



# SAFETY DATA SHEET

DOW FRANCE S.A.S.

Safety Data Sheet according to Reg. (EU) 2020/878

**Product name:** DOWSIL™ 1-2577 Low VOC Conformal Coating

**Revision Date:** 03.05.2023

**Version:** 8.0

**Date of last issue:** 05.01.2022

**Print Date:** 04.05.2023

DOW FRANCE S.A.S. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

**Product name:** DOWSIL™ 1-2577 Low VOC Conformal Coating

**UFI:** 7RKP-X0VA-W00A-X3XV

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

**Identified uses:** Use at industrial sites: Manufacture of computer, electronic and optical products, electrical equipment. Use in coatings.

### 1.3 Details of the supplier of the safety data sheet

#### COMPANY IDENTIFICATION

DOW FRANCE S.A.S.

23 AVENUE JULES RIMET

93210 LA PLAINE SAINT-DENIS

FRANCE

**Customer Information Number:**

(31) 115 67 2626

SDSQuestion@dow.com

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 00 33 388 736 000

**Local Emergency Contact:** 00 33 388 736 000

**ORFILA:** + 33 (0)1 45 42 59 59

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008:**

Flammable liquids - Category 2 - H225

Reproductive toxicity - Category 2 - H361d

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

### Hazard pictograms



Signal word: **DANGER**

### Hazard statements

H225 Highly flammable liquid and vapour.  
H361d Suspected of damaging the unborn child.

### Precautionary statements

P201 Obtain special instructions before use.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 Avoid breathing spray.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.  
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

**Contains** toluene

## 2.3 Other hazards

Static-accumulating flammable liquid.

This product contains octamethylcyclotetrasiloxane (D4) that has been identified by the Member State Committee of ECHA as fulfilling the PBT and vPvB criteria laid down in Annex XIII to Regulation (EC) No 1907/2006. See Section 12 for additional information.

### Endocrine disrupting properties

Environment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Human Health: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

---

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

---

**Chemical nature:** Silicone resin solution

## 3.2 Mixtures

This product is a mixture.

| CASRN /<br>EC-No. /<br>Index-No.                                                           | REACH<br>Registration<br>Number | Concentration       | Component                             | Classification:<br>REGULATION (EC) No<br>1272/2008                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------|---------------------------------|---------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CASRN</b><br>108-88-3<br><b>EC-No.</b><br>203-625-9<br><b>Index-No.</b><br>601-021-00-3 | 01-2119471310-51                | >= 3,0 - <= 4,0 %   | toluene                               | Flam. Liq. 2; H225<br>Skin Irrit. 2; H315<br>Repr. 2; H361d<br>STOT SE 3; H336<br>(Central nervous system)<br>STOT RE 2; H373<br>Asp. Tox. 1; H304<br>Aquatic Chronic 3; H412<br><br>Acute toxicity estimate<br>Acute oral toxicity:<br>5 580 mg/kg<br>Acute inhalation toxicity:<br>25,7 mg/l, 4 Hour, vapour<br>30 mg/l, 4 Hour, vapour<br>Acute dermal toxicity:<br>12 267 mg/kg |
| <b>CASRN</b><br>556-67-2<br><b>EC-No.</b><br>209-136-7<br><b>Index-No.</b><br>014-018-00-1 | —                               | 0,01%               | octamethylcyclotetr<br>asiloxane [D4] | Flam. Liq. 3; H226<br>Repr. 2; H361f<br>Aquatic Chronic 1; H410<br><br>M-Factor (Chronic aquatic<br>toxicity): 10<br><br>Acute toxicity estimate<br>Acute oral toxicity:<br>> 4 800 mg/kg<br>Acute inhalation toxicity:<br>36 mg/l, 4 Hour, dust/mist<br>Acute dermal toxicity:<br>> 2 400 mg/kg                                                                                    |
| Substances with a workplace exposure limit                                                 |                                 |                     |                                       |                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>CASRN</b><br>107-51-7<br><b>EC-No.</b><br>203-497-4<br><b>Index-No.</b><br>—            | 01-2119970219-31                | >= 53,0 - <= 74,0 % | Octamethyltrisiloxa<br>ne             | Flam. Liq. 3; H226<br><br>Acute toxicity estimate<br>Acute oral toxicity:<br>> 2 000 mg/kg<br>Acute inhalation toxicity:<br>> 22,6 mg/l, 4 Hour, vapour<br>Acute dermal toxicity:<br>> 2 000 mg/kg                                                                                                                                                                                  |
| <b>CASRN</b><br>1185-55-3                                                                  | 01-2119517436-40                | >= 0,8 - <= 2,6 %   | Methyltrimethoxysil<br>ane            | Flam. Liq. 2; H225                                                                                                                                                                                                                                                                                                                                                                  |

|                                                     |  |  |  |                                                                                                                                                                           |
|-----------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EC-No.</b><br>214-685-0<br><b>Index-No.</b><br>— |  |  |  | Acute toxicity estimate<br>Acute oral toxicity:<br>11 685 mg/kg<br>Acute inhalation toxicity:<br>> 7605 ppm, 6 Hour,<br>vapour<br>Acute dermal toxicity:<br>> 9 500 mg/kg |
|-----------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

For the full text of the H-Statements mentioned in this Section, see Section 16.

