

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## RTV 23 Mould-Making Catalyst

Version	Revision Date:	SDS Number:	Date of last issue: 14.08.2017
3.1	09.03.2018	671525-00009	Date of first issue: 24.10.2014

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

#### 1.1 Product identifier

Trade name : RTV 23 Mould-Making Catalyst

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

Use of the Sub-  
stance/Mixture : Vulcanising agents, Polymer

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

Company : CFSNET Ltd  
United Downs Industrial Park St  
Day, Redruth  
Cornwall  
TR16 5HY

Telephone : +44 (0) 1209 821028

E-mail : sales@cfsnet.co.uk

#### 1.4 Emergency telephone number

Emergency Contact : 0800 246 1274

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.

Specific target organ toxicity - repeated exposure, Category 2 H373: May cause damage to organs through prolonged or repeated exposure.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms

:



Signal word

: Warning

Hazard statements

: H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

:

**Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

**Storage:**

P405 Store locked up.

Hazardous components which must be listed on the label:

Trimethoxyphenylsilane

Dimethylbis[(1-oxoneodecyl)oxy]stannane

### 2.3 Other hazards

Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Organotin compound

#### Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Trimethoxyphenylsilane	2996-92-1 221-066-9 01-2119964479-19	Flam. Liq. 3; H226 Acute Tox. 4; H302 STOT RE 2; H373	>= 10 - < 20
Dimethylbis[(1-oxoneodecyl)oxy]stannane	68928-76-7 273-028-6	Acute Tox. 4; H302 Repr. 2; H361d STOT RE 1; H372 Aquatic Chronic 3; H412	>= 3 - < 10

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Methanol	67-56-1 200-659-6 603-001-00-X 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 0.1 - < 1
Tetramethoxysilane	681-84-5 211-656-4	Flam. Liq. 3; H226 Acute Tox. 1; H330 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 1; H372	>= 0.1 - < 1

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention.  
Rinse mouth thoroughly with water.

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

- Risks : Suspected of damaging the unborn child.  
May cause damage to organs through prolonged or repeated exposure.

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

- Treatment : Treat symptomatically and supportively.

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### SECTION 5: Firefighting measures

#### 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

#### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.  
Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Silicon oxides  
Formaldehyde  
Metal oxides

#### 5.3 Advice for firefighters

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

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.  
Use personal protective equipment.  
Follow safe handling advice and personal protective equipment recommendations.

#### 6.2 Environmental precautions

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).

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Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Methods for 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.  
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.  
Clean up remaining materials from spill with suitable absorbent.  
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.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Avoid inhalation of vapour or mist.

Do not swallow.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment

Keep container tightly closed.

Keep away from water.

Protect from moisture.

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.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

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### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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.

Advice on common storage : Do not store with the following product types:  
Strong oxidizing agents  
Organic peroxides  
Explosives  
Gases

### 7.3 Specific end use(s)

Specific use(s) : These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.  
For further information regarding the use of silicones / organic oils in consumer aerosol applications, please refer to the guidance document regarding the use of these type of materials in consumer aerosol applications that has been developed by the silicone industry ([www.SEHSC.com](http://www.SEHSC.com)) or contact the Dow Chemical customer service group.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No. Value	type (Form of exposure)	Control parameters Basis	
Trimethoxyphenylsilane	2996-92-1	TWA	50 ppm	DCC OEL
Dimethylbis[(1-oxoneodecyl)oxy]stannane	68928-76-7	TWA	0.1 mg/m <sup>3</sup> (Tin)	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	0.2 mg/m <sup>3</sup> (Tin)	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
Methanol	67-56-1	TWA	200 ppm 266 mg/m <sup>3</sup>	2006/15/EC
Further information	Indicative, Identifies the possibility of significant uptake through the skin			
		TWA	200 ppm 266 mg/m <sup>3</sup>	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which			

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	there are concerns that dermal absorption will lead to systemic toxicity.
	STEL 250 ppm 333 mg/m3 GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters Basis	
Propan-1-ol	71-23-8	STEL	250 ppm 625 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		TWA	200 ppm 500 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
Methanol	67-56-1	TWA	200 ppm 260 mg/m3	2006/15/EC
Further information	Indicative, Identifies the possibility of significant uptake through the skin			
		TWA	200 ppm 266 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	250 ppm 333 mg/m3	GB EH40
Further information	Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name End Use		Exposure routes	Potential health effects	Value
Tetrapropyl orthosilicate	Workers	Inhalation	Long-term systemic effects	85 mg/m3
	Workers	Inhalation	Acute systemic effects	85 mg/m3
	Workers	Skin contact	Long-term systemic effects	12 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	12 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	21 mg/m3
	Consumers	Inhalation	Acute systemic effects	21 mg/m3
	Consumers	Skin contact	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	6 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	6 mg/kg

