



# SAFETY DATA SHEET

DOW DEUTSCHLAND ANLAGENGESELLSCHAFT MBH

Safety Data Sheet according to Reg. (EU) No 2015/830

**Product name: DOWSIL™ 1200 OS Primer Clear**

**Revision Date: 22.08.2018**

**Version: 1.0**

**Date of last issue: -**

**Print Date: 23.08.2018**

DOW DEUTSCHLAND ANLAGENGESELLSCHAFT MBH 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.

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

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### 1.1 Product identifier

**Product name:** DOWSIL™ 1200 OS Primer Clear

### 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 DEUTSCHLAND ANLAGENGESELLSCHAFT MBH

AM KRONBERGER HANG 4

65824 SCHWALBACH

GERMANY

**Customer Information Number:**

(31) 115 67 2626

SDSQuestion@dow.com

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 00 49 4146 91 2333

**Local Emergency Contact:** 0049 4141 3679

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

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

Flammable liquids - Category 3 - H226

Skin irritation - Category 2 - H315

Serious eye damage - Category 1 - H318

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**

H226 Flammable liquid and vapour.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.

**Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P303 + P361 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
 + P353  
 P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
 + P338 + P310  
 P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.  
 P403 + P235 Store in a well-ventilated place. Keep cool.

**Contains** Tetra n-Butyl titanate**2.3 Other hazards**

Static-accumulating flammable liquid.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****Chemical nature:** Inorganic and organic compounds, Mixture**3.2 Mixtures**

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
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<b>CASRN</b> 18765-38-3 <b>EC-No.</b> 242-560-0 <b>Index-No.</b> –	–	>= 5,0 - <= 6,0 %	Tetrakis(2-butoxyethyl) orthosilicate	Skin Irrit. - 2 - H315
<b>CASRN</b> 5593-70-4 <b>EC-No.</b> 227-006-8 <b>Index-No.</b> –	01-2119967423-33	>= 4,0 - <= 5,0 %	Tetra n-Butyl titanate	Flam. Liq. - 3 - H226 Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318 STOT SE - 3 - H336 STOT SE - 3 - H336

Substances with a workplace exposure limit

<b>CASRN</b> 107-51-7 <b>EC-No.</b> 203-497-4 <b>Index-No.</b> –	01-2119970219-31	>= 83,0 - <= 87,0 %	Octamethyltrisiloxane	Flam. Liq. - 3 - H226
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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; if effects occur, consult a physician.

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

**Eye contact:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** 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:** Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. 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:** Water spray Alcohol-resistant foam Carbon dioxide (CO<sub>2</sub>) 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:** Carbon oxides Silicon oxides Formaldehyde Metal oxides

**Unusual Fire and Explosion Hazards:** Flash back possible over considerable distance. Exposure to combustion products may be a hazard to health. Fire burns more vigorously than would be expected. Vapours may form explosive mixtures with air.

### 5.3 Advice for firefighters

**Fire Fighting Procedures:** 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. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus. 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, Sections 13 and 15 of this SDS provide information regarding certain local

or national requirements. 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.

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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. Do not swallow. Do not get in eyes. 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.

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. 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.

**Storage class according to TRGS 510:** Flammable liquids

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

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 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/Notation
Octamethyltrisiloxane	Dow IHG	TWA	20 ppm

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

Propyl alcohol  
Ethylene glycol monobutyl ether  
butanol

**Derived No Effect Level**

Tetra n-Butyl titanate

**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.	127 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.	37,5 mg/kg bw/day	152 mg/m3	3,75 mg/kg bw/day	n.a.	n.a.

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
1103 mg/kg bw/day	78 mg/m3	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
556,5 mg/kg bw/day	19 mg/m3	0,04 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.

**Predicted No Effect Concentration**

Tetra n-Butyl titanate

Compartment	PNEC
Fresh water	0,08 mg/l
Marine water	0,008 mg/l
Intermittent use/release	2,25 mg/l
Soil	0,017 mg/kg d.w.
Marine sediment	0,007 mg/kg
Sewage treatment plant	65 mg/l
Fresh water sediment	0,069 mg/kg

Octamethyltrisiloxane

Compartment	PNEC
Fresh water sediment	1,326 mg/kg
Marine sediment	0,133 mg/kg
Soil	>= 0,44 mg/kg

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Sewage treatment plant	> 1 mg/l
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## 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.

#### 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. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). 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, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C, meeting standard EN 14387).

### 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**

<b>Physical state</b>	liquid
<b>Color</b>	colourless
<b>Odor</b>	slight
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting point/range</b>	No data available
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	> 100 °C
<b>Flash point</b>	<b>closed cup</b> 27 °C
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available
<b>Flammability (solid, gas)</b>	Not applicable
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Relative Vapor Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	0,82
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Kinematic Viscosity</b>	1,3 mm <sup>2</sup> /s at 25 °C
<b>Explosive properties</b>	Not explosive
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.

**9.2 Other information**

<b>Molecular weight</b>	No data available
<b>Particle size</b>	Not applicable

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. Vapours may form explosive mixture with air. Flammable liquid and vapour.

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

**10.5 Incompatible materials:** Oxidizing agents

**10.6 Hazardous decomposition products:** Propyl alcohol. Ethylene glycol monobutyl ether. Butanol.

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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 toxicological effects

#### Acute toxicity

##### Acute oral toxicity

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, Rat, > 5 000 mg/kg Estimated.

