



Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 01.10.2010

Revision: 01.10.2010

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** **KEIM Silex-OH**
- **Application of the substance / the preparation** Sealer based on silicic acid ester
- **Manufacturer/Supplier:**
 KEIM MINERAL PAINTS LTD
 Santok Building
 Deer Park Way
 Donnington Wood
 Telford
 Shropshire
 TF2 7NA
 United Kingdom
 Tel: +44 1952 231250
 Fax: +44 1952 231251
 Url: <http://www.keimpaints.co.uk>
- **Further information obtainable from:**
 David Pratt
 Telefon: +44 1952 231250
 E-Mail: sales@keimpaints.co.uk
- **Information in case of emergency:**
 GBK Gefahrgut Büro GmbH
 Emergency number: +49(0)6132/84463

2 Hazards identification

- **Hazard description:**
 Xi Irritant
 F Highly flammable
- **Information concerning particular hazards for human and environment:**
 R 11 Highly flammable.
 R 36/37 Irritating to eyes and respiratory system.
 R 66 Repeated exposure may cause skin dryness or cracking.
 R 67 Vapours may cause drowsiness and dizziness.
- **Classification system:**
 The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Tetraethylsilicate (monomer/oligomer blend) in org. solvent

- **Dangerous components:**

CAS: 78-10-4 EINECS: 201-083-8	tetraethyl silicate	Xn, Xi; R 10-20-36/37	10-25%
CAS: 78-93-3 EINECS: 201-159-0	butanone	Xi, F; R 11-36-66-67	10-25%
CAS: 67-64-1 EINECS: 200-662-2	acetone	Xi, F; R 11-36-66-67	2.5-10%

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- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:**

When seeing the doctor we suggest to present this safety data sheet.
Immediately remove any clothing soiled by the product.
Personal protection for the First Aider.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Wash off immediately with water and soap and rinse well afterwards.
If skin irritation continues, consult a doctor.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.
Do not induce vomiting; call for medical help immediately.

5 Fire-fighting measures

- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

- **For safety reasons unsuitable extinguishing agents:**

Water spray
Water with full jet
Water

- **Special hazards caused by the substance, its products of combustion or resulting gases:**

In case of fire, the following can be released:
carbon oxide (CO_x)
silicon dioxid (SiO₂)

Dangerous decomposition product: ethyl alcohol.

- **Protective equipment:** Wear self-contained respiratory protective device.

- **Additional information**

Cool endangered receptacles with water spray.
In case of fire do not breath smoke, fumes and vapours.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Person-related safety precautions:**

Ensure adequate ventilation
Avoid contact with skin and eyes.
Do not inhale fumes.
Respect the protection rules (see section 7 a. 8).
Particular danger of slipping on leaked/spilled product.
Wear protective equipment. Keep unprotected persons away.

- **Measures for environmental protection:**

Do not allow product to reach soil, sewage system or any water course.

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- Follow local governmental rules and regulations.
 Keep contaminated washing water and dispose of appropriately.
- **Measures for cleaning/collecting:**
 Absorb with non-combustible liquid-binding material (sand, diatomite, vermiculite).
 Ensure adequate ventilation.
 Dispose of the material collected according to regulations.
 Clear contaminated areas thoroughly.
 - **Additional information:** Eliminate all sources of ignition.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
 Keep receptacles tightly sealed.
 Prevent formation of aerosols.
 Avoid contact with skin and eyes.
 See item 8 for information about suitable protective equipment and technical precautions.
 Respect the protection rules.
- **Information about fire - and explosion protection:**
 Fumes can combine with air to form an explosive mixture.
 Cool endangered receptacles with water spray.
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 Keep in the original containers in a cool and dry place.
 Store only in unopened original receptacles.
 Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**
 Reacts with: water, basic substances and acids. Reaction causes the formation of: ethanol.
- **Further information about storage conditions:**
 Protect from frost.
 Protect from heat and direct sunlight.
 Keep container tightly sealed.
- **Storage class:** 3A

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

78-93-3 butanone

WEL	Short-term value: 899 mg/m ³ , 300 ppm
	Long-term value: 600 mg/m ³ , 200 ppm
	Sk

67-64-1 acetone

WEL	Short-term value: 3620 mg/m ³ , 1500 ppm
	Long-term value: 1210 mg/m ³ , 500 ppm

- **Additional information:** The lists valid during the making were used as basis.

