



**Safety data sheet
according to 1907/2006/EC, Article 31**

Printing date 17.11.2022

Version number 4 (replaces version 3)

Revision: 17.11.2022

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

· **1.1 Product identifier**

· Trade name: **Xantopren function Hardener 1 Plus**

· **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** Activator for dental impression material

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

· **Informing department:** E-Mail: msds@kulzer-dental.com

· **1.4 Emergency telephone number:** Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

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.

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

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:**

Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid tetraethyl orthosilicate

· **Hazard statements**

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

· **Precautionary statements**

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

· **2.3 Other hazards -**

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- **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:** -

· **Dangerous components:**

CAS: 78-10-4 EINECS: 201-083-8 Reg.nr.: 01-2119496195-28-0003	tetraethyl orthosilicate Flam. Liq. 3, H226 Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	50-75%
ELINCS: 477-470-2 Reg.nr.: 01-0000019944-59-XXXX	Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid Flam. Liq. 2, H225 Skin Sens. 1B, H317	25-50%

· **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** Supply fresh air; consult doctor in case of symptoms.

· **After skin contact** If skin irritation continues, consult a doctor.

· **After eye contact**

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

· **After swallowing**

Rinse out mouth and then drink plenty of water.

Drink copious amounts of water and provide fresh air. Instantly call for doctor.

· **4.2 Most important symptoms and effects, both acute and delayed** Allergic reactions

· **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.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· **5.2 Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures.

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

· **5.3 Advice for firefighters**

· **Protective equipment:** Put on breathing apparatus.

· **Additional information** -

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:**

Do not allow to enter drainage system, surface or ground water.

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Do not allow to enter the ground/soil.

Prevent material from reaching sewage system, holes and cellars.

- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
Send for recovery or disposal in suitable containers.
Dispose of contaminated material as waste according to item 13.

- **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.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Wear protective equipment. Keep unprotected persons away.
Please observe the additional instructions in the product's instructions for use.
Keep containers tightly sealed.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
 - **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
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 about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Store container in a well ventilated position.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

· **Components with critical values that require monitoring at the workplace:**

78-10-4 tetraethyl orthosilicate

WEL (Great Britain) Long-term value: 44 mg/m³, 5 ppm

IOELV (European Union) Long-term value: 44 mg/m³, 5 ppm

· **DNELs**

78-10-4 tetraethyl orthosilicate

Dermal	worker industrial, acute, systemic	12.1 mg/Kg/d (human)
	worker industrial, long term, systemic	12.1 mg/Kg/d (human)
	general population, acute, systemic	8.4 mg/Kg/d (human)
	general population, long term, systemic	8.4 mg/Kg/d (human)
Inhalative	worker industrial, acute, systemic	85 mg/m ³ (human)
	worker industrial, long term, systemic	85 mg/m ³ (human)
	general population, long term, systemic	25 mg/m ³ (human)

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Sulfonic acids, C10-21-alkane, Ph esters

Oral	general population, acute, systemic	26.37 mg/Kg (not defined)
	general population, long term, systemic	0.47 mg/Kg (not defined)
Dermal	worker industrial, acute, systemic	52.75 mg/Kg/d (not defined)
	worker industrial, long term, systemic	0.93 mg/Kg/d (not defined)
Inhalative	general population, acute, systemic	26.37 mg/Kg/d (not defined)
	general population, long term, systemic	0.47 mg/Kg/d (not defined)
	worker industrial, acute, systemic	84.8 mg/m3 (not defined)
	worker industrial, long term, systemic	6.5 mg/m3 (not defined)
	general population, acute, systemic	21.28 mg/m3 (not defined)
	general population, long term, systemic	1.64 mg/m3 (not defined)

· **PNECs**

78-10-4 tetraethyl orthosilicate

freshwater	0.192 mg/l (aqua)
marine water	0.0192 mg/l (aqua)
intermediate water release	10 mg/l (aqua)
sediment, dry weight, freshwater	0.18 mg/Kg (sediment)
soil, dry weight	0.05 mg/Kg (soil)

· **Additional information:** The lists that were valid during the compilation were used as 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**

Avoid contact with the eyes.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Hand protection**

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

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.

