



**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 11/30/2022

Reviewed on 11/30/2022

## 1 Identification

· **Product identifier**

· **Trade name:** **Cuttersil Universal Plus Liquid Hardener**

· -

· **Application of the substance / the mixture** Activator for dental impression material

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

· **Manufacturer/Supplier:**

Kulzer GmbH

Leipziger Straße 2, 63450 Hanau (Germany)

Tel.: +49 (0)800 4372522

· **Information department:**

Tel. +1 (800) 431-1785 Fax: +1 (800) 522-1545

e-mail: [customer.servicehkna@kulzer-dental.com](mailto:customer.servicehkna@kulzer-dental.com)

· **Emergency telephone number:**

Emergency CONTACT (24-Hour-Number)

ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

## 2 Hazard(s) identification

· **Classification of the substance or mixture**

Flammable Liquids 2 H225 Highly flammable liquid and vapor.

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

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

· **Hazard statements**

Highly flammable liquid and vapor.

May cause an allergic skin reaction.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

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Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system**

· **NFPA ratings for USA (scale 0-4)**



Health = 0  
Fire = 3  
Reactivity = 0

· **HMIS-Ratings (Scale 0-4)**



Health = 1  
Fire = 3  
Reactivity = 0

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** -

· **Dangerous components:**

|  |      |
|--|------|
| Reaction product of tetraethoxysilane, alkylated polysilicate, dioctyltin oxide and benzoic acid | >90% |
| Flammable Liquids 2, H225  |      |
| Sensitization - Skin 1B, H317  |      |

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

· **Description of first aid measures**

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**  
Immediately rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**  
Rinse out mouth and then drink plenty of water.  
If symptoms persist consult doctor.
- **Information for doctor**
  - **Most important symptoms and effects, both acute and delayed** Allergic reactions
  - **Indication of any immediate medical attention and special treatment needed**No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**

- **Suitable extinguishing agents**  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.  
Alcohol resistant foam

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- **For safety reasons unsuitable extinguishing agents** Water.
- **Special hazards arising from the substance or mixture**  
Can form explosive gas-air mixtures.  
Carbon monoxide (CO)  
Carbon dioxide (CO<sub>2</sub>)  
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
  - **Protective equipment:** No special measures required.
- **Additional information** -

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Do not allow to enter sewers/ surface or ground water.  
Do not allow to penetrate the ground/soil.
- **Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Send for recovery or disposal in suitable receptacles.
- **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 disposal information.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

None of the ingredients is listed.

- **PAC-2:**

None of the ingredients is listed.

- **PAC-3:**

None of the ingredients is listed.

## 7 Handling and storage

- **Handling**
  - **Precautions for safe handling**  
Keep receptacles tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
Please observe the additional instructions in the product's instructions for use.
  - **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and receptacles:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Store in dry conditions.

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- Store receptacle in a well ventilated area.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
  - **Components with limit 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.
    - **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
  - **Personal protective equipment**
    - **General protective and hygienic measures**  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.
    - **Breathing equipment:** Not necessary if room is well-ventilated.
    - **Protection of hands:**  
Impervious gloves  
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 protection:** Tightly sealed goggles.
    - **Body protection:** Light weight protective clothing

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Fluid
      - **Color:** Red
    - **Odor:** Aromatic
    - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.

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|   |  |
|---|--|
| · <b>Change in condition</b>                      |  |
| · <b>Melting point/Melting range:</b>             | undetermined   |
| · <b>Boiling point/Boiling range:</b>             | 110 °C (230 °F)  |
| · <b>Flash point:</b>                             | 21 °C (69.8 °F)  |
| · <b>Flammability (solid, gaseous)</b>            | Not applicable.  |
| · <b>Ignition temperature:</b>                    | 345 °C (653 °F)  |
| · <b>Decomposition temperature:</b>               | Not determined.  |
| · <b>Auto igniting:</b>                           | Product is not selfigniting.   |
| · <b>Danger of explosion:</b>                     | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · <b>Explosion limits:</b>                        |  |
| · <b>Lower:</b>                                   | Not determined.  |
| · <b>Upper:</b>                                   | Not determined.  |
| · <b>Vapor pressure at 20 °C (68 °F):</b>         | 42 hPa (31.5 mm Hg)  |
| · <b>Density at 20 °C (68 °F):</b>                | 1.058 g/cm <sup>3</sup> (8.82901 lbs/gal)  |
| · <b>Relative density</b>                         | Not determined.  |
| · <b>Vapor density</b>                            | Not determined.  |
| · <b>Evaporation rate</b>                         | Not determined.  |
| · <b>Solubility in / Miscibility with</b>         |  |
| · <b>Water:</b>                                   | Not miscible or difficult to mix   |
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined.  |
| · <b>Viscosity:</b>                               |  |
| · <b>dynamic:</b>                                 | Not determined.  |
| · <b>kinematic:</b>                               | Not determined.  |
| · <b>Other information</b>                        | No further relevant information available.   |