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Alkoxysilane	Workers	Skin contact	ffects	bw/day
	Workers	Inhalation	Acute systemic effects	2.5 mg/kg bw/day
	Workers	Inhalation	Acute systemic effects	40.2 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	2.5 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	40.2 mg/m <sup>3</sup>
	Consumers	Skin contact	Acute systemic effects	33.3 mg/kg bw/day
	Consumers	Inhalation	Acute systemic effects	10 mg/m <sup>3</sup>
	Consumers	Ingestion	Long-term systemic effects	0.7 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	1.7 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	10 mg/m <sup>3</sup>
Methanol	Workers	Inhalation	Long-term systemic effects	260 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	260 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	260 mg/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	260 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	40 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	40 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	50 mg/m <sup>3</sup>
	Consumers	Inhalation	Acute systemic effects	50 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term local effects	50 mg/m <sup>3</sup>
	Consumers	Inhalation	Acute local effects	50 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	8 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	8 mg/kg bw/day
Tetramethoxysilane Workers	Workers	Inhalation	Long-term local effects	93 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	0.3 mg/kg bw/day

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### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Tetrapropyl orthosilicate	Fresh water	10 mg/l
	Marine water	1 mg/l
	Fresh water sediment	11 mg/kg
	Marine sediment	1.1 mg/kg
	Soil	3.9 mg/kg
	Sewage treatment plant	96 mg/l
Alkoxysilane	Fresh water	0.24 mg/l
	Marine water	0.024 mg/l
	Fresh water sediment	0.24 mg/kg
	Marine sediment	0.024 mg/kg
	Soil	0.07 mg/kg
	Sewage treatment plant	74 mg/l
Methanol	Fresh water	20.8 mg/l
	Marine water	2.08 mg/l
	Intermittent use/release	1540 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	77 mg/kg
	Marine sediment	7.7 mg/kg
Tetramethoxysilane	Fresh water	5 mg/l
	Marine water	0.5 mg/l
	Fresh water sediment	4.44 mg/kg
	Marine sediment	0.44 mg/kg
	Soil	0.99 mg/kg
	Sewage treatment plant	> 1 mg/l

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### 8.2 Exposure controls

#### Engineering measures

Processing may form hazardous compounds (see section 10).  
Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

#### Personal protective equipment

Eye protection : Wear the following personal protective equipment:  
Safety glasses

Hand protection  
Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous sub-stance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Wear the following personal protective equipment:  
Flame retardant antistatic protective clothing, unless assessment demonstrates that the risk of explosive atmospheres or flash fires is low  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Self-contained breathing apparatus

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: Clear to slightly hazy, colourless
Odour	: slight
Odour Threshold	: No data available

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pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	> 35 °C
Flash point	:	64 °C Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	0.969
Solubility(ies) Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, dynamic	:	40 mPa.s
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Flammability (liquids)	:	Not applicable
Molecular weight	:	No data available
Particle size	:	Not applicable
Self-ignition	:	The substance or mixture is not classified as pyrophoric. The

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substance or mixture is not classified as self heating.

### 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

Hazardous reactions : Combustible liquid.  
Vapours may form explosive mixture with air.  
Use at elevated temperatures may form highly hazardous compounds.  
Can react with strong oxidizing agents.  
Hazardous decomposition products will be formed upon contact with water or humid air.  
Hazardous decomposition products will be formed at elevated temperatures.

#### 10.4 Conditions to avoid

Conditions to avoid : Exposure to moisture  
Heat, flames and sparks.

#### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents  
Water

#### 10.6 Hazardous decomposition products

Contact with water or humid air : Propan-1-ol  
Methanol

Thermal decomposition : Benzene  
Formaldehyde

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation Skin contact  
Ingestion Eye contact

#### Acute toxicity

Not classified based on available information.

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### **Product:**

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour Method:  
Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

### **Components:**

#### **Trimethoxyphenylsilane:**

Acute oral toxicity : LD50 (Rat): 1,049 mg/kg  
Remarks: On basis of test data.

#### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Acute oral toxicity : LD50 (Rat): 894 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### **Methanol: Acute**

oral toxicity : Acute toxicity estimate (Humans): 300 mg/kg  
Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Expert judgement  
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : Acute toxicity estimate (Humans): 300 mg/kg  
Method: Expert judgement

#### **Tetramethoxysilane:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): 63 ppm  
Exposure time: 4 h  
Test atmosphere: vapour

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Remarks: On basis of test data.

Acute dermal toxicity : LD50 (Rabbit): 17,544 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Information taken from reference works and the literature.

### **Skin corrosion/irritation**

Not classified based on available information.