Check protective gloves prior to each use for their proper condition.

recommended

· **Material of gloves**

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

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- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
 - Butyl rubber, BR
 - Nitrile rubber, NBR
- **Eye/face protection** Tightly sealed safety glasses.
- **Body protection:** Light weight protective clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

- **Physical state** Fluid
- **Colour:** Red
- **Smell:** Aromatic
 - **Odour threshold:** Not determined.
- **Melting point/freezing point:** Not determined
- **Boiling point or initial boiling point and boiling range** 110 °C
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
 - **Lower:** 1.3 Vol %
 - **Upper:** 23 Vol %
- **Flash point:** >48 °C
- **Ignition temperature:** 234 °C
- **Decomposition temperature:** Not determined.
- **SADT** Not determined.
- **pH** Not determined.
- **Viscosity:**
 - **Kinematic viscosity** Not determined.
 - **dynamic:** Not determined.
- **Solubility**
 - **Water:** Not miscible or difficult to mix
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Steam pressure at 20 °C:** 1.7 hPa
- **Density and/or relative density**
 - **Density at 20 °C** 1.03 g/cm³
 - **Relative density** Not determined.
 - **Vapour density** Not determined.

9.2 Other information

No further relevant information available.

- **Appearance:**
 - **Form:** Liquid
- **Important information on protection of health and environment, and on safety.**
 - **Self-inflammability:** Product is not selfigniting.
 - **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
- **Solvent content:**
 - **Solids content:** 12.9 %
- **Change in condition**
 - **Evaporation rate** Not determined.

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Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids Flammable liquid and vapour.	
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· 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**
 - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **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
 - **Additional information:** -

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:

78-10-4 tetraethyl orthosilicate

Oral LD50 6,270 mg/kg (rat)

Dermal LD50 5,878 mg/kg (can)

Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid

Oral LD50 >2,000 mg/kg (not defined)

Sulfonic acids, C10-21-alkane, Ph esters

Oral LD50 >15,900 mg/kg (rat)

Dermal LD50 >2,000 mg/kg (rat)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.

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- **Respiratory or skin 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**

Sulfonic acids, C10-21-alkane, Ph esters

Oral NOAEL(C) 3,000 mg/kg (rat)

- **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:**

78-10-4 tetraethyl orthosilicate

EC50/48h >844 mg/l (daphnia)

Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid

EC50/72h >100 mg/l (algae)

EC50/48h >100 mg/l (daphnia) (OECD 201)

· **12.2 Persistence and degradability**

Sulfonic acids, C10-21-alkane, Ph esters

Biodegradation 61 % (not defined)

· **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:** Avoid transfer into the environment.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

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- **Uncleaned packagings:**
- **Recommendation:**
Disposal must be made according to official regulations.
Non contaminated packagings can be used for recycling.

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	UN1993
· 14.2 UN proper shipping name · ADR · IMDG, IATA	1993 FLAMMABLE LIQUID, N.O.S. (Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid, TETRAETHYL SILICATE) FLAMMABLE LIQUID, N.O.S. (Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid, TETRAETHYL SILICATE)
· 14.3 Transport hazard class(es) · ADR  · Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA  · Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user · Kemler Number: · EMS Number: · Stowage Category	Warning: Flammable liquids. 30 F-E, S-E A
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	-

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· **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

· **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 1993 FLAMMABLE LIQUID, N.O.S.
(REACTION PRODUCT OF
TETRAETHOXYSILANE, ALKYLATED
POLYSILICATE, DIOCTYL TIN OXIDE AND
BENZOIC ACID, 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**
 - **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
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.

· **Abbreviations and acronyms:**

- SADT: Self Accelerating Decomposition Temperature
- 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)
- DNEL: Derived No-Effect Level (UK REACH)

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PNEC: Predicted No-Effect Concentration (UK REACH)
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
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
*** Data compared to the previous version altered.**

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

· **1.1 Product identifier**

· Trade name: **Xantopren function Hardener 2 Plus**

· **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** Activator for dental impression material

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

· **Informing department:** E-Mail: msds@kulzer-dental.com

· **1.4 Emergency telephone number:** Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

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.

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

· **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:**

Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid

· **Hazard statements**

H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

· **Precautionary statements**

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P403+P235 Store in a well-ventilated place. Keep cool.

· **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:** Activator for use with condensation curing silicone-based impression materials

· **Dangerous components:**

ELINCS: 477-470-2 Reg.nr.: 01-0000019944-59-XXXX	Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid Flam. Liq. 2, H225 Skin Sens. 1B, H317	10-25%
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· **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** Supply fresh air; consult doctor in case of symptoms.

· **After skin contact** If skin irritation continues, consult a doctor.

· **After eye contact**

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

· **After swallowing**

Rinse out mouth and then drink plenty of water.

In case of persistent symptoms consult doctor.

Seek immediate medical advice.

· **4.2 Most important symptoms and effects, both acute and delayed** Allergic reactions

· **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.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· **5.2 Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures.

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

· **5.3 Advice for firefighters**

· **Protective equipment:** No special measures required.

