

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.12.2022

Version number 4 (replaces version 3)

Revision: 06.12.2022

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

#### 1.1 Product identifier

**Trade name** KSE OH**Article number:** 0645

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

No further relevant information available.

**Application of the substance / the mixture** Stone strengthener

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

**Manufacturer/Supplier:**

Remmers GmbH  
Bernhard-Remmers-Str. 13  
D-49624 Lönningen / Germany  
Tel.: +49(0)5432/83-0  
Fax: +49(0)5432/3985

Remmers (UK) Limited  
Unit 4 , Lloyds Court  
Manor Royal, Crawley – West Sussex RH10 9QU  
fon +44 (0) 1293 594 010  
fax +44 (0) 1293 594 037

**Information department:**

Product Safety department: Phone: +44 (0) 1293 594 010  
Email: sales@remmers.co.ukk

#### 1.4 Emergency telephone number:

National Poisons Information Service (NPIS):  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

24h-Transport Emergency Contact Phone Number:  
within USA and Canada: 1-800-424-9300  
outside USA and Canada: 001-703-527-3887

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Flam. Liq. 3 H226 Flammable liquid and vapour.  
Eye Irrit. 2 H319 Causes serious eye irritation.  
STOT SE 3 H335 May cause respiratory irritation.

#### 2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

**Hazard pictograms**

GHS02 GHS07

**Signal word** Warning**Hazard-determining components of labelling:**

tetraethyl silicate

**Hazard statements**

H226 Flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

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**Precautionary statements**

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear eye protection / face protection.
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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Mixtures****Description:** Mixture of the substances listed below with harmless additions.

<b>Dangerous components [% w/w]:</b>		
CAS: 78-10-4 EINECS: 201-083-8 Index number: 014-005-00-0 Reg.nr.: 01-2119496195-28-XXXX	tetraethyl silicate Flam. Liq. 3, H226; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	≥50-≤70%
CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol Flam. Liq. 2, H225	≥0.25-≤0.5%

**Additional information** For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****General information** When symptoms occur or in case of doubt, seek medical advice**After inhalation** Take affected persons into the open air and position comfortably**After skin contact** If skin irritation continues, consult a doctor.**After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

**After swallowing** Seek immediate medical advice.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents**

Water mist

Fire-extinguishing powder

Carbon dioxide

**For safety reasons unsuitable extinguishing agents** Water with a full water jet.**5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

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Vapours are heavier than air and spread out over the ground. Ignition over greater distances is possible.

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

**Additional information** Cool endangered containers with water spray jet.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Keep away from ignition sources

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:**

Do not allow to enter the ground/soil.

Inform responsible authorities in case product reaches bodies of water or sewage system.

**6.3 Methods and material for containment and cleaning up:**

Send for recovery or disposal in suitable containers.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

**6.4 Reference to other sections**

Fumes can combine with air to form an explosive mixture.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Use only in well ventilated areas.

Extractor required on object.

Ensure good ventilation/exhaust in workplaces.

Avoid the formation of aerosols.

**Information about protection against explosions and fires:**

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

**7.2 Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and containers:** No special requirements.**Information on storage in a common storage facility:** Store away from food.**Further information about storage conditions:**

Store container in a well ventilated position.

Protect from humidity and keep away from water.

Do not smoke in storage areas. Storage temperature: room temperature.

Keep container tightly closed.

**\* SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

<b>Components with limit values that require monitoring at the workplace:</b>	
<b>CAS: 78-10-4 tetraethyl silicate</b>	
WEL	Long-term value: 44 mg/m <sup>3</sup> , 5 ppm
<b>CAS: 64-17-5 ethanol</b>	
WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm

**Additional information:** The lists that were valid during compilation were used as a basis.**8.2 Exposure controls****Appropriate engineering controls** No further data; see item 7.

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**Individual protection measures, such as personal protective equipment****General protective and hygienic measures**

Do not eat, drink or smoke while working.

Apply solvent-resistant skin protection preparation before beginning work.

Keep away from food, beverages and animal feed.

Immediately remove soiled, saturated clothing.

Wash hands before pauses and after work.

Avoid contact with eyes and skin.

The following indication regarding the personal protective equipment are to be considered as suggestions. The selection of the necessary personal protective equipment is to be evaluated by the employer depending on the types of operations and the local circumstances. If a risk assessment on-site shows that there is no risk for employees, the personal protective equipment is not required or the amount of the PPE can be adapted accordingly.

**Respiratory equipment:**

In case of insufficient ventilation/or spraying procedures: Respiratory equipment with particle filter P 2

In case of brief exposure or low pollution load, use respiratory protection equipment with filter. In case of intensive or longer exposure, use self-contained respiratory protection equipment.

**Hand protection**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

Nitrile rubber, NBR

Butyl rubber, BR

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**

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye/face protection** Tightly sealed safety glasses.**Body protection:** Protective work clothing.\* **SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information**

<b>Physical state</b>	Fluid
<b>Colour:</b>	Yellow cast
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.
<b>Melting point/freezing point:</b>	Not determined
<b>Boiling point or initial boiling point and boiling range</b>	>100 °C
<b>Flammability</b>	Flammable.
<b>Lower and upper explosion limit</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
<b>Flash point:</b>	40 °C (Abel-Pensky)
<b>Ignition temperature:</b>	not applicable
<b>Decomposition temperature:</b>	Not determined.
<b>pH</b>	Not determined.
<b>Viscosity:</b>	
<b>Kinematic viscosity at 20 °C dynamic:</b>	12 s (DIN 53211/4) Not determined.

