



**Safety Data Sheet  
according to WHS Regulations**

Printing date 01.02.2021

Version number 4

Revision: 01.02.2021

Hazardous according to criteria of Australian Safety and Compensation Council.

## 1 Identification

- **Product identifier**
  - **Trade name:** **Xantopren function Activator 2 Plus**
  - **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
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
Kulzer Australia Pty Ltd  
Unit 20, 53 Lorraine Street  
Peakhurst, NSW 2210  
Australia  
Tel: +61 (0) 2 9153 0311
  - **Informing department:** see above
  - **Emergency telephone number:**  
Poison Information Number: Australia 13 11 26 & New Zealand 0800 764 766

## 2 Hazard(s) Identification

- **Classification of the substance or mixture**  
Flam. Liq. 3 H226 Flammable liquid and vapour.
- **Label elements**
  - **GHS label elements**  
The product is classified and labelled according to the Globally Harmonised System (GHS).
    - **Hazard pictograms**  
  
GHS02
  - **Signal word** Warning
  - **Hazard-determining components of labelling:**  
tetraethyl orthosilicate  
tetramethyl orthosilicate
  - **Hazard statements**  
Flammable liquid and vapour.
  - **Precautionary statements**  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting equipment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Store in a well-ventilated place. Keep cool.
- **Other hazards -**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.

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### 3 Composition and Information on Ingredients

· **Chemical characterisation: Mixtures**

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

· **Dangerous components:**

CAS: 78-10-4 EINECS: 201-083-8	tetraethyl orthosilicate Flam. Liq. 3, H226; Acute Tox. 4, H332; Eye Irrit. 2A, H319; STOT SE 3, H335	5-10%
CAS: 870-08-6 EINECS: 212-791-1	dioctyltin oxide STOT RE 2, H373	5-10%

· **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 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. If symptoms persist, consult doctor.

· **After swallowing**

Rinse out mouth and then drink plenty of water.  
In case of persistent symptoms consult doctor.  
Seek immediate medical advice.

· **Information for doctor**

· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **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>, 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.

· **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.

· **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 drainage system, surface or ground water.  
Do not allow to enter the ground/soil.

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- **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.
- **Reference to other sections**  
See Section 13 for information on disposal.  
See Section 8 for information on personal protection equipment.

## 7 Handling and Storage

- **Handling**
  - **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.
- **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.
  - **Specific end use(s)** No further relevant information available.

## 8 Exposure controls and personal protection

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

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

### 78-10-4 tetraethyl orthosilicate

NES (Australia)	85 mg/m <sup>3</sup> , 10 ppm
PEL (USA)	850 mg/m <sup>3</sup> , 100 ppm
REL (USA)	85 mg/m <sup>3</sup> , 10 ppm
TLV (USA)	85 mg/m <sup>3</sup> , 10 ppm

### 681-84-5 tetramethyl orthosilicate

NES (Australia)	6 mg/m <sup>3</sup> , 1 ppm
REL (USA)	6 mg/m <sup>3</sup> , 1 ppm
TLV (USA)	6 mg/m <sup>3</sup> , 1 ppm

### · DNELs

#### 78-10-4 tetraethyl orthosilicate

Dermal	worker industr., acute, syst.	12.1 mg/Kg/d (human)
	worker industr., l.te., syst.	12.1 mg/Kg/d (human)
	ge.pop., acu., syst.	8.4 mg/Kg/d (human)
	ge.pop., l.te, syst.	8.4 mg/Kg/d (human)
Inhalative	worker industr., acute, syst.	85 mg/m <sup>3</sup> (human)

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worker industr., l.te., syst.	85 mg/m <sup>3</sup> (human)
ge.pop., l.te., syst.	25 mg/m <sup>3</sup> (human)

**· PNECs**

**78-10-4 tetraethyl orthosilicate**

freshwater	0.192 mg/l (aqua)
marine water	0.0192 mg/l (aqua)
interm. wat. release	10 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.

**· Exposure controls**

**· Personal protective equipment**

**· General protective and hygienic measures**

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.

