



# SAFETY DATA SHEET

DOW FRANCE S.A.S.

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

**Product name:** DOWSIL™ SE 4486

**Revision Date:** 15.07.2021

**Version:** 2.0

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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™ SE 4486

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

**Identified uses:** Adhesive, binding agents

### 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:**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### 2.2 Label elements

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

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

### **Supplemental information**

EUH210 Safety data sheet available on request.  
 EUH208 Contains: Methyltrimethoxysilane. May produce an allergic reaction.

### 2.3 Other hazards

This product contains no substances assessed to be PBT or vPvB at levels of 0.1% or higher.

#### 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, Sealant

### 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>1185-55-3<br><b>EC-No.</b><br>214-685-0<br><b>Index-No.</b><br>—         | 01-2119517436-40                | >= 0,42 - <= 0,56 % | Methyltrimethoxysilane                        | Flam. Liq. 2; H225<br>Skin Sens. 1B; H317<br><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 |
| Substances with a workplace exposure limit                                               |                                 |                     |                                               |                                                                                                                                                                                                                            |
| <b>CASRN</b><br>Not available<br><b>EC-No.</b><br>Not available<br><b>Index-No.</b><br>— | —                               | >= 75,0 - <= 91,0 % | Methyltrimethoxysilane treated aluminum oxide | Not classified<br><br>Acute toxicity estimate<br>Acute oral toxicity:<br>> 5 000 mg/kg<br>Acute inhalation toxicity:<br>> 2,3 mg/l, dust/mist                                                                              |

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

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## SECTION 4: FIRST AID MEASURES

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### 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; consult a physician.

**Skin contact:** Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation or rash occurs. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**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.

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

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

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

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

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Extinguishing media

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

**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:** Silicon oxides. Carbon oxides. Metal oxides. Formaldehyde.

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance.. Exposure to combustion products may be a hazard to health.. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat.. 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.. 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:** Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**6.1 Personal precautions, protective equipment and emergency procedures:** Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

**6.2 Environmental precautions:** Discharge into the environment must be avoided. 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.

**6.4 Reference to other sections:**  
See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: HANDLING AND STORAGE

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**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. 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. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

**7.2 Conditions for safe storage, including any incompatibilities:** Keep in properly labelled containers. 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. 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                             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|
| Methyltrimethoxysilane                        | Dow IHG                                                                                                             | TWA                               | 7,5 ppm                           |
|                                               | Further information: Skin Sensitizer                                                                                |                                   |                                   |
| Methyltrimethoxysilane treated aluminum oxide | ACGIH                                                                                                               | TWA Respirable particulate matter | 1 mg/m <sup>3</sup> , Aluminium   |
|                                               | Further information: A4: Not classifiable as a human carcinogen                                                     |                                   |                                   |
|                                               | FR VLE                                                                                                              | VME                               | 10 mg/m <sup>3</sup>              |
|                                               | Further information: Indicative exposure limits: Indicative exposure limits                                         |                                   |                                   |
| 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/m <sup>3</sup> 200 ppm     |
|                                               | Further information: Indicative; skin: Identifies the possibility of significant uptake through the skin            |                                   |                                   |
|                                               | FR VLE                                                                                                              | VME                               | 260 mg/m <sup>3</sup> 200 ppm     |
|                                               | Further information: Skin: Risk of penetration through skin; REL binding: Regulatory binding exposure limits        |                                   |                                   |
|                                               | FR VLE                                                                                                              | VLCT (VLE)                        | 1 300 mg/m <sup>3</sup> 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        |
|------------|---------|--------------------|---------------------|----------------------------------------------------------|---------------------------|--------------|
| methanol   | 67-56-1 | Methanol           | Urine               | End of shift (As soon as possible after exposure ceases) | 15 mg/l                   | ACGIH<br>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

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 |
| 0,38<br>mg/kg<br>bw/day       | 25,6<br>mg/m <sup>3</sup> | n.a.                       | n.a.       | 0,38<br>mg/kg<br>bw/day           | 25,6<br>mg/m <sup>3</sup> | 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 |
| 0,3<br>mg/kg<br>bw/day        | 6,25<br>mg/m <sup>3</sup> | 0,26<br>mg/kg<br>bw/day | n.a.                       | n.a.       | 0,3<br>mg/kg<br>bw/day            | 6,25<br>mg/m <sup>3</sup> | 0,26<br>mg/kg<br>bw/day | n.a.                           | n.a.       |

### Predicted No Effect Concentration

Methyltrimethoxysilane

| Compartment            | PNEC          |
|------------------------|---------------|
| Fresh water            | >= 1,3 mg/l   |
| Marine water           | >= 0,13 mg/l  |
| Fresh water sediment   | >= 1,1 mg/kg  |
| Marine sediment        | >= 0,11 mg/kg |
| Soil                   | >= 0,17 mg/kg |
| Sewage treatment plant | > 6,9 mg/l    |

