

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.07.2017

Version number 4

Revision: 27.07.2017

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

1.1 Product identifier

Trade name KSE 510**Article number:** 0625

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 Additive**Uses advised against** No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Remmers GmbH
Postfach 1255
D-49624 Lönningen / Germany
Tel.: +49(0)5432/83-0
Fax: +49(0)5432/3985

Remmers (UK) Limited
Unit B1 The Fleming Centre
West Sussex RH10 9NN
fon +44 (0) 1293 594 010
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Informing department:

Product Safety department: Tel.: Steve Dunn Tel.: +44 (0) 1293 594 010
E-Mail: sales@remmers.co.uk

1.4 Emergency telephone number:

during working hours:

U.K.: Tel.: +44 (0) 1293 594 010

sales@remmers.co.uk

Head Office Germany: Tel.: +49 (0)5432 83 187

info@remmers.de

after working hours: Tel.: +49 (0)171 21 34 091

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 CLP regulation.

Hazard pictograms

GHS02 GHS07

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

tetraethyl orthosilicate

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Hazard statements

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

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

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.

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 Chemical characterisation: Mixtures****Description:** Mixture of the substances listed below with harmless additions.

| Dangerous components: | | |
|--------------------------------|---|--------|
| CAS: 78-10-4 | tetraethyl orthosilicate | 20-40% |
| EINECS: 201-083-8 | Flam. Liq. 3, H226; Acute Tox. 4, H332; Eye Irrit. 2, | |
| Index number: 014-005-00-0 | H319; STOT SE 3, H335 | |
| Reg.nr.: 01-2119496195-28-XXXX | | |

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****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.

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**

Alcohol-resistant foam

Carbon dioxide

Fire-extinguishing powder

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.

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.**Additional information** Cool endangered containers with water spray jet.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Keep away from ignition sources

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions: Do not allow to enter the ground/soil.

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

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.

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:

Protect from humidity and keep away from water.

Store container in a well ventilated position.

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

Keep container tightly closed.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with limit values that have to be monitored at the workplace.

Additional information: The lists that were valid during compilation were used as a basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

Do not eat, drink or smoke while working.

Use skin protection cream for preventive skin protection.

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.

Respiratory equipment:

Use respiratory protection only when aerosol or mist is formed.

Short term filter device:

Filter A/P2.

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.

Protection of hands:

Protective gloves.

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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

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 374 part III 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 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****Appearance:**

| | |
|-------------------------|-----------------|
| Form: | Fluid |
| Colour: | Yellowish |
| Odour: | Type specific |
| Odour threshold: | Not determined. |

pH-value: Not determined.

Change in condition

| | |
|---|----------------|
| Melting point/freezing point: | Not determined |
| Initial boiling point and boiling range: | 170 °C |

Flash point: 47 °C (Abel-Pensky 20 ml/)

Inflammability (solid, gaseous) Not applicable.

Ignition temperature: 230 °C
230 °C

Decomposition temperature: Not determined.

Self-inflammability: Product is not self-igniting.

Explosive properties: Product is not explosive. However, formation of dangerous explosive vapour/air mixtures is possible.

Explosive Limits:

| | |
|---------------|------------|
| Lower: | 1.3 Vol % |
| Upper: | 23.0 Vol % |

Vapour pressure at 20 °C: 1.7 hPa

Density at 20 °C 1.02 g/cm³ (Aräometer 20 ml/)

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with

Water: Not miscible or difficult to mix

Distribution coefficient (n-octanol/water): Not determined.

Viscosity:

| | |
|----------------------------|--------------------|
| dynamic: | Not determined. |
| kinematic at 20 °C: | 20 s (DIN 53211/4) |

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| | |
|--------------------------------|--|
| Solvent separation test | < 3 % |
| Organic solvents: | 0.9 % |
| VOC EU | 9.5 g/l |
| 9.2 Other information | No further relevant information available. |

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

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

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

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products:

None if used properly.

None if stored properly.

* SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

| | | |
|---|----------|-----------------|
| LD/LC50 values that are relevant for classification: | | |
| ATE (Acute Toxicity Estimates) | | |
| Inhalative | LC50/4 h | 71.7 mg/l (rat) |

| | | |
|--|----------|----------------|
| CAS: 78-10-4 tetraethyl orthosilicate | | |
| Inhalative | LC50/4 h | <20 mg/l (rat) |

Skin corrosion/irritation: Dries skin out.

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.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability By hydrolysis: silicic acid and ethanol

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

Additional ecological information:

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

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

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* 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 | |
|--------------------------|--------------------------------|
| 06 08 99 | wastes not otherwise specified |



Uncleaned packaging:

Recommendation:

Disposal must be made according to official regulations.

Packaging can be reused or recycled after cleaning.

SECTION 14: Transport information

| | |
|---|--|
| 14.1 UN-Number | |
| ADR, IMDG, IATA | UN1292 |
| 14.2 UN proper shipping name | |
| ADR | 1292 TETRAETHYL SILICATE |
| IMDG, IATA | TETRAETHYL SILICATE |
| 14.3 Transport hazard class(es) | |
| ADR | |
|  | |
| Class | 3 (F1) Flammable liquids. |
| Label | 3 |
| ----- | |
| IMDG, IATA | |
|  | |
| Class | 3 Flammable liquids. |
| Label | 3 |
| 14.4 Packing group | |
| ADR, IMDG, IATA | III |
| 14.5 Environmental hazards: | |
| Marine pollutant: | - No |
| 14.6 Special precautions for user | |
| Kemler Number: | Warning: Flammable liquids. 30 |
| EMS Number: | F-E,S-D |
| Stowage Category | A |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | |
| Not applicable. | |
| Transport/Additional information: | |
| ----- | |
| ADR | |
| Limited quantities (LQ) | 5L |
| Excepted quantities (EQ) | Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| Transport category | 3 |
| Tunnel restriction code | D/E |

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| | |
|---------------------------------|---|
| IMDG | |
| Limited quantities (LQ) | 5L |
| Excepted quantities (EQ) | Code: E1 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 1000 ml |
| UN "Model Regulation": | 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.

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

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Delivery specifications are found in the respective Technical Information Sheets.

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.

Relevant phrases

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

Department issuing data specification sheet: Product Safety department / EHS

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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. 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