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** Heat, flames and sparks.
- **Incompatible materials:** Strong oxidizers
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide
- **Additional information:** -

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

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

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

- **Sensitization:** Sensitization possible through skin contact.

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· **Additional toxicological information:**

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· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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

**12 Ecological information**

· **Toxicity**

· **Aquatic toxicity:**

**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)

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

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

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

· **Additional ecological information:**

· **General notes:**

Avoid transfer into the environment.

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

Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

· **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.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.

Non contaminated packagings can be used for recycling.

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**14 Transport information**

|   |  |
|---|--|
| · <b>UN-Number</b><br>· DOT, ADR, IMDG, IATA  | UN1993   |
| · <b>UN proper shipping name</b><br>· DOT<br>· ADR<br>· IMDG, IATA  | Flammable liquids, n.o.s. (Tetraethyl silicate)<br>1993 FLAMMABLE LIQUID, N.O.S. (TETRAETHYL SILICATE)<br>FLAMMABLE LIQUID, N.O.S. (TETRAETHYL SILICATE) |
| · <b>Transport hazard class(es)</b><br>· DOT  |  |
|    |  |
| · <b>Class</b><br>· <b>Label</b>  | 3 Flammable liquids<br>3   |
| · <b>ADR</b>  |  |
|    |  |
| · <b>Class</b><br>· <b>Label</b>  | 3 (F1) Flammable liquids<br>3  |
| · <b>IMDG, IATA</b>   |  |
|    |  |
| · <b>Class</b><br>· <b>Label</b>  | 3 Flammable liquids<br>3   |
| · <b>Packing group</b><br>· DOT, ADR, IMDG, IATA  | III  |
| · <b>Environmental hazards:</b><br>· Marine pollutant:  | No   |
| · <b>Special precautions for user</b><br>· Hazard identification number (Kemler code):<br>· EMS Number:<br>· Stowage Category | Warning: Flammable liquids<br>30<br>F-E, S-E<br>A  |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>  | Not applicable.  |
| · <b>Transport/Additional information:</b>  | -  |
| · <b>ADR</b><br>· Excepted quantities (EQ)  | Code: E1<br>Maximum net quantity per inner packaging: 30   |

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|                                   |   |
|-----------------------------------|---|
|                                   | ml<br>Maximum net quantity per outer packaging:<br>1000 ml  |
| · <b>IMDG</b>                     |   |
| · <b>Limited quantities (LQ)</b>  | 5L  |
| · <b>Excepted quantities (EQ)</b> | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging:<br>1000 ml |
| · <b>UN "Model Regulation":</b>   | UN 1993 FLAMMABLE LIQUID, N.O.S.<br>(TETRAETHYL SILICATE), 3, III   |

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

· **Sara**

· **SARA Section 355 (extremely hazardous substances)**

None of the ingredients is listed.

· **SARA Section 313 (specific toxic chemical listings)**

None of the ingredients is listed.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Prop 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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

### 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.

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- **Relevant phrases**
  - H225 Highly flammable liquid and vapor.
  - H317 May cause an allergic skin reaction.
- **Date of preparation / last revision** 11/30/2022
- **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
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - 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)
  - NFPA: National Fire Protection Association (USA)
  - HMS: Hazardous Materials Identification System (USA)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit
  - Flammable Liquids 2: Flammable liquids – Category 2
  - Sensitization - Skin 1: Skin sensitisation – Category 1
  - Sensitization - Skin 1B: Skin sensitisation – Category 1B
- **\* Data compared to the previous version altered.**

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