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

1.1. Product identifier

FINOPASTE Hardener

REF 15184

UFI: **GM1C-C14T-S001-V2WN**

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Activator Especially suitable for manufacturing repair models, block outs, relinings and moulds.

1.3. Details of the supplier of the safety data sheet

Company name:	FINO GmbH	
Street:	Mangelsfeld 18	
Place:	D-97708 Bad Bocklet	
Telephone:	+49-97 08-90 94 20	Telefax: +49-97 08-90 94 21
e-mail:	info@fino.com	Internet: www.fino.com
Contact person:	Joachim Mahlmeister	Telephone: +49-97 08-90 94 20
e-mail:	info@fino.com	
Responsible Department:	This number can only be reached during our office hours, Monday to Friday from 8 a.m. to 5 p.m.	

1.4. Emergency telephone number:

+49-89-1 92 40
POISON CENTER München
24 hour(s) 7 day(s)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 4; H332
Skin Irrit. 2; H315
Eye Irrit. 2; H319
STOT SE 3; H335
STOT RE 2; H373
Aquatic Chronic 4; H413

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Alkyl-silicates

Signal word: Warning

Pictograms:

Hazard statements

H332	Harmful if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H371	May cause damage to organs (...).
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.

Precautionary statements

P260	Do not breathe mist/vapours/spray.
P264	Wash hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P312	Call Call a POISON CENTER/doctor/. if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
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.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Special labelling of certain mixtures

Contains: Alkyl-silicates

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

2.3. Other hazards

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Impression material for dental applications.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
-	Alkyl-silicates			10 - 25%
	-			
	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Aquatic Chronic 4; H226 H332 H315 H319 H335 H373 H413			
870-08-6	Dioctyltin oxide			1 - 10%
	212-791-1			
	STOT SE 2; H371			
68299-15-0	dioctylstannanes			1 - 10%
	269-595-4			
	STOT SE 2; H371			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
-	-	Alkyl-silicates	10 - 25% %
	inhalation: LC50 = 11 mg/l (vapours); inhalation: LC50 = 1.5 mg/l (dusts or mists)		
870-08-6	212-791-1	Dioctyltin oxide	1 - 10% %
	oral: LD50 = 2500 mg/kg		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Immediately remove any contaminated clothing, shoes or stockings.

After inhalation

Provide fresh air.

Consult physician if symptoms appear or if in doubt.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

Seek medical attention if problems persist.

4.3. Indication of any immediate medical attention and special treatment needed

When in doubt or if symptoms are observed, get medical advice.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, Extinguishing powder, Carbon dioxide (CO2), Sand, Water

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

No further data.

5.3. Advice for firefighters

No information available.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures

Remove persons to safety. Remove victim out of the danger area.

The danger areas must be delimited and identified using relevant warning and safety signs.

For emergency responders

Use personal protection equipment.

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

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Take up mechanically, placing in appropriate containers for disposal.
Wipe up with absorbent material (eg. cloth, fleece). Clear contaminated areas thoroughly.

Other information

Wipe up with absorbent material (eg. cloth, fleece). Clear contaminated areas thoroughly.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Treat the recovered material as prescribed in the section on waste disposal. Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

The product is intended for professional use.
Avoid contact with eyes and skin.
Observe instructions for use.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Wash hands before breaks and after work.
When using do not eat, drink or smoke.
Avoid contact with eyes and skin.

Further information on handling

After use replace the closing cap immediately.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity. Recommended storage temperature: 15-23 ºC

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Store in a dry place. Store in a closed container.

Betriebssicherheitsverordnung (BetrSichV) ---

7.3. Specific end use(s)

Hardener

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
870-08-6	Dioctyltin oxide			
Consumer DNEL, long-term		oral	systemic	0,02 mg/kg bw/day
68299-15-0	dioctylstannanes			
Consumer DNEL, long-term		dermal	systemic	1,75 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,617 mg/m³
Consumer DNEL, acute		dermal	systemic	0,625 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	0,109 mg/m³
Consumer DNEL, acute		oral	systemic	0,625 mg/kg bw/day

8.2. Exposure controls


Appropriate engineering controls

Provide adequate ventilation. If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

Hand protection

Disposable 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. The precise time of rupture can be found out from the manufacturer of the protective gloves and must be observed.