---

## SECTION 4: FIRST AID MEASURES

---

### 4.1 Description of first aid measures

#### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist. Suitable emergency eye wash facility should be available in work area.

**Ingestion:** Rinse mouth with water. No emergency medical treatment necessary.

### 4.2 Most important symptoms and effects, both acute and delayed:

Suspected of damaging the unborn child.

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

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

---

## SECTION 5: FIREFIGHTING MEASURES

---

### 5.1 Extinguishing media

**Suitable extinguishing media:** Alcohol-resistant foam. Dry chemical. Dry sand.

**Unsuitable extinguishing media:** High volume water jet. Do not use direct water stream..

## 5.2 Special hazards arising from the substance or mixture

**Hazardous combustion products:** Carbon oxides. Silicon oxides. Formaldehyde.

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance.. Exposure to combustion products may be a hazard to health.. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.. Flammable mixtures may exist within the vapor space of containers at room temperature.. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat.. Fire burns more vigorously than would be expected.. Vapours may form explosive mixtures with air..

## 5.3 Advice for firefighters

**Fire Fighting Procedures:** Use water spray to cool unopened containers.. Evacuate area.. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Do not use a solid water stream as it may scatter and spread fire.. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus.. Use personal protective equipment..

---

## SECTION 6: ACCIDENTAL RELEASE MEASURES

---

**6.1 Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Ventilate the area. Use personal protective equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Vapor explosion hazard. Keep out of sewers. Follow safe handling advice and personal protective equipment recommendations.

**6.2 Environmental precautions:** Do not release the product to the aquatic environment above defined regulatory levels. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and materials for containment and cleaning up:** Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur.

## 6.4 Reference to other sections:

See sections: 7, 8, 11, 12 and 13.

## SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Do not get on skin or clothing. Avoid inhalation of vapour or mist. Avoid contact with eyes. Do not swallow. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Non-sparking tools should be used. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Use with local exhaust ventilation. Use only in an area equipped with explosion proof exhaust ventilation. Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Ground and bond container and receiving equipment.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Do not store with the following product types: Strong oxidizing agents. Organic peroxides. Flammable solids. Pyrophoric liquids. Pyrophoric solids. Self-heating substances and mixtures. Substances and mixtures, which in contact with water, emit flammable gases. Explosives. Gases. Unsuitable materials for containers: None known.

**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component                         | Regulation                                                                                                                                                              | Type of listing | Value             |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| toluene                           | ACGIH                                                                                                                                                                   | TWA             | 20 ppm            |
|                                   | Further information: Ototoxicant; A4: Not classifiable as a human carcinogen                                                                                            |                 |                   |
|                                   | 2006/15/EC                                                                                                                                                              | TWA             | 192 mg/m3 50 ppm  |
|                                   | Further information: Indicative; skin: Identifies the possibility of significant uptake through the skin                                                                |                 |                   |
|                                   | 2006/15/EC                                                                                                                                                              | STEL            | 384 mg/m3 100 ppm |
|                                   | Further information: Indicative; skin: Identifies the possibility of significant uptake through the skin                                                                |                 |                   |
|                                   | FR VLE                                                                                                                                                                  | VME             | 76,8 mg/m3 20 ppm |
|                                   | Further information: R2: Reprotoxic category 2 - Possibly reprotoxic to humans; Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits |                 |                   |
|                                   | FR VLE                                                                                                                                                                  | VLCT (VLE)      | 384 mg/m3 100 ppm |
|                                   | Further information: R2: Reprotoxic category 2 - Possibly reprotoxic to humans; Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits |                 |                   |
| octamethylcyclotetrasiloxane [D4] | US WEEL                                                                                                                                                                 | TWA             | 10 ppm            |
| Octamethyltrisiloxane             | Dow IHG                                                                                                                                                                 | TWA             | 20 ppm            |
| Methyltrimethoxysilane            | Dow IHG                                                                                                                                                                 | TWA             | 7,5 ppm           |

|          |                                                                                                                     |            |                       |
|----------|---------------------------------------------------------------------------------------------------------------------|------------|-----------------------|
| methanol | ACGIH                                                                                                               | TWA        | 200 ppm               |
|          | Further information: Skin: Danger of cutaneous absorption                                                           |            |                       |
|          | ACGIH                                                                                                               | STEL       | 250 ppm               |
|          | Further information: Skin: Danger of cutaneous absorption                                                           |            |                       |
|          | 2006/15/EC                                                                                                          | TWA        | 260 mg/m3 200 ppm     |
|          | Further information: Indicative; skin: Identifies the possibility of significant uptake through the skin            |            |                       |
|          | FR VLE                                                                                                              | VME        | 260 mg/m3 200 ppm     |
|          | Further information: Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits        |            |                       |
|          | FR VLE                                                                                                              | VLCT (VLE) | 1 300 mg/m3 1 000 ppm |
|          | Further information: Skin: Risk of penetration through skin; Indicative exposure limits: Indicative exposure limits |            |                       |

The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing: Methanol.

