

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

Printing date 10.11.2015

Revision: 10.11.2015

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

- **1.1 Product identifier**
 - **Trade name: Omnident Härterflüssigkeit für Silikonknetmassen**
- **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:** OMNIDENT Dental-Handelsgesellschaft
Gutenbergring 7-9, DE-63110 Rodgau/Nieder-Roden, Telephone: +49 (6106) 874-267
 - **Informing department:** Productmarketing Omnident Telephone: +49 (6106) 874-267
- **1.4 Emergency telephone number:** Productmarketing Omnident Telephone +49 (6106)874-267 Mo-Fr 08:00am to 5:00pm

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.
 Acute Tox. 4 H332 Harmful if inhaled.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 STOT SE 3 H335 May cause respiratory irritation.
 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 CLP regulation.
 - **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Warning
- **Hazard-determining components of labelling:**
tetraethyl orthosilicate
dioctyltin oxide
tetramethyl orthosilicate
- **Hazard statements**
H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

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

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

Description: -

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%
CAS: 870-08-6 EINECS: 212-791-1	dioctyltin oxide STOT RE 2, H373; Aquatic Chronic 4, H413	10-25%
CAS: 681-84-5 EINECS: 211-656-4	tetramethyl orthosilicate Flam. Liq. 2, H225; Acute Tox. 1, H330; Eye Dam. 1, H318; Acute Tox. 4, H302	< 1%

Additional information For the wording of the listed risk 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**

Instantly wash with water and soap and rinse thoroughly.

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.

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.

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

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- **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.
Do not allow to enter the ground/soil.
- **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.
- **6.4 Reference to other sections**
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**
Wear protective equipment. Keep unprotected persons away.
Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
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.
- **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.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 Control parameters**
 - **Components with 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.

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· DNELs

78-10-4 tetraethyl orthosilicate

Dermal	ge.pop., acu., syst.	8.4 mg/Kg/d (human)
	ge.pop., l.te., syst.	8.4 mg/Kg/d (human)
	worker, acute, syst.	12.1 mg/Kg/d (human)
	worker, l.te., syst.	12.1 mg/Kg/d (human)
Inhalative	ge.pop., l.te., syst.	25 mg/m3 (human)
	worker, acute, syst.	85 mg/m3 (human)
	worker, l.te., syst.	85 mg/m3 (human)

· PNECs

78-10-4 tetraethyl orthosilicate

freshwater	0.192 mg/l (aqua)
interm. wat. release	10 mg/l (aqua)
marine water	0.0192 mg/l (aqua)
sedim., dw, fre.wat.	0.18 mg/Kg (sediment)
soil,dw	0.05 mg/Kg (soil)

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

· 8.2 Exposure controls

· 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.

· Breathing equipment:

Not necessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).

· Protection of hands:

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

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:

Butyl rubber, BR
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
Natural rubber, NR

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- Chloroprene rubber, CR
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
PVC or PE gloves
- **Eye protection:** 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**

· **Appearance:**

- **Form:** Liquid
- **Colour:** Red
- **Smell:** Aromatic

· **Change in condition**

- **Melting point/Melting range:** Not determined
- **Boiling point/Boiling range:** 110 °C

· **Flash point:** >48 °C

· **Ignition temperature:** 234 °C

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

· **Critical values for explosion:**

- **Lower:** 1,3 Vol %
- **Upper:** 23,0 Vol %

· **Steam pressure at 20 °C:** 1,7 hPa

· **Density at 20 °C** 1,0 g/cm³

· **Solubility in / Miscibility with**

- **Water:** Not miscible or difficult to mix

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

- **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

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· **Additional information:** -

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Harmful if inhaled.

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

78-10-4 tetraethyl orthosilicate

Oral	LD50	6270 mg/kg (rat)
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Dermal	LD50	5878 mg/kg (can)
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870-08-6 dioctyltin oxide

Oral	LD50	>4000 mg/kg (rat)
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681-84-5 tetramethyl orthosilicate

Oral	LD50	700 mg/kg (rat)
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· **Primary irritant effect:**

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

· **Serious eye damage/irritation**

Causes serious eye irritation.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

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

· **STOT-single exposure**

May cause respiratory irritation.

· **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

78-10-4 tetraethyl orthosilicate

EC50/48h	>844 mg/l (daphnia)
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870-08-6 dioctyltin oxide

EC50/48h	6.9 mg/l (daphnia)
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LC50/96h	13 mg/l (fish)
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· **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.

· **Additional ecological information:**

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

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

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- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Small quantities can be polymerized with the matching system component(s) and the cured solid material can be disposed of with the regular garbage. Larger quantities must be disposed of following the regulations of the local authorities.

· **European waste catalogue**

18 01 06* | chemicals consisting of or containing dangerous substances

· **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA** 1993

· **14.2 UN proper shipping name**

· **ADR** 1993 FLAMMABLE LIQUID, N.O.S., special provision 640E (TETRAETHYL SILICATE, METHYL ORTHOSILICATE)

· **IMDG, IATA** FLAMMABLE LIQUID, N.O.S. (TETRAETHYL SILICATE, METHYL ORTHOSILICATE)

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 3 (F1) Flammable liquids.

· **Label** 3

· **IMDG, IATA**



· **Class** 3 Flammable liquids.

· **Label** 3

· **14.4 Packing group**

· **ADR, IMDG, IATA** III

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· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Kemler Number:	30
· EMS Number:	F-E,S-E
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S., SPECIAL PROVISION 640E (TETRAETHYL SILICATE, METHYL ORTHOSILICATE), 3, III

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **Seveso category P5c** FLAMMABLE LIQUIDS
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **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.
 - H302 Harmful if swallowed.
 - H318 Causes serious eye damage.
 - H319 Causes serious eye irritation.
 - H330 Fatal if inhaled.
 - H332 Harmful if inhaled.
 - H335 May cause respiratory irritation.
 - H373 May cause damage to organs through prolonged or repeated exposure.
 - H413 May cause long lasting harmful effects to aquatic life.
- **Abbreviations and acronyms:**
 - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - DNEL: Derived No-Effect Level (REACH)
 - PNEC: Predicted No-Effect Concentration (REACH)
 - LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 1: Acute toxicity, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

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