not listed

Industrial emissions (integrated pollution prevention and control) - Water Not listed

Explosive precursors Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria**Category**

P5c

E1

National regulations

VOC content Exempt.

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States All components are active or exempted.

Canada inventory All components are listed or exempted.

China All components are listed or exempted.

Japan Japan inventory (CSCL): All components are listed or exempted.

Japan inventory (ISHL): All components are listed or exempted.

15.2 Chemical safety assessment This product contains substances for which Chemical Safety Assessments are still required.



SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Abbreviations and acronyms

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|--|---|
| Flam. Liq. 3, H226 Repr. 2, H361f Aquatic Chronic 1, H410 PBT, EUH440 vPvB, EUH441 | On basis of test data Calculation method Calculation method Calculation method Calculation method |

| | |
|--|---|
| Full text of abbreviated H statements | H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H335 May cause respiratory irritation. H361f Suspected of damaging fertility. H410 Very toxic to aquatic life with long lasting effects. EUH440 Accumulates in the environment and living organisms including in humans. EUH441 Strongly accumulates in the environment and living organisms including in humans. |
|--|---|

| | |
|--|---|
| Full text of classifications [CLP/ GHS] | Acute Tox. 3 ACUTE TOXICITY - Category 3 Aquatic Chronic 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 Flam. Liq. 2 FLAMMABLE LIQUIDS - Category 2 Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3 PBT PERSISTENT, BIOACCUMULATIVE AND TOXIC Repr. 2 REPRODUCTIVE TOXICITY - Category 2 Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2 STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 vPvB VERY PERSISTENT AND VERY BIOACCUMULATIVE |
|--|---|

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