**· Breathing equipment:** Not required.

**· 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

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:** Safety glasses

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

**9 Physical and Chemical Properties**

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

**· General Information**

**· Appearance:**

**· Form:** Liquid  
**· Colour:** Light yellow  
**· Smell:** Aromatic

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· <b>Odour threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
· <b>Melting point/freezing point:</b>	Not determined
· <b>Initial boiling point and boiling range:</b>	> 110 °C
· <b>Flash point:</b>	> 48 °C
· <b>Inflammability (solid, gaseous)</b>	Not applicable.
· <b>Ignition temperature:</b>	
· <b>Decomposition temperature:</b>	Not determined.
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· <b>Critical values for explosion:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Steam pressure:</b>	Not determined.
· <b>Density at 20 °C</b>	0,920 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour 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.
- **Chemical stability**
  - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None
- **Additional information:** -

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### 11 Toxicological Information

· **Information on toxicological effects**

· **Acute toxicity**

· **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)

**78-10-4 tetraethyl orthosilicate**

Oral LD50 6270 mg/kg (rat)

Dermal LD50 5878 mg/kg (can)

**870-08-6 dioctyltin oxide**

Oral LD50 >4000 mg/kg (rat)

**681-84-5 tetramethyl orthosilicate**

Oral LD50 700 mg/kg (rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation** No irritant effect.

· **Serious eye damage/irritation** No irritant effect.

· **Respiratory or skin sensitisation** No sensitizing effect known.

· **Additional toxicological information:** Harmful

· **Sensitisation** May cause sensitisation by skin contact.

### 12 Ecological Information

· **Toxicity**

· **Aquatic toxicity:**

**78-10-4 tetraethyl orthosilicate**

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

**870-08-6 dioctyltin oxide**

EC50/48h 6.9 mg/l (daphnia)

LC50/96h 13 mg/l (fish)

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

· **Behaviour 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.

· **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**

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.

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

**14 Transport information**

· <b>UN-Number</b> · <b>ADG, IMDG, IATA</b>	UN1993
· <b>UN proper shipping name</b> · <b>ADG</b>  · <b>IMDG, IATA</b>	1993 FLAMMABLE LIQUID, N.O.S., special provision 640E (TETRAETHYL SILICATE, METHYL ORTHOSILICATE) FLAMMABLE LIQUID, N.O.S. (TETRAETHYL SILICATE, METHYL ORTHOSILICATE)
· <b>Transport hazard class(es)</b> · <b>ADG</b>    · <b>Class</b> · <b>Label</b>	3 (F1) Flammable liquids. 3
· <b>IMDG, IATA</b>    · <b>Class</b> · <b>Label</b>	3 Flammable liquids. 3
· <b>Packing group</b> · <b>ADG, IMDG, IATA</b>	III
· <b>Environmental hazards:</b> · <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b> · <b>Kemler Number:</b> · <b>EMS Number:</b>	Warning: Flammable liquids. 30 F-E, S-E
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	-
· <b>ADG</b> · <b>Limited quantities (LQ)</b> · <b>Transport category</b> · <b>Tunnel restriction code</b>	5L 3 D/E

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· **UN "Model Regulation":** UN1993, FLAMMABLE LIQUID, N.O.S., special provision 640E (TETRAETHYL SILICATE, METHYL ORTHOSILICATE), 3, III

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**  
The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS02

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
tetraethyl orthosilicate  
tetramethyl orthosilicate
- **Hazard statements**  
Flammable liquid and vapour.
- **Precautionary statements**  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting equipment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
Store in a well-ventilated place. Keep cool.
- **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
- **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.

- **Relevant phrases**  
H226 Flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H373 May cause damage to organs through prolonged or repeated exposure.
- **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  
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)

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*DNEL: Derived No-Effect Level (REACH)*  
*PNEC: Predicted No-Effect Concentration (REACH)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Flam. Liq. 3: Flammable liquids – Category 3*  
*Acute Tox. 4: Acute toxicity – Category 4*  
*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*  
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*  
*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*  
**\* Data compared to the previous version altered.**

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