#### Biological occupational exposure limits

| Components | CAS-No.  | Control parameters | Biological specimen | Sampling time                                            | Permissible concentration | Basis     |
|------------|----------|--------------------|---------------------|----------------------------------------------------------|---------------------------|-----------|
| toluene    | 108-88-3 | Toluene            | In blood            | Prior to last shift of workweek                          | 0,02 mg/l                 | ACGIH BEI |
|            |          | Toluene            | Urine               | End of shift (As soon as possible after exposure ceases) | 0,03 mg/l                 | ACGIH BEI |
|            |          | o-Cresol           | Urine               | End of shift (As soon as possible after exposure ceases) | 0.3 mg/g creatinine       | ACGIH BEI |
| methanol   | 67-56-1  | Methanol           | Urine               | End of shift (As soon as possible after exposure ceases) | 15 mg/l                   | ACGIH BEI |

#### Recommended monitoring procedures

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with the Occupational Exposure Limits and the adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Validated exposure measurement methods should be applied by a competent person and samples should be analysed by an accredited laboratory.

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.

Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods. Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods. Health and Safety Executive (HSE), United Kingdom: Methods for the Determination of Hazardous Substances.

Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany.

L'Institut National de Recherche et de Sécurité, (INRS), France.

### Derived No Effect Level

toluene

#### Workers

| <i>Acute systemic effects</i> |            | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            | <i>Long-term local effects</i> |            |
|-------------------------------|------------|----------------------------|------------|-----------------------------------|------------|--------------------------------|------------|
| Dermal                        | Inhalation | Dermal                     | Inhalation | Dermal                            | Inhalation | Dermal                         | Inhalation |
| n.a.                          | 384 mg/m3  | n.a.                       | 384 mg/m3  | 384 mg/kg bw/day                  | 192 mg/m3  | n.a.                           | 192 mg/m3  |

#### Consumers

| <i>Acute systemic effects</i> |            |      | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            |                   | <i>Long-term local effects</i> |            |
|-------------------------------|------------|------|----------------------------|------------|-----------------------------------|------------|-------------------|--------------------------------|------------|
| Dermal                        | Inhalation | Oral | Dermal                     | Inhalation | Dermal                            | Inhalation | Oral              | Dermal                         | Inhalation |
| n.a.                          | 226 mg/m3  | n.a. | n.a.                       | 226 mg/m3  | 226 mg/kg bw/day                  | 56,5 mg/m3 | 8,13 mg/kg bw/day | n.a.                           | 56,5 mg/m3 |

octamethylcyclotetrasiloxane [D4]

#### Workers

| <i>Acute systemic effects</i> |            | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            | <i>Long-term local effects</i> |            |
|-------------------------------|------------|----------------------------|------------|-----------------------------------|------------|--------------------------------|------------|
| Dermal                        | Inhalation | Dermal                     | Inhalation | Dermal                            | Inhalation | Dermal                         | Inhalation |
| n.a.                          | n.a.       | n.a.                       | n.a.       | n.a.                              | 73 mg/m3   | n.a.                           | 73 mg/m3   |

#### Consumers

| <i>Acute systemic effects</i> |            |      | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            |                  | <i>Long-term local effects</i> |            |
|-------------------------------|------------|------|----------------------------|------------|-----------------------------------|------------|------------------|--------------------------------|------------|
| Dermal                        | Inhalation | Oral | Dermal                     | Inhalation | Dermal                            | Inhalation | Oral             | Dermal                         | Inhalation |
| n.a.                          | n.a.       | n.a. | n.a.                       | n.a.       | n.a.                              | 13 mg/m3   | 3,7 mg/kg bw/day | n.a.                           | 13 mg/m3   |

Octamethyltrisiloxane

**Workers**

| <i>Acute systemic effects</i> |            | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            | <i>Long-term local effects</i> |            |
|-------------------------------|------------|----------------------------|------------|-----------------------------------|------------|--------------------------------|------------|
| Dermal                        | Inhalation | Dermal                     | Inhalation | Dermal                            | Inhalation | Dermal                         | Inhalation |
| mg/kg bw/day                  | n.a.       | n.a.                       | n.a.       | 1103 mg/kg bw/day                 | 78 mg/m3   | n.a.                           | n.a.       |

**Consumers**

| <i>Acute systemic effects</i> |            |              | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            |                   | <i>Long-term local effects</i> |            |
|-------------------------------|------------|--------------|----------------------------|------------|-----------------------------------|------------|-------------------|--------------------------------|------------|
| Dermal                        | Inhalation | Oral         | Dermal                     | Inhalation | Dermal                            | Inhalation | Oral              | Dermal                         | Inhalation |
| mg/kg bw/day                  | n.a.       | mg/kg bw/day | n.a.                       | n.a.       | 556,5 mg/kg bw/day                | 19 mg/m3   | 0,04 mg/kg bw/day | n.a.                           | n.a.       |

