

MATERIAL: TECHSIL[®] STO

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

- 1.1 Product Name: Techsil[®] STO
1.2 Product Use: Adhesive Sealant
1.3 Supplier: Techsil Ltd
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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

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

- H318: Serious eye damage - Category 1
H317: Skin sensitisation - Sub-Category 1B
H361: Reproductive toxicity - Category 2
H412: Chronic aquatic toxicity - Category 3

Classification according to EU Directives 67/548/EEC or 1999/45/EC:

- R41: Irritant
H317: Skin sensitisation - Sub-category 1B
H361: Reproductive toxicity - Category 2
H412: Chronic aquatic toxicity - Category 3

2.2 Label Elements:

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements

Hazard pictograms:



Signal words: Danger

Hazard statements:

- H317** May cause an allergic reaction
H318 Causes serious eye damage.
H361 Suspected of damaging fertility or the unborn child.
H412 Harmful to aquatic life with long lasting effects.

Contact Details

Precautionary statements:

P201	Obtain special instructions before use.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351	IF IN EYES: Rinse cautiously with water for several minutes.
+ P338 +	Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or
P310	doctor/ physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.

2.3 Other Hazards:

Information not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Information not relevant

CASRN / EC-No. / Index- No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 301-10-0 EC-No. 206-108-6 Index-No.-	01-2119485798-13	>= 95.0 <= 100.0 %	Stannous octoate	Eye Dam. - 1 - H318 Skin Sens. - 1B H317 Repr. - 2 - H361 Aquatic Chronic - 3 H412

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

CASRN / EC-No. / Index- No.	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 301-10-0 EC-No. 206-108-6 Index-No.-	>= 95.0 <= 100.0 %	Stannous octoate	Xi - R41 R43 Repr.Cat.3 - R63 R52/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

Contact Details

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

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:

May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Repeated excessive exposure may aggravate preexisting lung disease. Skin contact may aggravate preexisting dermatitis.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media:

Suitable extinguishing equipment

Suitable extinguishing media: Extinguishing media - small fires Dry chemical Carbon dioxide (CO₂) Water spray Extinguishing media - large fires Foam

Unsuitable extinguishing media: None known.

5.2 Special Hazards Arising from the Substance or Mixture:

Combustion generates toxic fumes of the following: Carbon oxides

Unusual Fire and Explosion Hazards: High temperatures can cause sealed containers to rupture due to a build up or of internal pressure. During a fire, irritating and highly toxic gases and/or fumes may be generated during combustion or decomposition.

5.3 Advice for Fire-fighters:

Fire Fighting Procedures: Use water spray to cool unopened containers.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

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QF21 Rev 2 (June 2016)

Use personal protective equipment. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow. Take off all contaminated clothing immediately. Wash off with soap and plenty of water. Do not take clothing home to be laundered. Wash contaminated clothing before re-use.

6.2 Environmental Precautions:

WARNING: KEEP SPILLS AND CLEANING RUNOFFS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER.

6.3 Methods and Material for Containment and Cleaning-Up:

Keep people away from and upwind of spill/leak. Floor may be slippery; use care to avoid falling. Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

6.4 Reference to Other Sections:

References to other sections, if applicable, have been provided in the previous sub-sections.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Vapors can be evolved when material is heated during processing operations. See SECTION 8, Exposure Controls/Personal Protection, for types of ventilation required. May cause sensitisation of susceptible persons by skin contact. For personal protection see section 8.

7.2 Conditions for Safe Storage, Including and Incompatibilities:

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

7.3 Specific End Use(s):

See the technical data sheet on this product for further information.

SECTION 8: HANDLING AND STORAGE

8.1 Control Parameters:

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Stannous octoate	ACGIH ACGIH GB EH40 GB EH40	TWA	0.1 mg/m ³ , Tin
		STEL	0.2 mg/m ³ , Tin
		TWA	0.1 mg/m ³ , Tin
		STEL	0.2 mg/m ³ , Tin

Derived No Effect Level

Workers

Acute - systemic effects		Acute - local effects		Long-term - systemic effects		Long-term - local effects	
Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation	Dermal	Inhalation
n.a.	n.a.	n.a.	n.a.	n.a.	19.7 mg/m ³	n.a.	n.a.

Contact Details

Consumers

Acute - systemic effects			Acute – local effects		Long-term – systemic effects			Long-term – local effects	
Dermal	Inhalatio	Oral	Dermal	Inhalatio	Dermal	Inhalation	Oral	Dermal	Inhalation
n.a	n.a	n.a	n.a	n.a	2.3 mg/kg bw/day	11.8 mg/m ³	2.3 mg/kg bw/day	n.a.	n.a.

Predicted No Effect Concentration

Compartment	PNEC	Remarks
Fresh water	0.0069 mg/l	
Marine water	0.00069 mg/l	
Sewage treatment plant	6.5 mg/l	
Fresh water sediment	0.053 mg/kg d.w.	
Marine sediment	0.005 mg/kg d.w.	
Soil	0.006 mg/kg d.w.	

8.2 Exposure 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. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Polyvinyl alcohol ("PVA"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Contact Details

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 with a particulate pre-filter, type AP2.

