

## SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

Issue Date: 02/01/2016

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

#### 1.1 Product identifier

Trade name: CATALYST GEL

#### 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:** Catalyst for condensation curing polysiloxane dental impression materials.

#### 1.1 Details of the supplier of the safety data sheet

**BMS DENTAL S.R.L.**

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#### 1.2 Emergency telephone number

+39 0587 606089 (09.00 – 18.30, European time, GMT+2)

### SECTION 2: Hazards Identifications

#### 2.1 Classification of the substance or mixture

**Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of Danger: Xn – Harmful, Xi – Irritant.

R phrases:

R10: Flammable

R36/37/38: Irritating to eyes, respiratory system and skin.

R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R53: May cause long-term adverse effects in the aquatic environment.

**Classification according to Regulation (EC) No 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity – single exposure: STOT SE 3

Specific target organ toxicity – repeated exposure: STOT RE 2

Flammable liquid: Cat. 3

Hazardous to the aquatic environment: Aquatic Chronic 4

Hazard statements:

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

May cause damage to organs through prolonged or repeated use.

Flammable liquid and vapour.

May cause long lasting harmful effects to aquatic life.

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#### 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:



**Signal word:** Warning

##### Hazard-determining components of labelling:

Alkyl silicates, Dioctyltin oxide.

##### Hazard statements:

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

##### Precautionary statements:

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water
P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P273	Avoid release to the environment.

#### 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 characterization

Mixtures

Only substances required to be mentioned according to Annex II of regulation 1907/2006 are listed.

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<b>Dangerous components:</b>		
CAS: 78-10-4 EC: 201-083-8	Ethyl silicate Xn – Harmful, Xi – Irritant R10-20-36/37/38-48/22-53 Flam. Liq.3, H226; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	15 – 25%
CAS: 2768-02-7 EC: 220-449-8	Vinyltrimethoxysilane Xn – Harmful, R10 Flam. Liq.3, H226; Acute Tox. 4, H332	5 – 15%
CAS: 41637-38-1 EC: 212-791-1	Diocetyl tin oxide Xn – Harmful, R48/22-53 STOT RE2, H373; Aquatic Chronic 4, H413	5 – 10%

The full wording of the Risk (R) and Hazard (H) phrases are shown in section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### **After inhalation**

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

#### **After skin contact**

Remove contaminated clothing. Instantly wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse.

#### **After eye contact**

Rinse opened eye for several minutes under running water. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, consult a doctor.

#### **After swallowing**

Rinse mouth. Get medical attention if you feel unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

See section 11 for symptoms and effects caused by the substances.

### 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:**

CO<sub>2</sub>, chemical powder or foam. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak. Use fire extinguishing methods suitable to surrounding conditions.

#### **Unsuitable extinguishing agents:**

Do not use jets of water. This product has a very low flash point and may be inefficient but can be used to cool containers exposed to flames to prevent explosions.

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

Excess pressure that may be formed in containers exposed to fire has the risk of explosion. Do not breathe combustion products.

#### **5.3 Advice for firefighters**

In the event of fire and/or explosion do not breathe fumes. Use water spray jet to protect personnel and to cool endangered containers. Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required. Do not allow run-off from fire-fighting to enter drains or water courses.

### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition if there is no hazard. Remove persons from danger area. Avoid contact with eyes and skin. Do not breathe gas/fumes/vapour/spray. Wear suitable protective clothing (including personal protection equipment referred to section 8).

#### **6.2 Environmental precautions**

Avoid release to the environment. Do not allow to enter sewers/surface or ground water.

#### **6.3 Methods and material for containment and cleaning up**

Collect mechanically into a suitable container. The product may be absorbed by liquid-binding material (sand, diatomite, acid binders). Wash spill area with alcohol or water and soap.

#### **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 disposal information.

### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

#### **7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:** Store only in original receptacles.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:**

Store in a well ventilated place keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep container tightly sealed.

#### **7.3 Specific end use(s)**

No further relevant information available.

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#### SECTION 8: Exposure controls/personal protection

**Additional information about design of technical systems:** No further data; see item7.

#### 8.1 Control parameters

**Ingredients with limit values that require monitoring at the workplace:**

C.A.S. No.	Component		Limit
78-10-4	Tetraethyl silicate	OEL, TLV	TWA: 85 mg/m <sup>3</sup> TWA: 10 ppm STEL: 255 mg/m <sup>3</sup> STEL: 30 ppm
870-08-6	Dioctyltin oxide	OEL, TLV	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.2 mg/m <sup>3</sup>

OEL: Occupational Exposure Limit.  
TLV: Threshold Limit Value.  
STEL: Short-term Exposure Limit.  
TWA: Time-Weighted-Average.

**Additional information:** The lists that were valid during the making were used as a basis.

#### 8.2 Exposure control

**Personal protective equipment (PPE):**

**General protective and hygiene measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Avoid contact with eyes and skin.

Wash hands before breaks and at the end of work.

Immediately remove all soiled and contaminated clothing.

Keep away from foodstuffs, beverages and feed.

**Eye protection:** Tight sealing safety glasses.

**Protection of hands:**

Wear protective gloves. To protect the wearer, gloves must be the correct fit and be used properly.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**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.

**Respiratory protection:** Respiratory protection is necessary at insufficient ventilation, exposure limit overshoot and/or insufficient exhaust.