## Methyltrimethoxysilane

**Workers**

| <i>Acute systemic effects</i> |            | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            | <i>Long-term local effects</i> |            |
|-------------------------------|------------|----------------------------|------------|-----------------------------------|------------|--------------------------------|------------|
| Dermal                        | Inhalation | Dermal                     | Inhalation | Dermal                            | Inhalation | Dermal                         | Inhalation |
| n.a.                          | n.a.       | n.a.                       | n.a.       | 3,6 mg/m3                         | 25,6 mg/m3 | n.a.                           | n.a.       |

**Consumers**

| <i>Acute systemic effects</i> |            |      | <i>Acute local effects</i> |            | <i>Long-term systemic effects</i> |            |            | <i>Long-term local effects</i> |            |
|-------------------------------|------------|------|----------------------------|------------|-----------------------------------|------------|------------|--------------------------------|------------|
| Dermal                        | Inhalation | Oral | Dermal                     | Inhalation | Dermal                            | Inhalation | Oral       | Dermal                         | Inhalation |
| n.a.                          | n.a.       | n.a. | n.a.                       | n.a.       | 7,2 mg/m3                         | 6,25 mg/m3 | 0,26 mg/m3 | n.a.                           | n.a.       |

**Predicted No Effect Concentration**

## toluene

| Compartment              | PNEC                          |
|--------------------------|-------------------------------|
| Fresh water              | 0,074 mg/l                    |
| Intermittent use/release | 0,0378 mg/l                   |
| Marine water             | 0,0074 mg/l                   |
| Sewage treatment plant   | 0,84 mg/l                     |
| Fresh water sediment     | 1,78 mg/kg dry weight (d.w.)  |
| Marine sediment          | 0,178 mg/kg dry weight (d.w.) |
| Soil                     | 0,313 mg/kg dry weight (d.w.) |

## octamethylcyclotetrasiloxane [D4]

| Compartment            | PNEC         |
|------------------------|--------------|
| Fresh water            | 0,0015 mg/l  |
| Marine water           | 0,00015 mg/l |
| Sewage treatment plant | 10 mg/l      |

|                      |                              |
|----------------------|------------------------------|
| Fresh water sediment | 3 mg/kg dry weight (d.w.)    |
| Marine sediment      | 0,3 mg/kg dry weight (d.w.)  |
| Soil                 | 0,84 mg/kg dry weight (d.w.) |
| Oral                 | 41 mg/kg food                |

## Octamethyltrisiloxane

| Compartment            | PNEC                         |
|------------------------|------------------------------|
| Fresh water sediment   | 8,9 mg/kg dry weight (d.w.)  |
| Marine sediment        | 0,89 mg/kg dry weight (d.w.) |
| Soil                   | 1,7 mg/kg food               |
| Sewage treatment plant | 1 mg/l                       |
| Soil                   | 0,5 mg/kg dry weight (d.w.)  |

## Methyltrimethoxysilane

| Compartment          | PNEC        |
|----------------------|-------------|
| Fresh water sediment | 0,73 mg/kg  |
| Marine sediment      | 0,073 mg/kg |
| Soil                 | 0,03 mg/kg  |

## 8.2 Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator (meeting standard EN 136) with organic vapor cartridge (meeting standard EN 14387).

**Skin protection**

**Hand protection:** Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be

handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material.

Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

### Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

---

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

---

### 9.1 Information on basic physical and chemical properties

#### Appearance

|                                                          |                                                             |
|----------------------------------------------------------|-------------------------------------------------------------|
| Physical state                                           | liquid                                                      |
| Color                                                    | translucent                                                 |
| Odor                                                     | slight                                                      |
| Odor Threshold                                           | No data available                                           |
| pH                                                       | Not applicable, substance/mixture is non-soluble (in water) |
| Melting point/freezing point                             |                                                             |
| Melting point/range                                      | No data available                                           |
| Freezing point                                           | not determined                                              |
| Boiling point or initial boiling point and boiling range |                                                             |
| Boiling point (760 mmHg)                                 | 101 °C                                                      |
| Flash point                                              | <b>closed cup</b> 16,11 °C                                  |
| Flammability (solid, gas)                                | Not applicable                                              |
| Flammability (liquids)                                   | not determined                                              |
| Lower explosion limit                                    | No data available                                           |
| Upper explosion limit                                    | No data available                                           |
| Vapor Pressure                                           | No data available                                           |
| Relative Vapor Density (air = 1)                         | No data available                                           |
| Relative Density (water = 1)                             | 0,88                                                        |
| Solubility(ies)                                          |                                                             |
| Water solubility                                         | insoluble                                                   |
| Partition coefficient: n-octanol/water                   | not determined                                              |
| Auto-ignition temperature                                | No data available                                           |
| Decomposition temperature                                | No data available                                           |
| Kinematic Viscosity                                      | 1000 cSt at 25 °C                                           |
| Particle characteristics                                 |                                                             |

|                                             |                                                             |
|---------------------------------------------|-------------------------------------------------------------|
| Particle size                               | Not applicable                                              |
| <b>9.2 Other information</b>                |                                                             |
| <b>Molecular weight</b>                     | No data available                                           |
| <b>Explosive properties</b>                 | Not explosive                                               |
| <b>Oxidizing properties</b>                 | The substance or mixture is not classified as oxidizing.    |
| <b>Self-heating substances</b>              | The substance or mixture is not classified as self heating. |
| <b>Metal corrosion rate</b>                 | Not corrosive to metals                                     |
| <b>Evaporation Rate (Butyl Acetate = 1)</b> | No data available                                           |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