Environmental exposure controls

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance	
Physical State:	liquid clear
Colour	colourless to pale yellow
Odour:	Mild odour
Odour threshold:	no data available
pH.:	Not applicable
Melting point/range	9 °C
Freezing point	no data available
Boiling range: Boiling point (760 mmHg)	Not Applicable--Decomposes
Flash point:	closed cup 137 °C CC (EEC Method A9)
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability of solids and gases:	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure:	0.3 Pa at 20 °C
Relative Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	1.26
Water solubility	4.5 g/L at 20 °C <i>OECD Test Guideline 105</i> Slightly-moderately soluble
Partition coefficient : n-octanol/water	log Pow: 2.64
Auto-ignition temperature:	> 400 °C at 101,325 Pa
Decomposition temperature:	no data available
Kinematic Viscosity	no data available
Explosive properties:	Not explosive
Oxidising properties:	The substance or mixture is not classified as oxidizing.

Contact Details

9.2 Other Information:	
Liquid Density	1.26 g/cm ³ at 20 °C
Molecular weight	no data available
Percent volatility	0 - 10 %
Surface tension	55.9 mN/m at 20.5 °C

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

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:
No dangerous reaction known under conditions of normal use.
- 10.2 Chemical Stability:
Stable under recommended storage conditions. See Storage, Section 7.
- 10.3 Possibility of Hazardous Reactions:
Product will not undergo polymerization.
- 10.4 Conditions to Avoid:
Keep away from open flames, hot surfaces and sources of ignition.
- 10.5 Incompatible Materials:
Avoid contact with oxidizing materials.
- 10.6 Hazardous Decomposition Products:
Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1 Information on Toxicological Effects:
- Acute toxicity
Acute oral toxicity
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
- LD50, Rat, 5,870 mg/kg
- Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
- LD50, Rabbit, male and female, > 2,000 mg/kg No deaths occurred at this concentration.
- Acute inhalation toxicity
Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. Signs and symptoms of excessive exposure may include: Headache. Nausea and/or vomiting.
The LC50 has not been determined.
- Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness.
Prolonged contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin.
- Serious eye damage/eye irritation
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Contact Details

Sensitization

For skin sensitization:

Has caused allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

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

Specific Target Organ Systemic Toxicity (Repeated Exposure)

For the hydrolysis product(s)

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

Carcinogenicity

For the hydrolysis product(s) Did not cause cancer in laboratory animals.

Teratogenicity

For the hydrolysis product(s) Did not cause birth defects in laboratory animals.

Reproductive toxicity

For the hydrolysis product(s) Has been toxic to the fetus in laboratory animal tests.

Mutagenicity

For the hydrolysis product(s) In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard

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

COMPONENTS INFLUENCING TOXICOLOGY: Stannous octoate

Acute inhalation toxicity

The LC50 has not been determined.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

General Information

Harmful to aquatic organisms.

12.1 Toxicity:

Acute toxicity to fish

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

LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, > 116 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, water flea *Daphnia magna*, 48 Hour, 66.3 mg/l

Acute toxicity to algae/aquatic plants

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, Growth rate, 6.9 mg/l

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QF21 Rev 2 (June 2016)

NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate, 0.54 mg/l

- 12.2 Persistence and Degradability:
Biodegradability: For the hydrolysis product(s) Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent
- 12.3 Bioaccumulative Potential:
Partition coefficient: n-octanol/water(log Pow): 2.64 at 25 °C
- 12.4 Mobility in Soil:
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 41.3 Estimated.
- 12.5 Results of PBT and vPvB Assessment:
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).
- 12.6 Other Adverse Effects:
Information not available.

SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1 Waste Treatment Methods:
For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

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

SECTION 14: TRANSPORT INFORMATION

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

- 14.1 UN Number:
N/A
- 14.2 UN Proper Shipping Name:
N/A
- 14.3 Transport Hazard Class(es):
N/A
- 14.4 Packing Group:
N/A
- 14.5 Environmental Hazards:
N/A
- 14.6 Special Precautions for User:
N/A
- 14.7 Transport in Bulk According to Annex II of MARPOL73/78 and the IBC Code:
N/A
The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and the International Air Transport Association (IATA) regulations.

Classification for SEA transport (IMO-IMDG):

- 14.1 UN Number:
N/A
- 14.2 UN Proper Shipping Name:
N/A
- 14.3 Class
N/A
- 14.4 Packing group
N/A
- 14.5 Environmental hazards
N/A

Contact Details

- 14.6 Special precautions for user
N/A
- 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
N/A
- 14.2 Proper shipping name
N/A
- 14.3 Class
N/A
- 14.4 Packing group
N/A
- 14.5 Environmental hazards
N/A
- 14.6 Special precautions for user
N/A

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

SECTION 15: REGULATORY INFORMATION

- 15.1 Safety, Health & 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 II - Directive 96/82/EC and its amendments:

Listed in Regulation: Directive 96/82/EC does not apply

REACH :

This substance has been registered according to Regulation (EC) No. 1907/2006 (REACH).

REACH Regulation (EC) No 1907/2006

Contact Details

- 15.2 Chemical Safety Assessment:
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

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

H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H361	Suspected of damaging fertility or the unborn child.
H412	Harmful to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.

Revision

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

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
GB EH40	UK. EH40 WEL - Workplace Exposure Limits
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average

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.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their particular use.

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QF21 Rev 2 (June 2016)