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- **Personal protective equipment:**
- **General protective and hygienic measures:**
Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Do not inhale aerosols.
- **Respiratory protection:** In case of long or strong exposure: das mask filter ABEK.
- **Protection of hands:** Protective gloves
- **Material of gloves**
suitable material e.g.:
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.5 mm
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
Value for the permeation: Level ≥ 3 (60 min)
The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing

9 Physical and chemical properties

· General Information

Form:	Fluid
Colour:	Colourless
Odour:	Strong

· Change in condition

Melting point/Melting range:	< -40°C
Boiling point/Boiling range:	56°C

· Flash point:

2°C (DIN 51755)

· Ignition temperature:

230°C (DIN 51794)

· Self-igniting:

Product is not selfigniting.

· Danger of explosion:

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

Lower:	1.3 Vol %
Upper:	23.0 Vol %

· Oxidizing properties

Not applicable

· Vapour pressure at 20°C:

233 hPa

· Density at 25°C:

0.96 g/cm³

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· Vapour density	Not applicable
· Evaporation rate	Not applicable
· Solubility in / Miscibility with water at 20°C:	235 g/l
· pH-value:	Not determined
· Segregation coefficient (n-octanol/water):	Not applicable
· Viscosity: Dynamic:	Not determined
· Additional information:	Explosion limits for released ethanol: 3,5 - 15% (V).

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Materials to be avoided:**
Reacts with: water, basic substances and acids. Reaction causes the formation of: alcohols.
- **Dangerous reactions** Reacts with water.
- **Dangerous decomposition products:**
In case of fire, the following can be released:
carbon oxide (COx)
silicon dioxid (SiO₂)
ethyl alcohol (hydrolysis)
No hazardous decomposition products if stored and handled as prescribed.
- **Additional information:** In use may form flammable/explosive vapour-air mixture.

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

78-10-4 tetraethyl silicate

Oral	LD50	6270 mg/kg (rat)
Dermal	LD50	5878 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Repeated exposure may cause skin dryness or cracking.
- **on the eye:** Irritating effect.
- **during inhalation:**
Irritating to respiratory system.
Vapours may cause drowsiness and dizziness.
- **during swallowing:** Irritant effect possible
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):**
Experimental analysis are not available.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

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Irritant

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12 Ecological information

- **Information about elimination (persistence and degradability):**
Silicone content: Contact with water liberates: silicic acid and ethanol.
- **Ecotoxicological effects:**
- **Other information:**
In appropriate sewage treatment plants an extensively elimination off water due to biological degrading, mechanical separation and stripping.
- **Additional ecological information:**
- **AOX-indication:**
Due to the substance of content which do not include organic jointed halogens, the product can not take influence on the AOX-load of the waste water.
- **General notes:**
At present there are no ecotoxicological assessments.
The product may not be released into the environment without control.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

13 Disposal considerations

- **Product:**
 - **Recommendation** Disposal must be made according to official regulations.
- | |
|---|
| · European waste catalogue |
| 07 01 99 wastes not otherwise specified |
- **Uncleaned packaging:**
 - **Recommendation:** Disposal must be made according to official regulations.
 - **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1993
- **Packaging group:** II
- **Hazard label:** 3
- **Description of goods:** 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHYL METHYL KETONE (METHYL ETHYL KETONE), ACETONE), special provision 640D
- **Limited quantities (LQ)** LQ4
- **Transport category** 2

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- **Tunnel restriction code** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1993
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-E
- **Marine pollutant:** NO
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHYL METHYL KETONE (METHYL ETHYL KETONE), ACETONE)

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1993
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHYL METHYL KETONE (METHYL ETHYL KETONE), ACETONE)

15 Regulatory information

- **Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**

Xi Irritant
F Highly flammable

- **Risk phrases:**

11 Highly flammable.
36/37 Irritating to eyes and respiratory system.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
33 Take precautionary measures against static discharges.
35 This material and its container must be disposed of in a safe way.

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46 If swallowed, seek medical advice immediately and show this container or label. (Contd. of page 7)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Relevant R-phrases**

- 10 Flammable.
- 11 Highly flammable.
- 20 Harmful by inhalation.
- 36 Irritating to eyes.
- 36/37 Irritating to eyes and respiratory system.
- 66 Repeated exposure may cause skin dryness or cracking.
- 67 Vapours may cause drowsiness and dizziness.

• **Department issuing MSDS:** Product safety department

• **Contact:** Mrs. Popescu

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