---

## SECTION 10: STABILITY AND REACTIVITY

---

**10.1 Reactivity:** Not classified as a reactivity hazard.

**10.2 Chemical stability:** Stable under normal conditions.

**10.3 Possibility of hazardous reactions:** Can react with strong oxidizing agents. Vapours may form explosive mixture with air. Highly flammable liquid and vapour.

**10.4 Conditions to avoid:** Avoid static discharge. Heat, flames and sparks.

**10.5 Incompatible materials:** Avoid contact with oxidizing materials.

**10.6 Hazardous decomposition products:**

Decomposition products can include and are not limited to: Methanol. Benzene. Formaldehyde.

---

## SECTION 11: TOXICOLOGICAL INFORMATION

---

*Toxicological information appears in this section when such data are available.*

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

#### Information on likely routes of exposure

Inhalation, Eye contact, Skin contact, Ingestion.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

#### Acute Toxicity Endpoints:

##### Acute oral toxicity

##### Information for the Product:

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):  
LD50, > 5 000 mg/kg Estimated.

**Information for components:**

**toluene**

LD50, Rat, male, 5 580 mg/kg

**octamethylcyclotetrasiloxane [D4]**

LD50, Rat, male, > 4 800 mg/kg No deaths occurred at this concentration.

**Octamethyltrisiloxane**

LD50, Rat, female, > 2 000 mg/kg No deaths occurred at this concentration.

**Methyltrimethoxysilane**

LD50, Rat, male and female, 11 685 mg/kg

This substance may hydrolyze to release Methanol. Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

**Acute dermal toxicity**

**Information for the Product:**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):  
LD50, > 2 000 mg/kg Estimated.

**Information for components:**

**toluene**

LD50, Rabbit, 12 267 mg/kg

**octamethylcyclotetrasiloxane [D4]**

LD50, Rat, male and female, > 2 400 mg/kg No deaths occurred at this concentration.

**Octamethyltrisiloxane**

LD50, Rat, male and female, > 2 000 mg/kg No deaths occurred at this concentration.

**Methyltrimethoxysilane**

LD50, Rabbit, male and female, > 9 500 mg/kg OECD 402 or equivalent

This substance may hydrolyze to release Methanol. Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.

### Acute inhalation toxicity

#### Information for the Product:

No adverse effects are anticipated from single exposure to mist. Excessive exposure may cause: Respiratory irritation Central nervous system depression Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Alcohol consumption and exertion may increase the adverse effects of toluene.

As product: The LC50 has not been determined.

#### Information for components:

##### toluene

LC50, Rat, male, 4 Hour, vapour, 25,7 mg/l

LC50, Rat, female, 4 Hour, vapour, 30 mg/l

##### octamethylcyclotetrasiloxane [D4]

LC50, Rat, male and female, 4 Hour, dust/mist, 36 mg/l OECD Test Guideline 403

##### Octamethyltrisiloxane

LC50, Rat, male and female, 4 Hour, vapour, > 22,6 mg/l No deaths occurred at this concentration.

##### Methyltrimethoxysilane

LC50, Rat, male and female, 6 Hour, vapour, > 7605 ppm OECD Test Guideline 403

This substance may hydrolyze to release Methanol. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

### Skin corrosion/irritation

#### Information for the Product:

Based on information for component(s):

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

#### Information for components:

##### toluene

Brief contact may cause slight skin irritation with local redness.

Prolonged contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

**octamethylcyclotetrasiloxane [D4]**

Brief contact is essentially nonirritating to skin.

**Octamethyltrisiloxane**

Brief contact is essentially nonirritating to skin.

**Methyltrimethoxysilane**

Brief contact may cause slight skin irritation with local redness.

**Serious eye damage/eye irritation****Information for the Product:**

Based on information for component(s):

May cause slight eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Vapor may cause lacrimation (tears).

**Information for components:****toluene**

May cause slight eye irritation.

May cause slight temporary corneal injury.

Vapor may cause eye irritation experienced as mild discomfort and redness.

Vapor may cause lacrimation (tears).

**octamethylcyclotetrasiloxane [D4]**

Essentially nonirritating to eyes.

**Octamethyltrisiloxane**

May cause slight temporary eye irritation.

Corneal injury is unlikely.

**Methyltrimethoxysilane**

May cause slight temporary eye irritation.

Corneal injury is unlikely.

**Sensitization****Information for the Product:**

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant information found.

**Information for components:**

**toluene**

For skin sensitization:

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**octamethylcyclotetrasiloxane [D4]**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Octamethyltrisiloxane**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Methyltrimethoxysilane**

For skin sensitization:

Did not demonstrate the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

**Information for the Product:**

Product test data not available.