## 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 safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

**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 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 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.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

|                |                   |
|----------------|-------------------|
| Physical state | viscous liquid    |
| Color          | white             |
| Odor           | slight            |
| Odor Threshold | No data available |

|                                                          |                                                             |
|----------------------------------------------------------|-------------------------------------------------------------|
| pH                                                       | No data available                                           |
| 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)                                 | > 100 °C                                                    |
| Flash point                                              | <b>Seta closed cup</b> 74 °C                                |
| Flammability (solid, gas)                                | Not applicable                                              |
| Flammability (liquids)                                   | Not applicable                                              |
| 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)                             | 2,57                                                        |
| Solubility(ies)                                          |                                                             |
| Water solubility                                         | not determined                                              |
| Partition coefficient: n-octanol/water                   | not determined                                              |
| Auto-ignition temperature                                | No data available                                           |
| Decomposition temperature                                | No data available                                           |
| Kinematic Viscosity                                      | No data available                                           |
| Particle characteristics                                 |                                                             |
| Particle size                                            | Not applicable                                              |
| <b>9.2 Other information</b>                             |                                                             |
| Molecular weight                                         | No data available                                           |
| Dynamic Viscosity                                        | 250 poise                                                   |
| Explosive properties                                     | Not explosive                                               |
| Oxidizing properties                                     | The substance or mixture is not classified as oxidizing.    |
| Self-heating substances                                  | The substance or mixture is not classified as self heating. |
| Metal corrosion rate                                     | Not corrosive to metals                                     |
| Evaporation Rate (Butyl Acetate = 1)                     | No data available                                           |

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

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## SECTION 10: STABILITY AND REACTIVITY

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**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. When heated to temperatures above 150 °C (300 °F) in the presence of air, product can form formaldehyde vapours.



Safe handling conditions may be maintained by keeping vapour concentrations within the occupational exposure limit for formaldehyde. Vapours may form explosive mixture with air. Combustible liquid.

**10.4 Conditions to avoid:** 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. Formaldehyde.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is 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 oral toxicity**

Very low toxicity if swallowed. Signs and symptoms of excessive exposure may include: Gastrointestinal irritation.

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

Based on information for component(s):

LD50, Rat, > 5 000 mg/kg Estimated.

#### **Information for components:**

##### **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.

##### **Methyltrimethoxysilane treated aluminum oxide**

LD50, Rat, > 5 000 mg/kg OECD Test Guideline 401

#### **Acute dermal toxicity**

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:****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.

**Methyltrimethoxysilane treated aluminum oxide**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

Vapors are unlikely due to physical properties. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

**Information for components:****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.

**Methyltrimethoxysilane treated aluminum oxide**

For similar material(s): LC50, Rat, male and female, dust/mist, > 2,3 mg/l No deaths occurred at this concentration.

**Skin corrosion/irritation**

Based on information for component(s):

Brief contact may cause slight skin irritation with local redness.

**Information for components:****Methyltrimethoxysilane**

Brief contact may cause slight skin irritation with local redness.

**Methyltrimethoxysilane treated aluminum oxide**

Brief contact is essentially nonirritating to skin.

Mechanical injury only.

**Serious eye damage/eye irritation**

Based on information for component(s):

May cause slight eye irritation.

May cause mild eye discomfort.

**Information for components:****Methyltrimethoxysilane**

May cause slight temporary eye irritation.  
Corneal injury is unlikely.

**Methyltrimethoxysilane treated aluminum oxide**

Solid or dust may cause irritation or corneal injury due to mechanical action.

**Sensitization**

For skin sensitization:

Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Information for components:**

**Methyltrimethoxysilane**

For skin sensitization:

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Methyltrimethoxysilane treated aluminum oxide**

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

For respiratory sensitization:

No relevant data found.

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

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

**Information for components:**

**Methyltrimethoxysilane**

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

**Methyltrimethoxysilane treated aluminum oxide**

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

**Aspiration Hazard**

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

**Information for components:**

**Methyltrimethoxysilane**

May be harmful if swallowed and enters airways.

**Methyltrimethoxysilane treated aluminum oxide**

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

**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)**

Exposure to alumina alone has not been shown to cause chronic lung disease. Some forms of alumina, when injected directly into the lungs of animals, caused fibrosis, but this is an abnormal route of exposure.

**Information for components:****Methyltrimethoxysilane**

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

**Methyltrimethoxysilane treated aluminum oxide**

Repeated excessive exposures to alumina (aluminium oxide) dust or fumes may cause respiratory effects.

Exposure to alumina alone has not been shown to cause chronic lung disease. Some forms of alumina, when injected directly into the lungs of animals, caused fibrosis, but this is an abnormal route of exposure.

