



# Sentinel Seal x

## Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 01 December 2010

Revision date: 16 July 2014

Supersedes: 12 July 2013

Version: 3.0

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Sentinel Seal x

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

##### 1.2.1. Relevant identified uses

Main use category : Joint and Leak Sealer for Central Heating Systems

##### 1.2.2. Uses advised against

No additional information available

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

SENTINEL PERFORMANCE SOLUTIONS LTD  
7650 Daresbury Park, Daresbury  
WA4 4BS Warrington - United Kingdom  
T +44 (0) 1928 704 330 - F +44 (0) 1928 562 070  
[info.uk@sentinel-solutions.net](mailto:info.uk@sentinel-solutions.net)

#### 1.4. Emergency telephone number

Emergency number : +44 (0) 1928 704 339  
(24 hours, 7 days)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin Irrit. 2 H315

Eye Dam. 1 H318

Full text of H-phrases: see section 16

##### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) :

Danger

Hazardous ingredients :

Triacetoxylethylsilane, Methylsilanetriyl triacetate

Hazard statements (CLP) :

H315 - Causes skin irritation  
H318 - Causes serious eye damage

Precautionary statements (CLP) :

P264 - Wash hands, forearms and face thoroughly after handling  
P280 - Wear protective gloves, eye protection  
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a doctor  
P362 + P364 - Take off contaminated clothing and wash it before reuse

#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Other hazards not contributing to the classification : Ingestion may cause irritation of the gastrointestinal tract.

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Triacetoxyethylsilane	(CAS No) 17689-77-9 (EC No.) 241-677-4	1 - 2	Xn; R22 C; R34 R14
Methylsilanetriyl triacetate	(CAS No) 4253-34-3 (EC No.) 224-221-9	1 - 2	Xn; R22 C; R34 R14

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Triacetoxyethylsilane	(CAS No) 17689-77-9 (EC No.) 241-677-4	1 - 2	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314
Methylsilanetriyl triacetate	(CAS No) 4253-34-3 (EC No.) 224-221-9	1 - 2	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314

Full text of R- and H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove to fresh air, keep the patient warm and at rest. If symptoms develop obtain medical attention.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If symptoms develop obtain medical attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms develop obtain medical attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Rinse mouth. Give 100 - 200 ml of water to drink. If symptoms develop obtain medical attention.

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

Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries upon intravenous administration	: Ingestion may cause irritation of the gastrointestinal tract.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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

Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. Formaldehyde.
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#### 5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.
Protection during firefighting	: As in any fire, wear self-contained breathing apparatus and full protective gear.

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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##### 6.1.2. For emergency responders

Protective equipment	: Use chemically protective clothing.
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Emergency procedures : Ensure adequate ventilation. Avoid contact with skin and eyes. Avoid inhalation of vapours.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours. Wear recommended personal protective equipment. Take off contaminated clothing and wash before reuse.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product.

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

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Avoid ignition sources. Protect material from direct sunlight.

### 7.3. Specific end use(s)

Joint and Leak Sealer for Central Heating Systems.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Appropriate engineering controls : Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves. Standard EN 374 - Protective gloves against chemicals.

Eye protection : Chemical goggles or safety glasses. Standard EN 166 - Personal eye-protection.

Skin and body protection : Use chemically protective clothing.

Respiratory protection : Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazard protection : Not required for normal conditions of use.

Environmental exposure controls : Avoid release to the environment.

Other information : Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Paste.

Colour : Various colours.

Odour : characteristic.

Odour threshold : No data available

pH : 12.94 @ 25 °C

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : > 100 °C (closed cup)

Self ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : Not applicable  
Non flammable.

Vapour pressure : No data available

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Relative vapour density at 20 °C	: 1.01 @ 20 °C
Relative density	: No data available
Solubility	: Immiscible.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None known.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No information available.

### 10.4. Conditions to avoid

Extremely high or low temperatures. Ignition sources.

### 10.5. Incompatible materials

Oxidizing agents.

### 10.6. Hazardous decomposition products

This product can generate formaldehyde at approximately 150 °C and above in the presence of air. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant and potential cancer hazard. So, use adequate ventilation or wear protective equipment such as gloves, goggles, respirator or protective clothing when this product is heated at approximately 150 °C and above in the presence of air. Hydrolysis: Acetic acid.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

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LD50 oral rat	> 15000 mg/kg (calculated value)
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#### Methylsilanetriyl triacetate (4253-34-3)

LD50 oral rat	2060 mg/kg
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Skin corrosion/irritation	: Causes skin irritation. pH: 12.94 @ 25 °C
Serious eye damage/irritation	: Causes serious eye damage. pH: 12.94 @ 25 °C
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met

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Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

#### 12.1. Toxicity

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EC50 Daphnia	> 2500 mg/l 48 h - Daphnia magna

#### 12.2. Persistence and degradability

Sentinel Seal x	
Persistence and degradability	No information available.

#### 12.3. Bioaccumulative potential

Sentinel Seal x	
Bioaccumulative potential	Low bioaccumulation potential.

#### 12.4. Mobility in soil

Sentinel Seal x	
Ecology - soil	No information available.

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

Sentinel Seal x	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

#### 12.6. Other adverse effects

: Avoid release to the environment

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

No dangerous good in sense of transport regulations

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR/RID) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

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#### 14.3. Transport hazard class(es)

Not applicable

#### 14.4. Packing group

Not applicable

#### 14.5. Environmental hazards

Other information : Not classified.

#### 14.6. Special precautions for user

Special transport precautions : No special precautions required.

##### 14.6.1. Overland transport

No additional information available

##### 14.6.2. Transport by sea

No additional information available

##### 14.6.3. Air transport

No additional information available

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

##### 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

### SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Abbreviations and acronyms : ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route). ATE (Acute Toxicity Estimate). CAS (Chemical Abstracts Service) number. CLP (Classification, Labeling and Packaging). DNEL (Derived No effect Limit). EC (European Community). EC50 (Effective Concentration 50%). EN (European Norm). IARC (International Agency for Research on Cancer). IATA (International Air Transport Association). IBC (Intermediate Bulk Container). IMDG (International Maritime Dangerous Goods Code). IMO (International Maritime Organisation). LC50 (Lethal Concentration 50%). LD50 (Lethal Dose 50%). MAC (Maximal Allowed Concentration). O/W (Oil-in-Water (chemistry)). OECD (Organisation for Economic Co-operation and Development). PBT (Persistent, bioaccumulative and toxic). PMcc (Pensky-Martens Closed Cup test). PNEC (predicted no effect concentration). REACH (Registration, Evaluation and Authorisation of Chemicals). RID (Règlement concernant le transport international ferroviaire de marchandises). STEL (Short Term Exposure Limit). TWA (Time Weighted Average). UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods). vPvB (very persistent and very bioaccumulative).

Other information : None.

Full text of R-, H- and EUH-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
R14	Reacts violently with water
R22	Harmful if swallowed
R34	Causes burns
C	Corrosive
Xn	Harmful

NCEC SDS EU (REACH ANNEX II)

*The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.*