**Information for components:**

**toluene**

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Central nervous system

**octamethylcyclotetrasiloxane [D4]**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Octamethyltrisiloxane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Methyltrimethoxysilane**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Aspiration Hazard**

**Information for the Product:**

Based on physical properties, not likely to be an aspiration hazard.

**Information for components:****toluene**

May be fatal if swallowed and enters airways.

**octamethylcyclotetrasiloxane [D4]**

May be harmful if swallowed and enters airways.

**Octamethyltrisiloxane**

Based on available information, aspiration hazard could not be determined.

**Methyltrimethoxysilane**

Material is not classified as an aspiration hazard based on insufficient data, however materials with low viscosity may be aspirated into the lungs during ingestion or vomiting.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)****Information for the Product:**

Product test data not available.

**Information for components:****toluene**

In animals, effects have been reported on the following organs:

Central nervous system.

Excessive exposure may cause neurologic signs and symptoms.

Toluene has caused hearing loss in laboratory animals upon exposure to high concentrations.

Intentional misuse by deliberately inhaling toluene may cause nervous system damage, hearing loss, liver and kidney effects and death.

**octamethylcyclotetrasiloxane [D4]**

In animals, effects have been reported on the following organs:

Kidney.

Liver.

Respiratory tract.

Female reproductive organs.

**Octamethyltrisiloxane**

In animals, effects have been reported on the following organs:

Liver

This material contains octamethyltrisiloxane (L3). Repeated inhalation exposure in rats to L3 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific

mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

**Methyltrimethoxysilane**

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**

**Information for the Product:**

Product test data not available.

**Information for components:**

**toluene**

Did not cause cancer in laboratory animals.

**octamethylcyclotetrasiloxane [D4]**

Results from a 2 year repeated vapour inhalation exposure study to rats of octamethylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

**Octamethyltrisiloxane**

Did not cause cancer in laboratory animals.

**Methyltrimethoxysilane**

No relevant data found.

**Teratogenicity**

Suspected of damaging the unborn child.

**Information for the Product:**

Product test data not available.

**Information for components:**

**toluene**

In laboratory animals, toluene has been toxic to the fetus at doses toxic to the mother; it has caused birth defects in mice when administered orally, but not by inhalation.

**octamethylcyclotetrasiloxane [D4]**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Octamethyltrisiloxane**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Methyltrimethoxysilane**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Reproductive toxicity**

Suspected of damaging the unborn child.

**Information for the Product:**

Product test data not available.

**Information for components:****toluene**

In animal studies, did not interfere with reproduction.

**octamethylcyclotetrasiloxane [D4]**

In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, has been shown to interfere with fertility.

**Octamethyltrisiloxane**

In animal studies, did not interfere with fertility. In animal studies, did not interfere with reproduction.

**Methyltrimethoxysilane**

In animal studies, did not interfere with reproduction.

**Mutagenicity****Information for the Product:**

Product test data not available.

**Information for components:****toluene**

The majority and most reliable of the many genetic toxicity studies on toluene, both in vitro and in animals, indicate that it is not genetically toxic.

**octamethylcyclotetrasiloxane [D4]**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Octamethyltrisiloxane**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Methyltrimethoxysilane**

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

## 11.2 Information on other hazards

### Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### Information for components:

##### toluene

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

##### octamethylcyclotetrasiloxane [D4]

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

##### Octamethyltrisiloxane

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

##### Methyltrimethoxysilane

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

---

## SECTION 12: ECOLOGICAL INFORMATION

---

*Ecotoxicological information appears in this section when such data are available.*

### 12.1 Toxicity

#### toluene

##### **Acute toxicity to fish**

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 5,8 mg/l, OECD Test Guideline 203

LC50, Oncorhynchus kisutch (coho salmon), flow-through test, 96 Hour, 5,5 mg/l

##### **Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 24 Hour, 7 mg/l, OECD Test Guideline 202

LC50, water flea Ceriodaphnia dubia, semi-static test, 48 Hour, 3,78 mg/l

##### **Acute toxicity to algae/aquatic plants**

EC50, Chlorella sp, 3 Hour, 134 mg/l

NOEC, Skeletonema costatum (marine diatom), 72 Hour, Biomass, 10 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Nitrosomonas sp., Static, 24 Hour, Respiration rates., 84 mg/l

**Chronic toxicity to fish**

NOEC, Oncorhynchus kisutch (coho salmon), flow-through test, 40 d, growth, 1,39 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Ceriodaphnia dubia (water flea), 7 d, number of offspring, 0,74 mg/l

NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 2 mg/l

**octamethylcyclotetrasiloxane [D4]****Acute toxicity to fish**

Based on testing of comparable products: The estimated maximum aqueous concentration of Octamethyl Cyclotetrasiloxane (D4) from migration to water from the product as supplied is below the D4 established no-effect threshold (< 0.0079 mg/L) for aquatic organisms.

**Chronic toxicity to aquatic invertebrates**

Based on testing for product(s) in this family of materials:

Not classified due to data which are conclusive although insufficient for classification.

