

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.12.2022

Version number 8 (replaces version 7)

Revision: 07.12.2022

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

1.1 Product identifier

Trade name **Kiesol iK****Article number:** 1813

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 Protective impregnation

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. 2 H225 Highly flammable liquid and vapour.

Acute Tox. 4 H332 Harmful if inhaled.

Eye Dam. 1 H318 Causes serious eye damage.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

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 GHS05 GHS07 GHS08

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine
trimethoxy(methyl)silane
N,N'-bis(3-(trimethylsiloxy)propyl)-1,2-ethanediamine

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oligomers of (ethylenediaminopropyl) trimethoxysilane
ethylenediamine

N,N-bis(3-(trimethylsiloxy)propyl)-1,2-ethanediamine

Hazard statements

H225 Highly flammable liquid and vapour.

H332 Harmful if inhaled.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

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

Precautionary statements

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

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P362+P364 Take off contaminated clothing and wash it before reuse.

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

Dangerous components [% w/w]:		
CAS: 1760-24-3 EINECS: 217-164-6	N-(3-(trimethoxysilyl)propyl)ethylenediamine STOT RE 2, H373; Eye Dam. 1, H318; Acute Tox. 4, H332; Skin Sens. 1, H317	≥50-≤70%
CAS: 1185-55-3 EINECS: 214-685-0 Reg.nr.: 01-2119517436-40-XXXX	trimethoxy(methyl)silane Flam. Liq. 2, H225; Skin Sens. 1, H317	≥30-<40%
CAS: 68845-16-9 EINECS: 272-453-4	N,N'-bis(3-(trimethylsiloxy)propyl)-1,2-ethanediamine Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	≥3-<5%
	oligomers of (ethylenediaminopropyl) trimethoxysilane STOT RE 2, H373; Eye Dam. 1, H318; Acute Tox. 4, H332; Skin Sens. 1, H317	≥1-<2.5%
CAS: 74956-86-8 EC number: 695-749-9	N,N-bis(3-(trimethylsiloxy)propyl)-1,2-ethanediamine Eye Dam. 1, H318; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	≥1-<2.5%
CAS: 67-56-1 EINECS: 200-659-6 Index number: 603-001-00-X Reg.nr.: 01-2119433307-44-XXXX	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 Specific concentration limits: STOT SE 1; H370: C ≥10 % STOT SE 2; H371: 3 % ≤ C < 10 %	≥0.5-≤1%
CAS: 107-15-3 EINECS: 203-468-6 Index number: 612-006-00-6	ethylenediamine Flam. Liq. 3, H226; Acute Tox. 3, H311; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥0.5-<1%

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Trade name **Kiesol iK**

CAS: 1112-39-6 EINECS: 214-189-4 Reg.nr.: 01-2119976290-35-XXXX	Dimethoxydimethylsilan Flam. Liq. 2, H225; Repr. 2, H361f	(Contd. of page 2) ≥0.25-≤0.5%
CAS: 23410-40-4 EINECS: 245-642-4	N-[3-(dimethoxymethylsilyl)-2-methylpropyl] ethylenediamine Eye Dam. 1, H318; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Sens. 1, H317	≥0.1-<0.25%

SVHC	
CAS: 107-15-3	ethylenediamine

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

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation

Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

After skin contact

Call a doctor immediately.

Wash immediately with water and soap and rinse thoroughly.

After eye contact Rinse opened eye for several minutes under running water. Then 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

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

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.

Put on breathing apparatus.

Additional information Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

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

Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up:

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

Use neutralising agent.

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.

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See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes.
Ensure good ventilation/exhaust in workplaces.
Avoid the formation of aerosols.

Information about protection against explosions and fires:

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: Store in cool location.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

CAS: 67-56-1 methanol

WEL	Short-term value: 333 mg/m ³ , 250 ppm
	Long-term value: 266 mg/m ³ , 200 ppm
	Sk

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.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures

Keep away from food, beverages and animal feed.
Immediately remove soiled, saturated clothing.
Wash hands before pauses and after work.

Store protective clothing separately.

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 a risk of inhaling, wear half-mask with combination filter for organic vapours and particles.
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.

Hand protection

Impervious gloves
Long cuffed 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

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.

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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 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.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information**

Physical state	Fluid
Colour:	Yellowish
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	Not determined
Flammability	Highly flammable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	18 °C
Ignition temperature:	not applicable
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity at 20 °C	10 s (DIN 53211/4)
dynamic:	Not determined.
Solubility	
Water:	Fully miscible
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	1 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information

Appearance:	
Form:	Fluid
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 %
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

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Pyrophoric liquids	Void
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.

10.3 Possibility of hazardous reactions Reacts with water to form alcohol.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: Strong oxidising agents

10.6 Hazardous decomposition products: Small quantities of formaldehyde may be split off.

* SECTION 11: Toxicological information

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

Acute toxicity: Harmful if inhaled.

LD/LC50 values that are relevant for classification: No further relevant information available.

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

Serious eye damage/irritation: Causes serious eye damage.

Sensitisation: May cause an allergic skin reaction.

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: May cause damage to organs through prolonged or repeated exposure.

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: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

Other information: By hydrolysis: methanol and silanol and/or siloxanol compounds.

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 undiluted or non-neutralised product to reach the sewage system or receiving waters.

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

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

SECTION 13: Disposal considerations

Recommendation

Must be specially treated in compliance with official regulations.

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

07 04 04*	other organic solvents, washing liquids and mother liquors
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Uncleaned packaging:**Recommendation:**

Disposal must be made according to official regulations.

Packaging can be reused or recycled after cleaning.

Recommended cleaning agent: Water, if necessary with cleaning agent.

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. (trimethoxy(methyl)silane)
IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (trimethoxy(methyl)silane)
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	II
14.5 Environmental hazards: Marine pollutant:	Yes
14.6 Special precautions for user hazard identification number: EMS Number: Stowage Category	Warning: Flammable liquids. 33 F-E, <u>S-E</u> B
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.

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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. (TRIMETHOXY(METHYL)SILANE), 3, II

* 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, 69

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

Substances of very high concern (SVHC) according to UK REACH

CAS: 107-15-3 | ethylenediamine

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

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.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H331 Toxic if inhaled.

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H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H361f Suspected of damaging fertility.

H370 Causes damage to organs.

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

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Classification according to Regulation (EC) No 1272/2008 Calculation method**Department issuing data specification sheet:** Product Safety department / EHS**Date of previous version:** 12.07.2019**Version number of previous version:** 7**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. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Repr. 2: Reproductive toxicity – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3