Suitable material: NBR (Nitrile rubber)

Skin protection

lab coat

PVC (polyvinyl chloride) Apron

Respiratory protection

Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m3 (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m³ (0.5 % by vol.); class 3: maximum permitted contaminant concentration in inhaled air = 10000 mL/m³ (1.0 % by vol.)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	blue
Odour:	characteristic

Changes in the physical state

Melting point/freezing point:	not determined

Boiling point or initial boiling point and boiling range:	> 150 °C
Softening point:	not determined
Flash point:	not applicable
Flammability	
Solid/liquid:	not applicable
Explosive properties	
not explosive according to EU A.14	
Lower explosion limits:	---
Upper explosion limits:	---
Auto-ignition temperature:	not applicable
Self-ignition temperature	
Solid:	not applicable
Decomposition temperature:	not determined
pH-Value:	not applicable
Viscosity / dynamic:	not applicable
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents	
Ketone	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not applicable
Density (at 23 °C):	1,0 g/cm³
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes	
Sustaining combustion:	No data available
Oxidizing properties	
no classification	
Other safety characteristics	
Solvent content:	not determined
Solid content:	not determined
Evaporation rate:	not determined
Further Information	

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Air, humid

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No data available.

Further information

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Harmful if inhaled.

The statement is derived from products of similar structure or composition.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
-	Alkyl-silicates				
	inhalation vapour	LC50 11 mg/l		ATE	
	inhalation dust/mist	LC50 1.5 mg/l		ATE	
870-08-6	Dioctyltin oxide				
	oral	LD50 2500 mg/kg	Rat	RTECS	

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

The statement is derived from products of similar structure or composition.

Sensitising effects

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

Guinea pig not sensitising.

The statement is derived from products of similar structure or composition.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (Alkyl-silicates)

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (Alkyl-silicates)

Aspiration hazard

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

Specific effects in experiment on an animal

No data available.

Additional information on tests

none

Practical experience

No special references.

11.2. Information on other hazards

Other information

No special precautionary measures.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
870-08-6	Dioctyltin oxide						
	Acute fish toxicity	LC50	13 mg/l	96 h			
	Acute crustacea toxicity	EC50	6,9 mg/l	48 h	Daphnia magna (Big water flea)		

12.2. Persistence and degradability

none Evidence exists for biodegradation processes.

12.3. Bioaccumulative potential

Low

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
870-08-6	Dioctyltin oxide	9,259

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Respective data are not available.

Further information

Do not allow uncontrolled discharge of product into the environment. May cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Can be incinerated together with household waste in compliance with applicable technical regulations following consultation with approved waste disposal management companies and authorities in charge.

Contaminated packaging

Non-contaminated packaging can be supplied to a recycling system.
Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No special measures are necessary.

14.7. Maritime transport in bulk according to IMO instruments

No special precautionary measures.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 40

2004/42/EC (VOC):	no classification
Information according to 2012/18/EU (SEVESO III):	H2 ACUTE TOXIC
Additional information:	H2

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

Additional information

No further data.

Betriebssicherheitsverordnung (BetrSichV) ---

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,7.

* Data changed compared with the previous version.

Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
"IATA-DGR: Dangerous Goods Regulations by the ""International Air Transport Association"" (IATA)"
ICAO: International Civil Aviation Organization
"ICAO-TI: Technical Instructions by the ""International Civil Aviation Organization"" (ICAO)"
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 Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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)
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
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

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H371	May cause damage to organs (...).
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1	Auxiliary for dental technology	PW	20	0	0	4	0	94	100

LCS: Life cycle stages
SU: Sectors of use
PC: Product categories
PROC: Process categories
ERC: Environmental release categories
AC: Article categories
TF: Technical functions

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)