##### Acute dermal toxicity

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

As product:

Based on information for component(s):

LD50, > 5 000 mg/kg Estimated.

##### Acute inhalation toxicity

No adverse effects are anticipated from single exposure to mist. As product: The LC50 has not been determined.

#### Skin corrosion/irritation

Brief contact may cause skin irritation with local redness.

#### Serious eye damage/eye irritation

May cause moderate eye irritation.

May cause severe corneal injury.

May cause permanent impairment of vision.

#### Sensitization

For skin sensitization:

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

Contains component(s) which have not demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

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

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

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

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.

**Carcinogenicity**

For the major component(s): Did not cause cancer in laboratory animals.

**Teratogenicity**

For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

**Reproductive toxicity**

For the major component(s): In animal studies, did not interfere with fertility. In animal studies, did not interfere with reproduction.

**Mutagenicity**

For the major component(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Aspiration Hazard**

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

**COMPONENTS INFLUENCING TOXICOLOGY:****Tetrakis(2-butoxyethyl) orthosilicate****Acute inhalation toxicity**

Brief exposure (minutes) is not likely to cause adverse effects.

**Tetra n-Butyl titanate****Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, 11 mg/l

**Octamethyltrisiloxane****Acute inhalation toxicity**

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

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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

### Tetrakis(2-butoxyethyl) orthosilicate

#### **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, Danio rerio (zebra fish), 96 Hour, > 201 mg/l, OECD Test Guideline 203

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

No toxicity at the limit of solubility

EC50, Daphnia sp. (water flea), 48 Hour, > 90 mg/l, EG 84/449

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

ErC50, Scenedesmus subspicatus, 72 Hour, > 161 mg/l, 88/302/EC

### Tetra n-Butyl titanate

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

No relevant data found.

### 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

## 12.2 Persistence and degradability

### Tetrakis(2-butoxyethyl) orthosilicate

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

10-day Window: Pass

**Biodegradation:** 83 %

**Method:** OECD Test Guideline 301B

#### **Tetra n-Butyl titanate**

**Biodegradability:** No relevant data found.

#### **Octamethyltrisiloxane**

**Biodegradability:** Biodegradation under aerobic laboratory conditions is below detectable limits (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD < 2.5%).

10-day Window: Not applicable

**Biodegradation:** 0 %

**Exposure time:** 28 d

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

### **12.3 Bioaccumulative potential**

#### **Tetrakis(2-butoxyethyl) orthosilicate**

**Bioaccumulation:** No relevant data found.

#### **Tetra n-Butyl titanate**

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

**Partition coefficient: n-octanol/water(log Pow):** 0,88 Estimated.

#### **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):** >= 500 Pimephales promelas (fathead minnow) OECD Test Guideline 305

### **12.4 Mobility in soil**

#### **Tetrakis(2-butoxyethyl) orthosilicate**

No relevant data found.

#### **Tetra n-Butyl titanate**

No relevant data found.

#### **Octamethyltrisiloxane**

Potential for mobility in soil is slight (Koc between 2000 and 5000).

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

### **12.5 Results of PBT and vPvB assessment**

#### **Tetrakis(2-butoxyethyl) orthosilicate**

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

#### **Tetra n-Butyl titanate**

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

**12.6 Other adverse effects****Tetrakis(2-butoxyethyl) orthosilicate**

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

**Tetra n-Butyl titanate**

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.

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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):**

- |  |   |
|--|---|
| <b>14.1 UN number</b>                    | UN 1993   |
| <b>14.2 UN proper shipping name</b>      | FLAMMABLE LIQUID, N.O.S.(Octamethyltrisiloxane, Organo Titanate)  |
| <b>14.3 Transport hazard class(es)</b>   | 3   |
| <b>14.4 Packing group</b>                | III   |
| <b>14.5 Environmental hazards</b>        | Not considered environmentally hazardous based on available data. |
| <b>14.6 Special precautions for user</b> | Hazard Identification Number: 30                                  |

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

- |  |  |
|--|--|
| <b>14.1 UN number</b>                  | UN 1993  |
| <b>14.2 UN proper shipping name</b>    | FLAMMABLE LIQUID, N.O.S.(Octamethyltrisiloxane, Organo Titanate) |
| <b>14.3 Transport hazard class(es)</b> | 3  |

14.4	Packing group	III
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	Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

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

14.1	UN number	UN 1993
14.2	UN proper shipping name	Flammable liquid, n.o.s.(Octamethyltrisiloxane, Organo Titanate)
14.3	Transport hazard class(es)	3
14.4	Packing group	III
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 pre-registered, 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: FLAMMABLE LIQUIDS

Number in Regulation: P5c

5 000 t

50 000 t

**Wassergefährdungsklasse (Deutschland)**

WGK 1: slightly hazardous to water

**Further information**

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

**15.2 Chemical safety assessment**

Not applicable

**SECTION 16: OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

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

Flam. Liq. - 3 - H226 - Based on product data or assessment

Skin Irrit. - 2 - H315 - Calculation method

Eye Dam. - 1 - H318 - Calculation method

**Revision**

Identification Number: 4099614 / A287 / Issue Date: 22.08.2018 / Version: 1.0

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

**Legend**

Dow IHG	Dow Industrial Hygiene Guideline
TWA	Time weighted average
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
Skin Irrit.	Skin irritation
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 - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; 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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