



Kinetics Controls & Innovation Ltd

SAFETY DATA SHEET

Mac-Seal Activator

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

1.1. Product identifier

Product name Mac-Seal Activator

Synonyms; trade names Mac-Seal Activator

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

Identified uses Activator. Sealant.

Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier KCI Ltd (Kinetics Control and Innovation Limited)
 Unit 4 & 6-7
 1 Kirkhill Place
 Dyce
 Aberdeen
 AB21 0GU
 UK
 +44 (0)1224 255480
 www.kciltld.co.uk
 info@kciltld.co.uk

Contact person Roy MacKenzie

1.4. Emergency telephone number

Emergency telephone +44 (0) 1224 255480 (office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

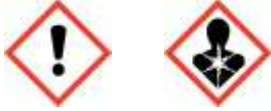
Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H332 Eye Irrit. 2 - H319 Repr. 2 - H361 STOT SE 3
 H335 STOT RE 2 - H373

Mac-Seal Activator

Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word

Warning

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201 Obtain special instructions before use.

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

P260 Do not breathe vapour/spray.

P261 Avoid breathing vapour/spray.

P264 Wash contaminated skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

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

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P312 Call a POISON CENTER/doctor if you feel unwell.

P314 Get medical advice/attention if you feel unwell.

P330 Rinse mouth.

P337+P313 If eye irritation persists: Get medical advice/attention.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with national regulations.

Contains

tetraethyl silicate, Dimethylbis[(1-oxoneodecyl)oxy]stannane

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

tetraethyl silicate		30-60%
CAS number: 78-10-4	EC number: 201-083-8	REACH registration number: 012119496195-28-XXXX

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Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H332 Eye Irrit. 2 - H319 STOT SE 3 - H335	
Dimethylbis[(1-oxoneodecyl)oxy]stannane CAS number: 68928-76-7 EC number: 273-028-6	5-10%
Classification Acute Tox. 4 - H302 Repr. 2 - H361d STOT RE 1 - H372 Aquatic Chronic 4 - H413	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	If in doubt, get medical attention promptly.
Inhalation	Get medical attention if symptoms are severe or persist. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.
Ingestion	IF SWALLOWED: Rinse mouth thoroughly with water. Get medical attention if symptoms are severe or persist. Get medical attention if a large quantity has been ingested.
Skin contact	IF ON SKIN (or hair): Wash with plenty of water.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

Inhalation	Harmful by inhalation.
Ingestion	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Skin contact	The product is irritating to eyes and skin.
Eye contact	The product is irritating to eyes and skin.

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

Notes for the doctor	Possible risk of harm to the unborn child.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Mac-Seal Activator

Suitable extinguishing media Foam. Carbon dioxide (CO₂). Powder. Dry chemicals. Water spray, fog or mist. Inert gas.

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapours may form explosive mixtures with air.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Silica. Oxides of carbon. Formaldehyde.

5.3. Advice for firefighters

Protective actions during firefighting In case of fire: Evacuate area. Fight fire with normal precautions from a reasonable distance. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment protective for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. No smoking, sparks, flames or other sources of ignition near spillage. Ensure suitable respiratory protection is worn during removal of spillages in confined areas. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.

6.2. Environmental precautions

Environmental precautions The product is not expected to be hazardous to the environment. The product is not expected to be toxic to aquatic organisms.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if safe to do so. If leakage cannot be stopped, evacuate area. Take care as floors and other surfaces may become slippery. Small Spillages: Absorb spillage with noncombustible, absorbent material. Large Spillages: Should be contained by bunding or dyking and prevent from reaching drains, ditches, or rivers. All Spillages: Place waste in labelled, sealed containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Dispose of contents/container in accordance with local regulations.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Earth container and transfer equipment to eliminate sparks from static electricity. Use only outdoors or in a well-ventilated area. Avoid contact during pregnancy/while nursing. Do not breathe vapours. Avoid contact with skin, eyes and clothing. For personal protection, see Section 8. Do not eat, drink or smoke when using this product. Do not empty into drains.
Advice on general occupational hygiene	Pregnant or breastfeeding women should not work with this product if there is any risk of exposure. Do not eat, drink or smoke when using this product. Provide eyewash station. Wash contaminated skin thoroughly after handling. Take off contaminated clothing and wash it before reuse. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Store in a cool and well-ventilated place. Store locked up.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters Occupational exposure limits tetraethyl silicate