**Carcinogenicity**

Although certain forms of alumina have been reported to induce tumors when injected directly into the lungs of laboratory animals, there is no evidence that alumina is carcinogenic under normal routes of exposure.

**Information for components:****Methyltrimethoxysilane**

No relevant data found.

**Methyltrimethoxysilane treated aluminum oxide**

Although certain forms of alumina have been reported to induce tumors when injected directly into the lungs of laboratory animals, there is no evidence that alumina is carcinogenic under normal routes of exposure.

**Teratogenicity**

High doses of aluminium and aluminium salts given to laboratory animals during pregnancy have caused developmental toxicity in the fetus at doses mildly toxic to the mother.

**Information for components:****Methyltrimethoxysilane**

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

**Methyltrimethoxysilane treated aluminum oxide**

High doses of aluminium and aluminium salts given to laboratory animals during pregnancy have caused developmental toxicity in the fetus at doses mildly toxic to the mother. The relevance of these data to alumina is unknown.

**Reproductive toxicity**

No relevant data found.

**Information for components:****Methyltrimethoxysilane**

In animal studies, did not interfere with reproduction.

**Methyltrimethoxysilane treated aluminum oxide**

No relevant data found.

**Mutagenicity**

Based on information for component(s): In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were predominantly negative.

**Information for components:**

**Methyltrimethoxysilane**

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

**Methyltrimethoxysilane treated aluminum oxide**

For similar material(s): In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were predominantly 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:**

**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.

**Methyltrimethoxysilane treated aluminum oxide**

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.

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## SECTION 12: ECOLOGICAL INFORMATION

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

**12.1 Toxicity**

**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**

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

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

**Methyltrimethoxysilane treated aluminum oxide****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).

EC50, Fish, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 100 mg/l, OECD Test Guideline 201 or Equivalent

**12.2 Persistence and degradability****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

**Methyltrimethoxysilane treated aluminum oxide**

**Biodegradability:** Biodegradation is not applicable.

**12.3 Bioaccumulative potential****Methyltrimethoxysilane**

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

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

**Methyltrimethoxysilane treated aluminum oxide**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

## 12.4 Mobility in soil

### Methyltrimethoxysilane

No relevant data found.

### Methyltrimethoxysilane treated aluminum oxide

No relevant data found.

## 12.5 Results of PBT and vPvB assessment

### 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).

### Methyltrimethoxysilane treated aluminum oxide

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

## 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.

### 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.

### Methyltrimethoxysilane treated aluminum oxide

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

### Methyltrimethoxysilane

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

### Methyltrimethoxysilane treated aluminum oxide

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

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### 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.

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## SECTION 14: TRANSPORT INFORMATION

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

- |                                   |                                                                   |
|-----------------------------------|-------------------------------------------------------------------|
| 14.1 UN number or ID number       | Not applicable                                                    |
| 14.2 UN proper shipping name      | Not regulated for transport                                       |
| 14.3 Transport hazard class(es)   | Not applicable                                                    |
| 14.4 Packing group                | Not applicable                                                    |
| 14.5 Environmental hazards        | Not considered environmentally hazardous based on available data. |
| 14.6 Special precautions for user | No data available.                                                |

### 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                                  | Not applicable                                              |
| 14.2 UN proper shipping name                                 | Not regulated for transport                                 |
| 14.3 Transport hazard class(es)                              | Not applicable                                              |
| 14.4 Packing group                                           | Not applicable                                              |
| 14.5 Environmental hazards                                   | Not considered as marine pollutant based on available data. |
| 14.6 Special precautions for user                            | No data available.                                          |
| 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       | Not applicable              |
| 14.2 UN proper shipping name      | Not regulated for transport |
| 14.3 Transport hazard class(es)   | Not applicable              |
| 14.4 Packing group                | Not applicable              |
| 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.



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**SECTION 15: REGULATORY INFORMATION**

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**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.

**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: Not applicable

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

1436: Storage or use of combustible liquids with flash points between 60°C and 93°C.

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

(Not applicable)

**15.2 Chemical safety assessment**

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

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**SECTION 16: OTHER INFORMATION**

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

|      |                                      |
|------|--------------------------------------|
| H225 | Highly flammable liquid and vapour.  |
| H317 | May cause an allergic skin reaction. |

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

This product is not classified as dangerous according to EC criteria.

**Revision**

Identification Number: 4046544 / A560 / Issue Date: 15.07.2021 / Version: 2.0

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 (INRS)           |
| STEL       | Short-term exposure limit                             |
| TWA        | Time weighted average                                 |
| VLCT (VLE) | Short Term Exposure Limit                             |
| VME        | Time Weighted Average                                 |
| Flam. Liq. | Flammable liquids                                     |
| Skin Sens. | Skin sensitisation                                    |

**Full text of other abbreviations**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European 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; KECI - 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; 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.

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