### **Components:**

#### **Trimethoxyphenylsilane:**

Species: Rabbit  
Result: No skin irritation  
Remarks: On basis of test data.

#### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: No skin irritation

#### **Methanol:**

Species: Rabbit  
Result: No skin irritation

#### **Tetramethoxysilane:**

Species: Rabbit  
Result: Skin irritation  
Remarks: Based on data from similar materials

### **Serious eye damage/eye irritation**

Not classified based on available information.

### **Components:**

#### **Trimethoxyphenylsilane:**

Species: Rabbit  
Result: No eye irritation  
Remarks: Based on data from similar materials

#### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Species: Rabbit  
Method: OECD Test Guideline 405  
Result: No eye irritation

#### **Methanol:**

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Species: Rabbit  
Result: No eye irritation

### **Tetramethoxysilane:**

Result: Irreversible effects on the eye  
Remarks: On basis of test data.

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

### **Components:**

#### **Methanol:**

Test Type: Maximisation Test  
Exposure routes: Skin contact  
Species: Guinea pig  
Result: negative

#### **Tetramethoxysilane:**

Assessment: Does not cause skin sensitisation.

Test Type: Buehler Test  
Species: Guinea pig  
Remarks: Based on data from similar materials

### **Germ cell mutagenicity**

Not classified based on available information.

### **Components:**

#### **Trimethoxyphenylsilane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative  
Remarks: On basis of test data.

#### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

#### **Methanol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

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Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Genotoxicity in vivo  
cytogenetic assay) : Test Type: Mammalian erythrocyte micronucleus test (in vivo)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

### **Tetramethoxysilane:**

Genotoxicity in vivo  
cytogenetic assay) : Test Type: Mammalian erythrocyte micronucleus test (in vivo)  
Species: Rat  
Application Route: Inhalation  
Result: negative  
Remarks: On basis of test data.

Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

### **Carcinogenicity**

Not classified based on available information.

### **Components:**

#### **Methanol:**

Species: Mouse  
Application Route: inhalation (vapour) Exposure  
time: 18 Months  
Result: negative

### **Reproductive toxicity**

Suspected of damaging the unborn child.

### **Components:**

#### **Trimethoxyphenylsilane:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the  
reproduction/developmental toxicity screening test Species: Rat,  
male and female  
Application Route: Ingestion  
Symptoms: No effects on fertility  
Remarks: On basis of test data.

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the  
reproduction/developmental toxicity screening test Species: Rat,  
male and female  
Application Route: Ingestion  
Symptoms: No effects on foetal development  
Remarks: On basis of test data.

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Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

### **Methanol:**

Effects on fertility : Test Type: Fertility/early embryonic development  
Species: Mouse  
Application Route: Ingestion  
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Mouse  
Application Route: Ingestion  
Result: positive  
Remarks: The effects were seen only at maternally toxic dos-es.

### **STOT - single exposure**

Not classified based on available information.

### **Components:**

#### **Methanol:**

Target Organs: Eyes, Central nervous system  
Assessment: Causes damage to organs.

### **STOT - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

### **Components:**

#### **Trimethoxyphenylsilane:**

Exposure routes: Ingestion  
Target Organs: Bladder, Kidney  
Assessment: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Exposure routes: inhalation (vapour)  
Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Exposure routes: Ingestion  
Target Organs: Immune system, Central nervous system  
Assessment: Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

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### **Tetramethoxysilane:**

Exposure routes: inhalation (vapour)

Target Organs: Respiratory system

Assessment: Shown to produce significant health effects in animals at concentrations of 0.2 mg/l/6h/d or less.

### **Repeated dose toxicity**

#### **Components:**

#### **Trimethoxyphenylsilane:**

Species: Rat

Application Route: Ingestion

Target Organs: Bladder, Kidney

Remarks: On basis of test data.

Species: Rat

Application Route: inhalation (vapour)

Remarks: On basis of test data.

#### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Species: Rat

NOAEL: < 1.6 mg/kg

Application Route: Ingestion

Exposure time: 90 Days

Remarks: Based on data from similar materials

#### **Methanol:**

Species: Rat

NOAEL: 1.06 mg/l

Application Route: inhalation (vapour)

Exposure time: 90 Days

#### **Tetramethoxysilane:**

Species: Rat

Application Route: inhalation (vapour)

Target Organs: Respiratory system

Remarks: On basis of test data.