**Octamethyltrisiloxane****Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, > 0,0191 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 0,02 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

No toxicity at the limit of solubility

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 0,0094 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

For similar material(s):

EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l, OECD Test Guideline 209

**Chronic toxicity to fish**

No toxicity at the limit of solubility

NOEC, Oncorhynchus mykiss (rainbow trout), 90 d, > 0,027 mg/l

**Chronic toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

NOEC, Daphnia magna (Water flea), flow-through test, 21 d, > 0,015 mg/l

**Methyltrimethoxysilane****Acute toxicity to fish**

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).  
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 110 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 122 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

No toxicity at the limit of solubility

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 3,6 mg/l, OECD Test Guideline 201

No toxicity at the limit of solubility

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, >= 3,6 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

EC10, activated sludge, 3 Hour, Respiration rates., > 100 mg/l, OECD Test Guideline 209

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 28 d, number of offspring, >= 10 mg/l

**12.2 Persistence and degradability****toluene**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 100 %

**Exposure time:** 14 d

**Method:** OECD Test Guideline 301C or Equivalent

**octamethylcyclotetrasiloxane [D4]**

**Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 3,7 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310

**Stability in Water (1/2-life)**

Hydrolysis, DT50, 3,9 d, pH 7, Half-life Temperature 25 °C, OECD Test Guideline 111

**Octamethyltrisiloxane**

**Biodegradability:** Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

10-day Window: Not applicable

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310 or Equivalent

**Methyltrimethoxysilane**

**Biodegradability:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

**Biodegradation:** 54 %

**Exposure time:** 28 d

**Method:** Regulation (EC) No. 440/2008, Annex, C.4-A

### 12.3 Bioaccumulative potential

#### toluene

**Bioaccumulation:** Bioconcentration potential is low ( $BCF < 100$  or  $\log Pow < 3$ ).

**Partition coefficient: n-octanol/water(log Pow):** 2,73 Measured

**Bioconcentration factor (BCF):** 90 Carp (*Leuciscus idus melanotus*) Measured

#### octamethylcyclotetrasiloxane [D4]

**Bioaccumulation:** Bioconcentration potential is high ( $BCF > 3000$  or  $\log Pow$  between 5 and 7).

**Partition coefficient: n-octanol/water(log Pow):** 6,49 Measured

**Bioconcentration factor (BCF):** 12 400 *Pimephales promelas* (fathead minnow) Measured

#### Octamethyltrisiloxane

**Bioaccumulation:** Bioconcentration potential is high ( $BCF > 3000$  or  $\log Pow$  between 5 and 7).

**Partition coefficient: n-octanol/water(log Pow):** 5,35 Estimated.

**Bioconcentration factor (BCF):**  $\geq 500$  *Pimephales promelas* (fathead minnow) OECD Test Guideline 305

#### Methyltrimethoxysilane

**Bioaccumulation:** Bioconcentration potential is low ( $BCF < 100$  or  $\log Pow < 3$ ).

**Partition coefficient: n-octanol/water(log Pow):** -0,82 Estimated.

### 12.4 Mobility in soil

#### toluene

**Partition coefficient (Koc):** 205 Estimated.

#### octamethylcyclotetrasiloxane [D4]

**Partition coefficient (Koc):** 16596 OECD Test Guideline 106

#### Octamethyltrisiloxane

**Partition coefficient (Koc):** 3179 Estimated.

#### Methyltrimethoxysilane

No relevant data found.

### 12.5 Results of PBT and vPvB assessment

#### toluene

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

#### octamethylcyclotetrasiloxane [D4]

Octamethylcyclotetrasiloxane (D4) meets the current criteria for PBT and vPvB under REACH Annex XIII or other regionally specific criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

This substance is considered to be persistent, bioaccumulating and toxic (PBT).

#### **Octamethyltrisiloxane**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

#### **Methyltrimethoxysilane**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**12.6 Endocrine disrupting properties** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

#### **toluene**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

#### **octamethylcyclotetrasiloxane [D4]**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

#### **Octamethyltrisiloxane**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

#### **Methyltrimethoxysilane**

The substance is not considered to have endocrine disrupting properties according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

### **12.7 Other adverse effects**

#### **toluene**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

#### **octamethylcyclotetrasiloxane [D4]**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

#### **Octamethyltrisiloxane**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Methyltrimethoxysilane**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

---

**SECTION 13: DISPOSAL CONSIDERATIONS**

---

**13.1 Waste treatment methods**

Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

---

**SECTION 14: TRANSPORT INFORMATION**

---

**Classification for ROAD and Rail transport (ADR/RID):**

- |                                   |                                                                   |
|-----------------------------------|-------------------------------------------------------------------|
| 14.1 UN number or ID number       | UN 1139                                                           |
| 14.2 UN proper shipping name      | COATING SOLUTION                                                  |
| 14.3 Transport hazard class(es)   | 3                                                                 |
| 14.4 Packing group                | II                                                                |
| 14.5 Environmental hazards        | Not considered environmentally hazardous based on available data. |
| 14.6 Special precautions for user | Special Provision 640D<br>Hazard Identification Number: 33        |