Use: Positive Pressure Self-Contained Breathing Apparatus (SCBA) / Filtering device (full mask or mouthpiece) with filter ABEK1/ABEK2.

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### SECTION 9: Physical and chemical properties

<b>9.1 Information on basic physical and chemical properties</b>	
General information	
Appearance:	
Form:	Gel
Colour:	Red
Odour:	Spearmint
Odour threshold:	Not determined.
pH value:	Not applicable.
Change in condition:	
Melting point/Melting range:	Undetermined
Boiling point/Boiling range:	108 °C.
Flash point:	32 °C.
Flammability (solid, gaseous):	Not determined.
Self-igniting:	Product is not self igniting.
Vapour pressure:	Not applicable.
Density:	Not determined.
Relative density:	1,02 gr/mL.
Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in / Miscibility with:	
Water:	Insoluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
<b>9.2 Other information</b>	No further relevant information available.

### 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 used according to specifications.

**10.3 Possibility of hazardous reactions:** The vapours may form explosive mixtures with the air.

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**10.4 Conditions to avoid:** Avoid overheating. Avoid all sources of ignition. Avoid exposure to air and humid.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity:**

**LD50:** >2000mg/Kg (Rat).

The statement is derived from products with similar composition.

Chemical name	Exposure route(s)	Method	Species	Value
Ethyl silicate	Inhalation	OECD 403	Rat	LD50 < 16mg/l/4h
	Inhale vapour	ATE		1,1 mg/l
	Inhale aerosol	ATE		1,5 mg/l
Vinyltrimethoxysilane	Oral	OECD 401	Rat	LD50 7120 mg/Kg
	Dermal		Rabbit	
	Inhalation	OECD 403	Rat	16,8 mg/l/4h
Dioctyltin oxide	Oral		Rat	LD50 2764 mg/Kg
	Dermal		Rabbit	LD50 2764 mg/Kg

**Primary irritant effect:**

**on the skin:** Irritating effect.

Not an irritant.

The statement is derived from products with similar composition.

**on the eye:** Causes serious eye irritation.

**sensitization:** No danger of sensitization (Guinea pigs).

The statement is derived from products with similar composition.

**Additional toxicological information:**

**Severe effects after repeated or prolonged exposure:** May cause damage to organs through prolonged or repeated exposure.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Aquatic toxicity:**

Chemical name	Exposure route(s)	Species	Value
Dioctyltin oxide	Acute fish toxicity		LD50 22,8 mg/l/96h
	Acute crustacean toxicity	Daphnia magna	LD50 12,2 mg/l/48h
Vinyltrimethoxysilane	Acute crustacean toxicity	Daphnia magna	LD50 168,7 mg/l/48h

### 12.2 Persistence and degradability:

Ethyl silicate: Rapidly biodegradable.

Vinyltrimethoxysilane: Rapidly biodegradable.

Dioctyltin oxide: NOT Rapidly biodegradable.

**12.3 Bioaccumulative potential:** No further relevant information available.

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#### **12.4 Mobility in soil**

**Additional ecological information:**

**General notes:**

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

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

**PBT:** not applicable

**vPvB:** not applicable

#### **12.6 Other adverse effects:** No further relevant information available.

### **SECTION 13: Disposal considerations**

#### **13.1 Waste treatment methods**

##### **Recommendations**

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

##### **Uncleaned packaging**

##### **Recommendations**

Disposal must be carried out in accordance to the local and national regulations currently in force.

### **SECTION 14: Transport information**

<b>14.1 UN-Number</b> ADR/RID , IMDG, IATA	UN1993
<b>14.2 UN proper shipping name</b> ADR/RID, IMDG, IATA	Flammable liquid, n.o.s. (ethyl silicate, vinyltrimethoxysilane)
<b>14.3 Transport hazard class(es)</b> ADR/RID, IMDG, IATA Class	3
<b>14.4 Packing group</b> ADR/RID, IMDG, IATA	III
<b>14.5 Environmental hazards:</b> Marine pollutant	No
<b>14.6 Special precautions for user</b>	Not applicable
<b>14.7 Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code</b>	Not applicable
<b>Transport/Additional information</b>	-
<b>UN "Model Regulation":</b>	-

### **SECTION 15: Regulatory information**

#### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

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

### **SECTION 16: Other information**



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The information provided above is based on our present knowledge and experience. This safety data sheet refers explicitly to the product indicated and comprises no guarantee of particular quality. Any use of this product in any way not indicated on this safety data sheet will be exclusively under the user's responsibility.

#### Relevant R-phrases:

10	Flammable.
20	Harmful by inhalation.
36/37/38	Irritating to eyes/respiratory system and skin.
48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
53	May cause long-term adverse effects in the aquatic environment.

#### Relevant H phrases:

Flam. Liq. 3	Flammable liquid, category 3.
Acute Tox. 4	Reproductive toxicity, category 2.
STOT RE 2	Specific target organ toxicity – repeated exposure, category 2.
STOT SE 3	Specific target organ toxicity – single exposure, category 3.
Eye Irrit. 2	Eye irritation, category 2.
H226	Flammable liquid and vapour.
H315	Causes skin irritation.
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.
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

CAS: Chemical Abstracts Service (division of the American Chemical Society)