· **Additional information** -

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:**

Do not allow to enter drainage system, surface or ground water.

Do not allow to enter the ground/soil.

Prevent material from reaching sewage system, holes and cellars.

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

Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).

Dispose of contaminated material as waste according to item 13.

Send for recovery or disposal in suitable containers.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling

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See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

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SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Wear protective equipment. Keep unprotected persons away.
Please observe the additional instructions in the product's instructions for use.
Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

· 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: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.

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

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Components with critical values that require monitoring at the workplace:

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

· DNELs

110-27-0 isopropyl myristate

Oral	general population, long term, systemic	1.6 mg/Kg (not defined)
Dermal	worker industrial, long term, systemic	33 mg/Kg/d (not defined)
	general population, long term, systemic	16 mg/Kg/d (not defined)
Inhalative	worker industrial, long term, systemic	23.5 mg/m ³ (not defined)
	general population, long term, systemic	5.79 mg/m ³ (not defined)

· PNECs

110-27-0 isopropyl myristate

sediment, dry weight, freshwater	1.44 mg/Kg (sediment)
sediment, dry weight, marine water	1.44 mg/Kg (sediment)
soil, dry weight	20 mg/Kg (soil)

· Additional information: The lists that were valid during the compilation were used as 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

Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Do not inhale gases / fumes / aerosols.

· Breathing equipment: Not required.

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· **Hand protection**

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

If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.

Check protective gloves prior to each use for their proper condition.
recommended

· **Material of gloves**

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

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

Nitrile rubber, NBR

· **Eye/face protection** Tightly sealed safety glasses.

· **Body protection:** Light weight protective clothing

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Physical state**

Fluid

· **Colour:**

Light yellow

· **Smell:**

Aromatic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Not determined

· **Boiling point or initial boiling point and boiling range**

>110 °C

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

>48 °C

· **Decomposition temperature:**

Not determined.

· **SADT**

· **pH**

Not determined.

· **Viscosity:**

· **Kinematic viscosity**

Not determined.

· **dynamic:**

Not determined.

· **Solubility**

· **Water:**

Not miscible or difficult to mix

· **Partition coefficient n-octanol/water (log value)**

Not determined.

· **Steam pressure:**

Not determined.

· **Density and/or relative density**

· **Density at 20 °C**

0.92 g/cm³

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· Relative density	Not determined.
· Vapour density	Not determined.
· 9.2 Other information	No further relevant information available.
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· Solvent content:	
· Solids content:	9.9 %
· 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	
· Flammable liquid and vapour.	
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· 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**
 - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **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
 - **Additional information:** -

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.

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· LD/LC50 values that are relevant for classification:

110-27-0 isopropyl myristate

Oral	LD50	>10000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin 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** 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:

110-27-0 isopropyl myristate

EC50/48h	>100 mg/l (daphnia) (OECD 202)
IC 50/ 72h	>100 mg/l (algae) (OECD 201)
LC50 / 96h	8400 mg/l (fish)
EC0 / 30 min	>10000 mg/l (bacteria) (OECD 209)

Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid

EC50/72h	>100 mg/l (algae)
EC50/48h	>100 mg/l (daphnia) (OECD 201)

- **12.2 Persistence and degradability** No further relevant information available.
- **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:** Avoid transfer into the environment.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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Disposal must be made according to official regulations.

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· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.
Non contaminated packagings can be used for recycling.

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. (Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid)
FLAMMABLE LIQUID, N.O.S. (Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid)

· IMDG, IATA

· **14.3 Transport hazard class(es)**

· ADR



· Class
· Label

3 (F1) Flammable liquids.
3

· IMDG, IATA



· Class
· Label

3 Flammable liquids.
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.

· EMS Number:

30

· Stowage Category

F-E, S-E

A

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**

-

· ADR

· Limited quantities (LQ)

· Excepted quantities (EQ)

5L

Code: E1

Maximum net quantity per inner packaging:

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	30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
<hr/>	
· 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 1993 FLAMMABLE LIQUID, N.O.S. (REACTION PRODUCT OF TETRAETHOXYSilANE, ALKYLATED POLYSILICATE, DIOCTYLtin OXIDE AND BENZOIC ACID), 3, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Directive 2012/18/EU**
 - **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**
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H317 May cause an allergic skin reaction.

· **Abbreviations and acronyms:**

SADT: Self Accelerating Decomposition Temperature

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)

DNEL: Derived No-Effect Level (UK REACH)

PNEC: Predicted No-Effect Concentration (UK REACH)

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

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

- *** Data compared to the previous version altered.**