



Kinetics Controls & Innovation Ltd

SAFETY DATA SHEET

MHS-Protect Activator

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

1.1. Product identifier

Product name MHS-Protect Activator

Synonyms; trade names MHS-Protect Activator

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

Identified uses Activator. Corrosion inhibitor.

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)

National emergency telephone NHS: 111 (Members of the public)

number UK National Poisons Information Service: 0844 892 0111 (Health Professionals Only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

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Health hazards STOT RE 2 -
H373

Environmental hazards Not Classified

2.2. Label elements

Pictogram

Signal word Warning

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

Precautionary statements P260 Do not breathe vapour/spray.
P314 Get medical advice/attention if you feel unwell.
P501 Dispose of contents/container in accordance with national regulations.

Contains trimethoxyphenylsilane, Dimethylbis[(1-oxoneodecyl)oxy]stannane

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

trimethoxyphenylsilane	10-30%
CAS number: 2996-92-1	EC number: 221-066-9
Classification	
Flam. Liq. 3 - H226	
Acute Tox. 4 - H302	
STOT RE 2 - H373	
Dimethylbis[(1-oxoneodecyl)oxy]stannane	1-5%
CAS number: 68928-76-7	EC number: 273-028-6
Classification	
Acute Tox. 4 - H302	
Repr. 2 - H361d	
STOT RE 1 - H372	
Aquatic Chronic 4 - H413	
methanol	<1%
CAS number: 67-56-1	EC number: 200-659-6
	REACH registration number: 012119433307-44-XXXX

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Classification	
Flam. Liq. 2 - H225	
Acute Tox. 3 - H301	
Acute Tox. 3 - H311	
Acute Tox. 3 - H331	
STOT SE 1 - H370	
tetramethyl orthosilicate	<1%
CAS number: 681-84-5	EC number: 211-656-4
Classification	
Flam. Liq. 3 - H226	
Acute Tox. 1 - H330	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	

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	Get medical advice/attention if you feel unwell.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms are severe or persist.
Ingestion	Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water.
Eye contact	Rinse immediately with plenty of water.

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

Inhalation	Harmful if inhaled.
Ingestion	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Skin contact	No specific symptoms known.
Eye contact	No specific symptoms known.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Foam. Carbon dioxide (CO2). Powder. Dry chemicals. Water spray, fog or mist. Inert gas.
Unsuitable extinguishing	None known.

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media

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapours may form explosive mixtures with air.

Hazardous combustion products Oxides of carbon. Silica. 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 materials. for firefighters Use protective equipment appropriate for surrounding

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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. Small Spillages: Absorb spillage with non-combustible, absorbent material. Large Spillages: Should be contained by bunding or dyking and prevent from reaching drains, ditches, or rivers. All Spillages: Collect and place in suitable waste disposal containers and seal securely. 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin, eyes and clothing. Avoid inhalation of vapours and spray/mists. Provide adequate ventilation. Mechanical ventilation or local exhaust ventilation may be required.

7.2. Conditions for safe storage, including any incompatibilities

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Storage precautions Keep away from oxidising materials, heat and flames.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters Occupational exposure limits methanol

Long-term exposure limit (8-hour TWA): 260 mg/m³ 200 ppm

Sk

tetramethyl orthosilicate

Long-term exposure limit (8-hour TWA): WEL [1] ppm [6,3] mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Ingredient comments Trimethoxyphenylsilane (EC 221-066-9, CAS 2996-92-1):

DNEL

Workers - Inhalation; Long term systemic effects: 40.2 mg/m³

Workers - Dermal; Long term systemic effects: 2.5 mg/kg bw/day

General population - Inhalation; Long term systemic effects: 10 mg/m³

General population - Dermal; Long term systemic effects: 1.73 mg/kg bw/day

General population - Dermal; Short term systemic effects: 33.3 mg/kg bw/day

General population - Oral; Long term systemic effects: 0.69 mg/kg bw/day

PNEC

PNEC - Fresh water; Long term 0.24 mg/l

PNEC - Marine water; Long term 0.024 mg/l

PNEC - Intermittent release; Long term 2.40 mg/l

PNEC - STP; Long term 74 mg/l

PNEC - Sediment (Freshwater); Long term 1.10 mg/kg sediment dw

PNEC - Sediment (Marinewater); Long term 0.11 mg/kg sediment dw

PNEC - Soil; Long term 0.08 mg/kg soil dw

tetramethyl orthosilicate (CAS: 681-84-5)

Ingredient comments

The UK Advisory Committee on Toxic Substances has expressed concern that, for the OELs shown in parentheses, health may not be adequately protected because of doubts that the limit was not soundly-based. These OELs were included in the published UK 2002 list and its 2003 supplement, but are omitted from the published 2005 list.

8.2. Exposure controls

Protective equipment



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Appropriate engineering controls	Provide adequate general and local exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Tight-fitting safety glasses.
Hand protection	Wear protective gloves.
Hygiene measures	Wash hands thoroughly after handling. Good personal hygiene procedures should be implemented.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Clear. Colourless. Slightly hazy.
Odour	Slight.
Initial boiling point and range	>65°C @ 101.325 kPa
Flash point	66°C PMCC (Pensky-Martens closed cup).
Relative density	0.962
Viscosity	40 mPa s @ 25°C
Explosive properties	Product is not explosive but vapours may cause explosive mixtures with air.
Oxidising properties	Does not meet the criteria for classification as oxidising.
Comments	This information is not intended for use in preparing product specification.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

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

Stability	Stable under the prescribed storage conditions.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known.
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10.4. Conditions to avoid

Conditions to avoid	None known.
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10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition Heating may generate the following products: Carbon dioxide (CO₂). Carbon monoxide (CO). products Silicon dioxide. Formaldehyde vapour.

SECTION 11: Toxicological information

11.1. Information on toxicological effects Acute toxicity - oral

ATE oral (mg/kg) 6,903.13240326

Acute toxicity - dermal

ATE dermal (mg/kg) 75,000.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 155.39112051

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEL 100 mg/kg bw/day (nominal), Oral, Rat

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.

12.6. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Disposal methods Dispose of contents/container in accordance with local regulations.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 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.

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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	09/03/2015
SDS number	4553
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. 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. H361 Suspected of damaging fertility or the unborn child. H370 Causes damage to organs (Central nervous system, Eyes). H372 Causes damage to organs through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure. H373 May cause damage to organs (Bladder) through prolonged or repeated exposure. H413 May cause long lasting harmful effects to aquatic life.