**Classification for INLAND waterways (ADNR/ADN):**

**Consult your Dow contact before transporting by inland waterway**

**Classification for SEA transport (IMO-IMDG):**

- |                                                              |                                                             |
|--------------------------------------------------------------|-------------------------------------------------------------|
| 14.1 UN number or ID number                                  | UN 1139                                                     |
| 14.2 UN proper shipping name                                 | COATING SOLUTION                                            |
| 14.3 Transport hazard class(es)                              | 3                                                           |
| 14.4 Packing group                                           | II                                                          |
| 14.5 Environmental hazards                                   | Not considered as marine pollutant based on available data. |
| 14.6 Special precautions for user                            | EmS: F-E, S-E                                               |
| 14.7 Maritime transport in bulk according to IMO instruments | Consult IMO regulations before transporting ocean bulk      |

**Classification for AIR transport (IATA/ICAO):**

- |                             |         |
|-----------------------------|---------|
| 14.1 UN number or ID number | UN 1139 |
|-----------------------------|---------|

|                                   |                    |
|-----------------------------------|--------------------|
| 14.2 UN proper shipping name      | Coating solution   |
| 14.3 Transport hazard class(es)   | 3                  |
| 14.4 Packing group                | II                 |
| 14.5 Environmental hazards        | Not applicable     |
| 14.6 Special precautions for user | No data available. |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

---

## SECTION 15: REGULATORY INFORMATION

---

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

#### REACH Regulation (EC) No 1907/2006

This product contains only components that have been either registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

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

Conditions of restriction for the following entries should be considered:  
Number on list 3, 75  
toluene (Number on list 48)  
octamethylcyclotetrasiloxane [D4] (Number on list 70)

#### Authorisation status under REACH:

The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

|                   |                                         |
|-------------------|-----------------------------------------|
| CAS-No.: 556-67-2 | Name: octamethylcyclotetrasiloxane [D4] |
|-------------------|-----------------------------------------|

Authorisation status: listed in the Candidate List of Substances of Very High Concern for Authorisation

Authorisation number: Not available

Sunset date: Not available

Exempted (Categories of) Uses: Not available

**Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.**

Listed in Regulation: FLAMMABLE LIQUIDS

Number in Regulation: P5c

5 000 t

50 000 t

**Installations classified for the protection of the environment (Environment Code R511-9)**

4331: Flammable liquids category 2 or 3 excluding rubric 4330

**Occupational Illnesses (R-461-3, France):**Table: 4  
bis

(Gastro intestinal illness caused by benzene, toluene, xylene and all products in which they are contained.)

**Further information**

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

**15.2 Chemical safety assessment**

No Chemical Safety Assessment has been carried out for this substance/mixture.

---

**SECTION 16: OTHER INFORMATION**

---

**Full text of H-Statements referred to under sections 2 and 3.**

|       |                                                                    |
|-------|--------------------------------------------------------------------|
| H225  | Highly flammable liquid and vapour.                                |
| H226  | Flammable liquid and vapour.                                       |
| H304  | May be fatal if swallowed and enters airways.                      |
| H315  | Causes skin irritation.                                            |
| H336  | May cause drowsiness or dizziness.                                 |
| H361d | Suspected of damaging the unborn child.                            |
| H361f | Suspected of damaging fertility.                                   |
| H373  | May cause damage to organs through prolonged or repeated exposure. |
| H410  | Very toxic to aquatic life with long lasting effects.              |
| H412  | Harmful to aquatic life with long lasting effects.                 |

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008**

Flam. Liq. - 2 - H225 - Based on product data or assessment

Repr. - 2 - H361d - Calculation method

**Revision**

Identification Number: 2880806 / A560 / Issue Date: 03.05.2023 / Version: 8.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

|                 |                                                       |
|-----------------|-------------------------------------------------------|
| 2006/15/EC      | Europe. Indicative occupational exposure limit values |
| ACGIH           | USA. ACGIH Threshold Limit Values (TLV)               |
| ACGIH BEI       | ACGIH - Biological Exposure Indices (BEI)             |
| Dow IHG         | Dow Industrial Hygiene Guideline                      |
| FR VLE          | France. Occupational Exposure Limits                  |
| STEL            | Short-term exposure limit                             |
| TWA             | Time weighted average                                 |
| US WEEL         | USA. Workplace Environmental Exposure Levels (WEEL)   |
| VLCT (VLE)      | Short Term Exposure Limit                             |
| VME             | Time Weighted Average                                 |
| Aquatic Chronic | Long-term (chronic) aquatic hazard                    |
| Asp. Tox.       | Aspiration hazard                                     |
| Flam. Liq.      | Flammable liquids                                     |
| Repr.           | Reproductive toxicity                                 |
| Skin Irrit.     | Skin irritation                                       |
| STOT RE         | Specific target organ toxicity - repeated exposure    |
| STOT SE         | Specific target organ toxicity - single exposure      |

**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECl - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW FRANCE S.A.S. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

FR