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<b>Solubility</b>	
<b>Water:</b>	Partially soluble
<b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
<b>Vapour pressure:</b>	Not determined.
<b>Density and/or relative density</b>	
<b>Density at 20 °C:</b>	0.98 g/cm <sup>3</sup> (Aräometer)
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>9.2 Other information</b>	
	Explosibility limit for released ethanol: 3,5 - 15 Vol.-%
<b>Appearance:</b>	
<b>Form:</b>	Fluid
<b>Important information on protection of health and environment, and on safety.</b>	
<b>Explosive properties:</b>	Product is not explosive. However, formation of dangerous explosive vapour/air mixtures is possible.
<b>Solvent separation test</b>	< 3 %
<b>Organic solvents:</b>	0.4 %
<b>Change in condition</b>	
<b>Evaporation rate</b>	Not determined.
<b>Information with regard to physical hazard classes</b>	
<b>Explosives</b>	Void
<b>Flammable gases</b>	Void
<b>Aerosols</b>	Void
<b>Oxidising gases</b>	Void
<b>Gases under pressure</b>	Void
<b>Flammable liquids</b>	Flammable liquid and vapour.
<b>Flammable solids</b>	Void
<b>Self-reactive substances and mixtures</b>	Void
<b>Pyrophoric liquids</b>	Void
<b>Pyrophoric solids</b>	Void
<b>Self-heating substances and mixtures</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
<b>Oxidising liquids</b>	Void
<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

## SECTION 10: Stability and reactivity

**10.1 Reactivity** No further relevant information available.

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

No decomposition if handled and stored according to specifications.

### 10.3 Possibility of hazardous reactions

Reacts with water in the presence of alkaline materials or acids by forming ethanol.

Used empty containers may contain product gases which form explosive mixtures with air

Forms explosive gases / fumes

Develops readily flammable gases / vapours

**10.4 Conditions to avoid** No further relevant information available.

### 10.5 Incompatible materials:

Acids

Bases

### 10.6 Hazardous decomposition products:

None if used properly.

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None if stored properly.

## \* SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity:** Based on available data, the classification criteria are not met.

#### LD/LC50 values that are relevant for classification:

**CAS: 78-10-4 tetraethyl silicate**

Oral	LD50	>2,500 mg/kg (rat)
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**Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation:** Causes serious eye irritation.

**Sensitisation:** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

**Carcinogenicity:** Based on available data, the classification criteria are not met.

**Reproductive toxicity:** Based on available data, the classification criteria are not met.

**STOT-single exposure:** May cause respiratory irritation.

**STOT-repeated exposure:** Based on available data, the classification criteria are not met.

**Aspiration hazard:** Based on available data, the classification criteria are not met.

### 11.2 Information on other hazards

#### Endocrine disrupting properties

None of the ingredients is listed.

## \* SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity:

**CAS: 78-10-4 tetraethyl silicate**

EC50/48h	>75 mg/l (Daphnia magna)
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**12.2 Persistence and degradability** No further relevant information available.

**Other information:** Silicone component: reacts with water forming silicate acid and ethanol.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

#### 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

#### 12.7 Other adverse effects

#### Additional ecological information:

#### General notes:

Do not allow product to reach ground water, bodies of water or sewage system.

Do not allow undiluted or larger quantities of the product to reach ground water, bodies fo water or sewage system.

## SECTION 13: Disposal considerations

### Recommendation

The given refuse codes are recommendations based upon the intended use of the product. Because of special use and disposal conditions at the user's, other codes may apply under other conditions.

#### European waste catalogue

17 01 06*	mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances
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#### Uncleaned packaging:

#### Recommendation:

Disposal must be made according to official regulations.

Packaging can be reused or recycled after cleaning.

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SECTION 14: Transport information	
<b>14.1 UN number or ID number</b> ADR, IMDG, IATA	UN1292
<b>14.2 UN proper shipping name</b> ADR IMDG, IATA	1292 TETRAETHYL SILICATE TETRAETHYL SILICATE
<b>14.3 Transport hazard class(es)</b> ADR	
	
<b>Class</b>	3 (F1) Flammable liquids.
<b>Label</b>	3
IMDG, IATA	
	
<b>Class</b>	3 Flammable liquids.
<b>Label</b>	3
<b>14.4 Packing group</b> ADR, IMDG, IATA	III
<b>14.5 Environmental hazards:</b> Marine pollutant:	No
<b>14.6 Special precautions for user</b> hazard identification number: EMS Number: Stowage Category	Warning: Flammable liquids. 30 F-E,S-D A
<b>14.7 Maritime transport in bulk according to</b> IMO instruments	Not applicable.
<b>Transport/Additional information:</b>	
ADR	
<b>Limited quantities (LQ)</b>	5L
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>Transport category</b>	3
<b>Tunnel restriction code</b>	D/E
IMDG	
<b>Limited quantities (LQ)</b>	5L
<b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<b>UN "Model Regulation":</b>	UN 1292 TETRAETHYL SILICATE, 3, III

## SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

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**Seveso category** P5c FLAMMABLE LIQUIDS**Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t**Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

<b>DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II</b>
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None of the ingredients is listed.
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**REGULATION (EU) 2019/1148**

<b>Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))</b>
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None of the ingredients is listed.
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<b>Annex II - REPORTABLE EXPLOSIVES PRECURSORS</b>
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None of the ingredients is listed.
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**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

<b>SECTION 16: Other information</b>
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This data is based on our present state of knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship. Delivery specifications are found in the respective Technical Information Sheets.

**Relevant phrases**

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

**Classification according to Regulation (EC) No 1272/2008** Calculation method**Department issuing data specification sheet:** Product Safety department / EHS**Date of previous version:** 12.06.2018**Version number of previous version:** 3**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3