Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.12.2022 Version number 5 (replaces version 4) Revision: 06.12.2022

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

1.1 Product identifier

Trade name KSE 500 E

Article number: 0715

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 Löningen / 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

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 2 H225 Highly flammable liquid and vapour.
Eye Irrit. 2 H319 Causes serious eye 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 Danger
Hazard statements
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
Precautionary statements

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.

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P240	Ground and bond container and receiving equipment.
P243	Take action to prevent static discharges.
P280	Wear eye protection / face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
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.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture of the substances listed below with harmless additions.

Dangerous components [% w/w]:		
CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43-XXXX	ethanol Flam. Liq. 2, H225; Eye Irrit. 2, H319	≥10-<20%
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	≥10-<20%
CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5	ethanol Flam. Liq. 2, H225	≥0.5-≤1%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg.nr.: 01-2119457290-43-XXXX	butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	0.1-≤0.25%

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
Aspiration risk!
Administer medicinal carbon
Seek immediate medical advice.
4.2 Most important symptoms and effects, both acute and delayed
In case of prolonged/repeated exposure or in high concentrations:
Headache
Dizziness
nausea
anaesthetic effect
Skin contact may cause irritation.
May cause irritation of the eyes.
Inhalation may have an irritating effect on mucous membranes.
Danger Long-term or repeated exposure may cause inflammation of the skin (dermatitis).

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4.3 Indication of any immediate medical attention and special treatment needed
Allow to inhale cortison spray as soon as possible.
To avoid dermatitis (skin inflammation), use skin cream.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents
Water spray jet
Fire-extinguishing powder
Alcohol-resistant foam
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.
Carbon monoxide (CO)
Carbon dioxide
tin oxide
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
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.
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
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:
Prevent any penetration into the ground.
Store in cool location.
Information on storage in a common storage facility: Store away from oxidising agents.
Further information about storage conditions:
Protect from humidity and keep away from water.
Store container in a well ventilated position.
Protect from frost.
Do not smoke in storage areas. Storage temperature: room temperature.

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Keep container tightly closed.
Store cool and dry in tightly closed containers.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:	
CAS: 64-17-5 ethanol	
WEL	Long-term value: 1920 mg/m³, 1000 ppm
CAS: 78-10-4 tetraethyl silicate	
WEL	Long-term value: 44 mg/m³, 5 ppm
CAS: 64-17-5 ethanol	
WEL	Long-term value: 1920 mg/m³, 1000 ppm
CAS: 78-93-3 butanone	
WEL	Short-term value: 899 mg/m³, 300 ppm Long-term value: 600 mg/m³, 200 ppm Sk, BMGV

Ingredients with biological limit values:	
CAS: 78-93-3 butanone	
BMGV	70 µmol/L Medium: urine Sampling time: post shift Parameter: butan-2-one

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

8.2 Exposure controls
Appropriate engineering controls Use only in well-ventilated areas.
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 evalutated 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 euiqment is not required or the amount of the PPE can be adpated accordingly.
Respiratory equipment:
Respiratory protection if there is a risk of splashes/mist.
Filter A/P2.
Hand protection
Impervious gloves
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
PVC gloves
Chloroprene rubber, CR
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.

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The exact break trough 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.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Physical state	Fluid
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	>100 °C
Flammability	Highly flammable.
Lower and upper explosion limit	
Lower:	1.3 Vol % (Ethanol)
Upper:	23 Vol % (Ethanol)
Flash point:	15 °C (Setaflash)
Ignition temperature:	320 °C
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity at 20 °C	11 s (DIN 53211/4)
dynamic:	Not determined.
Solubility	
Water:	Not miscible or difficult to mix
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	57 hPa
Density and/or relative density	
Density at 20 °C:	1.01 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information	
Appearance:	
Form:	Liquid
Important information on protection of health and environment, and on safety.	
Explosive properties:	Product is not explosive. However, formation of dangerous explosive vapour/air mixtures is possible.
Solvent separation test	< 3 %
Solvent content:	16.62 %
Organic solvents:	16.7 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Highly flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void

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Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	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.
Avoid: heat, flames, sparks
10.3 Possibility of hazardous reactions
Used empty containers may contain product gases which form explosive mixtures with air
Reacts with oxidising agents
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials: oxidising agent
10.6 Hazardous decomposition products:
None if used properly.
None if stored properly.
May be released in fire:
Poisonous gases/vapours

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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: 64-17-5 ethanol		
Oral	LD50	7,060 mg/kg (rat)
Inhalative	LC50/4 h	20,000 mg/l (rat)
CAS: 78-10-4 tetraethyl silicate		
Oral	LD50	>2,500 mg/kg (rat)

Skin corrosion/irritation:
Dries skin out.
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: Based on available data, the classification criteria are not met.
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.

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SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:	
CAS: 78-10-4 tetraethyl silicate	
EC50/48h	>75 mg/l (Daphnia magna)

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.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Endocrine disrupting properties
For information on endocrine disrupting properties see section 11.
12.7 Other adverse effects
Additional ecological information:
General notes: Do not allow product to reach ground water, bodies of water or sewage system.

SECTION 13: Disposal considerations

Recommendation
Add water to gelled product remains and allow to react. Solid silica gel can be added to building rubble refuse.
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 01	concrete

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 or ID number
ADR, IMDG, IATA UN1993

14.2 UN proper shipping name
ADR 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))
IMDG FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))
IATA FLAMMABLE LIQUID, N.O.S. (ETHANOL)

14.3 Transport hazard class(es)

ADR

Class 3 (F1) Flammable liquids.
Label 3

IMDG, IATA

Class 3 Flammable liquids.

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Label	3
14.4 Packing group **ADR, IMDG, IATA**	II
14.5 Environmental hazards: **Marine pollutant:**	- No
14.6 Special precautions for user **hazard identification number:** **EMS Number:** **Stowage Category**	Warning: Flammable liquids. 33 F-E,S-E B
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
Transport category	2
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, II

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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

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))
None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS
None of the ingredients is listed.

National regulations

Information on employment restrictions:
Employment restrictions concerning young persons must be observed.
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

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.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.
Classification according to Regulation (EC) No 1272/2008 Calculation method

Department issuing data specification sheet: Product Safety department / EHS
Date of previous version: 11.06.2018
Version number of previous version: 4
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