Long-term exposure limit (8-hour TWA): WEL 10 ppm 87 mg/m³ vapour, mist

Short-term exposure limit (15-minute): WEL 30 ppm 260 mg/m³ vapour, mist

WEL = Workplace Exposure Limit

Ingredient comments	Dimethylbis[(1-oxoneodecyl)oxy]stannane (EC 273-028-6, CAS 78-10-4): No information available. Tetraethyl orthosilicate (EC 201-083-8, CAS 78-10-4):
DNEL	Workers - Inhalation; Long term systemic effects: 85 mg/m ³ Workers - Inhalation; Short term systemic effects: 85 mg/m ³ Workers - Inhalation; Long term local effects: 85 mg/m ³ Workers - Inhalation; Short term local effects: 85 mg/m ³ Workers - Dermal; Long term systemic effects: 56 mg/kg bw/day Workers - Dermal; Short term systemic effects: 56 mg/kg bw/day General population - Inhalation; Long term systemic effects: 14 mg/m ³ General population - Inhalation; Short term systemic effects: 14 mg/m ³ General population - Inhalation; Long term local effects: 14 mg/m ³ General population - Inhalation; Short term local effects: 14 mg/m ³

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General population - Dermal; Long term systemic effects: 3 mg/kg bw/day

General population - Dermal; Short term systemic effects: 3 mg/kg bw/day

PNEC

- Fresh water; Long term 0.19 mg/l
- Marine water; Long term 0.019 mg/l
- Water , Intermittent release; Long term 10 mg/l
- STP; Long term 4000 mg/l
- Sediment (Freshwater); Long term 0.83 mg/kg sediment dw
- Sediment (Marinewater); Long term 0.083 mg/kg sediment dw
- Soil; Long term 0.05 mg/kg soil dw

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Mechanical ventilation or local exhaust ventilation may be required. In case of insufficient ventilation, wear suitable respiratory equipment.

Personal protection

Wear suitable protective clothing.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Hand protection

Wear protective gloves. The breakthrough time for any glove material may be different for different glove manufacturers.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact. Wear suitable protective equipment for prolonged exposure and/or high concentrations of vapours, spray or mist.

Hygiene measures

Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated.

Respiratory protection

Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Respiratory protection may be required if excessive airborne contamination occurs.

Environmental exposure controls

Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

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SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless to pale yellow.
Odour	Alcoholic.
Flash point	24°C CC (Closed cup).
Upper/lower flammability or explosive limits	Product is not explosive but vapours may cause explosive mixtures with air.
Relative density	1.01
Viscosity	3.5 mPa s @ 25°C
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Fibrogenic dust. Formaldehyde vapour. Carbon dioxide (CO₂). Carbon monoxide (CO). products

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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Toxicological effects This product is toxic.

Acute toxicity - oral

ATE oral (mg/kg) 956.02294455

Acute toxicity - inhalation

ATE inhalation (dusts/mists
mg/l) 3.33333333

Serious eye damage/irritation

Serious eye damage/irritation Irritation of eyes is assumed.

Reproductive toxicity

Reproductive toxicity - fertility No specific test data are available. Suspected of damaging
fertility.

Reproductive toxicity - No specific test data are available. development

Specific target organ toxicity - single exposure

STOT - single exposure LD₅₀ 10 mg/l, Inhalation, Rat

Target organs Respiratory system, lungs

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No specific test data are available.

Target organs No specific target organs known.

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Toxicity No information available.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulative potential No information available.

12.4. Mobility in soil

Mobility No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB
assessment This product does not contain any substances classified as PBT or vPvB.

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12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

SECTION 14: Transport information

14.1. UN number

UN 1993

14.2. UN proper shipping name

FLAMMABLE LIQUID, N.O.S (Tetraethyl orthosilicate/ Ethanol)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID label	3
IMDG class	3



14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS F-E; S-E

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14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: Regulatory information

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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

General information	The data contained herein does not constitute the user's own assessment or workplace risk as required by other health and safety legislation (e.g. COSHH 1988). The data does not signify any warranty with regard to the product's properties.
Revision comments	This revision to the SDS removed classification information according to Directive 67/548/EEC (Dangerous Substances Directive) and Directive 1999/45/EC (Dangerous Preparations Directive). Removal of this information is a requirement of Regulation (EC) No 1272/2008 (Classification Labelling and Packaging Regulation).
Revision date	03/07/2015
Supersedes date	02/03/2015
SDS number	4546
Hazard statements in full	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure. H413 May cause long lasting harmful effects to aquatic life.