

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

Flam. Liq. 3; H226
Acute Tox. 4; H332
Skin Irrit. 2; H315
Eye Irrit. 2; H319
STOT SE 2; H371 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

H226	Flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

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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.

Precautionary statements

P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P312 Call a POISON CENTER/doctor/ if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P405 Store locked up.
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).
Medical assistance is required in case of symptoms, which are obviously caused by the irritation of skin, eyes or the inhalation of fumes of the product.

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	Diocetyl tin 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	Diocetyl tin 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.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Seek medical attention if problems persist.

Rinse mouth immediately and drink 1 glass of water.

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 absorption of humidity. Recommended storage temperature: 15-23 °C

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	Exposure route	Effect	Value
DNEL type				
870-08-6	Diocetyl tin oxide			
Consumer DNEL, long-term		oral	systemic	0,02 mg/kg bw/day
68299-15-0	diocetyl stannanes			
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 absorption 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.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye 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

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 damage to organs. (Dioctyltin oxide; dioctylstannanes)

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	Diocetyl tin 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	Diocetyl tin 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.

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.

List of Wastes Code - residues/unused products

180106 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (EXCEPT KITCHEN AND RESTAURANT WASTES NOT ARISING FROM IMMEDIATE HEALTH CARE); wastes from natal care, diagnosis, treatment or prevention of disease in humans; chemicals consisting of or containing hazardous substances; hazardous waste

List of Wastes Code - used product

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

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

Information according to Directive 2012/18/EU (SEVESO III):

P5c FLAMMABLE LIQUIDS

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): 2,4,7,12,13,15.

* 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.
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 relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)