### **Aspiration toxicity**

Not classified based on available information.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

##### Components:

##### **Trimethoxyphenylsilane:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials  
No toxicity at the limit of solubility

LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.20 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: On basis of test data.  
No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.0029 mg/l Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: On basis of test data.  
No toxicity at the limit of solubility

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.17 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: On basis of test data.  
No toxicity at the limit of solubility

Toxicity to microorganisms : EC50 : > 1,000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

##### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 17 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials

Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): 37 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

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Remarks: Based on data from similar materials

EC10 (Desmodesmus subspicatus (green algae)): 5.7 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

### Methanol:

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 15,400 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 22,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : IC50 : > 1,000 mg/l  
Exposure time: 3 h
- Toxicity to fish (Chronic toxicity) : NOEC: 15,800 mg/l  
Exposure time: 200 h  
Species: Oryzias latipes (Orange-red killifish)

### Tetramethoxysilane:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 245 mg/l  
Exposure time: 96 h  
Method: Directive 67/548/EEC, Annex V, C.1.  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 75 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials  
No toxicity at the limit of solubility
- Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): > 22 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: No toxicity at the limit of solubility

### Ecotoxicology Assessment

- Acute aquatic toxicity : This product has no known ecotoxicological effects.

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### 12.2 Persistence and degradability

#### Components:

##### **Trimethoxyphenylsilane:**

Biodegradability : Result: Not readily biodegradable. Biodegradation: 1 %  
Exposure time: 28 d  
Method: OECD Test Guideline 310  
Remarks: Based on data from similar materials

##### **Dimethylbis[(1-oxoneodecyl)oxy]stannane:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 3 %  
Exposure time: 35 d  
Method: OECD Test Guideline 301F  
Remarks: Based on data from similar materials

##### **Methanol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 95 %  
Exposure time: 20 d

##### **Tetramethoxysilane:**

Stability in water : Degradation half life: < 3 min  
pH: 7

### 12.3 Bioaccumulative potential

#### Components:

##### **Methanol:**

Bioaccumulation : Species: Leuciscus idus (Golden orfe)  
Bioconcentration factor (BCF): < 10

Partition coefficient: n-octanol/water : log Pow: -0.77

##### **Tetramethoxysilane:**

Partition coefficient: n-octanol/water : log Pow: -0.5

**12.4 Mobility in soil** No data available

**12.5 Results of PBT and vPvB assessment** Not relevant

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### 12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.  
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.  
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Empty containers retain residue and can be dangerous.  
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.  
If not otherwise specified: Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

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deplete the ozone layer

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.  
Not applicable

### Other regulations:

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.

### The components of this product are reported in the following inventories:

NZIoC : All ingredients listed or exempt.

REACH : For purchases from EU, all ingredients are currently pre-registered or exempt under REACH. Please refer to section 1 for recommended uses. For purchases from non-EU legal entities with the intention to export into EEA please contact your DC representative/local office.

TSCA : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

AICS : All ingredients listed or exempt.

IECSC : All ingredients listed or exempt.

ENCS/ISHL : All components are listed on ENCS/ISHL or exempted from inventory listing.

KECI : All ingredients listed, exempt or notified.

PICCS : All ingredients listed or exempt.

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

TCSI : All ingredients listed or exempt.

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### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

### Full text of H-Statements

H225	: Highly flammable liquid and vapour.
H226	: Flammable liquid and vapour.
H301	: Toxic if swallowed.
H302	: Harmful if swallowed.
H311	: Toxic in contact with skin.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H330	: Fatal if inhaled.
H331	: Toxic if inhaled.
H361d	: Suspected of damaging the unborn child.
H370	: Causes damage to organs.
H372	: Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	: Causes damage to organs through prolonged or repeated exposure if swallowed.
H412	: May cause damage to organs through prolonged or repeated exposure if swallowed.
H412	: Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox. Aquatic	: Acute toxicity
Chronic Eye Dam.	: Chronic aquatic toxicity
Flam. Liq.	: Serious eye damage
Repr.	: Flammable liquids
Skin Irrit.	: Reproductive toxicity
STOT RE	: Skin irritation
STOT SE	: Specific target organ toxicity - repeated exposure
2006/15/EC	: Specific target organ toxicity - single exposure
DCC OEL	: Europe. Indicative occupational exposure limit values
GB EH40	: Dow Chemical Guide
2006/15/EC / TWA	: UK. EH40 WEL - Workplace Exposure Limits
DCC OEL / TWA GB	: Limit Value - eight hours
EH40 / TWA GB	: Time weighted average
EH40 / STEL	: Long-term exposure limit (8-hour TWA reference period)
	: Short-term exposure limit (15-minute reference period)

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;

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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 Equip-ment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentra-tion; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Mari-time Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisa-tion 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 Develop-ment; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccu-mulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Sub-stances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evalua-tion, 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 Sub-stances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioac-cumulative

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-cy, <http://echa.europa.eu/>

### Classification of the mixture:

Repr. 2

STOT RE 2

H361d

H373

### Classification procedure:

Calculation method

Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, infor-mation and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS ma-terial is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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