

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

FINOTHERM Soldering Investment Material

REF 40505 / 40505P

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

Making of soldering models (also called soldering block) for furnace and flame soldering.

**Uses advised against**

No further data.

**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**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

**2.2. Label elements****GB CLP Regulation****Special labelling of certain mixtures**

EUH210 Safety data sheet available on request.

**Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**2.3. Other hazards**

No risks worthy of mention.

Results of PBT and vPvB assessment: not applicable

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**BA SO<sub>4</sub>, SiO<sub>2</sub>, Al<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, CaO, MgO, TiO<sub>2</sub>, CaSo

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
-	barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex			50 %
	-	056-002-00-7		
	Acute Tox. 4, Acute Tox. 4; H332 H302			
14808-60-7	Quartz			25 %
	238-878-4			
	STOT RE 1; H372			
7778-18-9	Calcium sulphate			25 %
	231-900-3			

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		
-	-	barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex	50 %
	inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: ATE = 500 mg/kg		
14808-60-7	238-878-4	Quartz	25 %
	inhalation: LC50 = > 2,08 mg/l (dusts or mists)		

**Further Information**

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

Never give anything by mouth to an unconscious person or a person with cramps.

If unconscious but breathing normally, place in recovery position and seek medical advice.

**After inhalation**

Supply fresh air. In case of respiratory arrest bed on the back, overextend head, mouth-to-nose resuscitation.

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

**After contact with skin**

Wash contaminated clothing before reuse.

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

In case of skin irritation, consult a physician.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Call a doctor if you feel unwell.

**4.2. Most important symptoms and effects, both acute and delayed**

No effects known.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

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

Foam, Extinguishing powder, Carbon dioxide (CO<sub>2</sub>), Water spray jet, Sand

**Unsuitable extinguishing media**

Full water jet

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

Sulphur dioxide (SO<sub>2</sub>), Barium oxide vapour

**5.3. Advice for firefighters**

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Self-contained respirator (breathing apparatus)

**Additional information**

Product sets when in contact with water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Ensure good ventilation / exhaustion at the workplace. Keep unprotected persons away.

Avoid dust formation.

**For non-emergency personnel**

Emergency procedures

Remove victim out of the danger area. Remove persons to safety. The danger areas must be delimited and identified using relevant warning and safety signs.

**For emergency responders**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Wear personal protection equipment (refer to section 8).

**6.2. Environmental precautions**

Do not allow to enter sewers/surface or ground water. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

**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).

Following consultation with waste management company and after biological pre-treatment, landfill together with household waste.

**For cleaning up**

For cleaning, approved industrial vacuum cleaners are recommended, dust class:

Collect in closed and suitable containers for disposal.

**Other information**

Take up mechanically.

**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**

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Avoid dust formation.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

The usual precautionary measures are to be adhered to when handling chemicals.  
Wash hands before breaks and after work.  
Avoid dust formation.

**Further information on handling**

No special handling advices are necessary.

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

**Requirements for storage rooms and vessels**

Keep only in the original container in a cool, well-ventilated place.

**Hints on joint storage**

Not known.

**Further information on storage conditions**

Store in cool, dry conditions in well sealed receptacles.  
Protect from moisture.

Betriebssicherheitsverordnung (BetrSichV) ---

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

Making of soldering models (also called soldering block) for furnace and flame soldering.

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

**8.1. Control parameters**

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7778-18-9	Calcium sulphate			
Consumer DNEL, long-term		oral	systemic	6

**Additional advice on limit values**

Exposure limits at intended use

**8.2. Exposure controls**

**Appropriate engineering controls**

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Tightly sealed safety glasses. EN 166

**Hand protection**

Tested protective gloves must be worn For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The precise time of rupture can be found out from the manufacturer of the protective gloves and must be observed.

**Skin protection**

common occupational protective clothing.

**Respiratory protection**

Not required for usual handling of the product.

If workplace exposure limits are exceeded, respiratory protection must be worn.

Full-face mask or mouthpiece with particulate filter: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 15 times the exposure limit.

P3 filter: up to a max. of

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Powder
Colour:	brown
Odour:	odourless

**Changes in the physical state**

Melting point/freezing point:	Liquid on inert carrier material
Boiling point or initial boiling point and boiling range:	---
Softening point:	not determined
Flash point:	Liquid on inert carrier material

**Flammability**

Solid/liquid:	Liquid on inert carrier material
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**Explosive properties**

not explosive.

Lower explosion limits:	---
Upper explosion limits:	---
Auto-ignition temperature:	Liquid on inert carrier material

**Self-ignition temperature**

Solid:	Product is not selfigniting.
Decomposition temperature:	not determined
pH-Value (at 20 °C):	7
Viscosity / dynamic:	Liquid on inert carrier material
Water solubility: (at 20 °C)	7,4 g/L
Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	---
Density (at 20 °C):	3,07 g/cm <sup>3</sup>
Bulk density:	1400 kg/m <sup>3</sup>
Relative vapour density:	not applicable

**9.2. Other information****Information with regard to physical hazard classes**

Sustaining combustion:	No data available
Oxidizing properties	
The product itself does not burn.	

**Other safety characteristics**

Solid content:	not determined
Evaporation rate:	not applicable

**Further Information**
**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

This material is considered to be non-reactive under normal use conditions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

No information available. Not known.

**10.6. Hazardous decomposition products**

Formation of toxic gases is possible during heating or in case of fire. Sulphur oxides, Barium oxide vapour

**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in GB CLP Regulation**
**Acute toxicity**

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

**ATEmix tested**

	Dose	Species	Source
LD50, oral	>5000 mg/kg	Rat	

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
-	barium salts, with the exception of barium sulphate, salts of 1-azo-2-hydroxynaphthalenyl aryl sulphonic acid, and of salts specified elsewhere in this Annex				
	oral	ATE 500 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
14808-60-7	Quartz				
	inhalation (4 h) dust/mist	LC50 > 2,08 mg/l			

**Irritation and corrosivity**

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

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

**Sensitising effects**

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

No sensitizing effect known.

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

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

**STOT-single exposure**

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

**STOT-repeated exposure**

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

Liquid of 1-propanol with various additives.

**Aspiration hazard**

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

**Specific effects in experiment on an animal**

For this substance the summation method is not applicable when classification of respective mixtures is calculated.

**Additional information on tests**

No special references.

**Practical experience**

No special references.

**11.2. Information on other hazards**
**Other information**

No special precautionary measures.

**SECTION 12: Ecological information**
**12.1. Toxicity**

Water hazard class: slightly hazardous to water

Do not allow to enter into surface water or drains.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
14808-60-7	Quartz					
	Acute fish toxicity	LC50 mg/l	>218,6	96 h		
	Acute algae toxicity	ErC50 mg/l	1,35	72 h		
	Acute crustacea toxicity	EC50	1,9 mg/l	48 h		

**12.2. Persistence and degradability**

none Evidence exists for biodegradation processes.

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
7778-18-9	Calcium sulphate				
	sewage treatment plant	100 mg/l			

**12.3. Bioaccumulative potential**

No indication of bioaccumulation potential.

**12.4. Mobility in soil**

If product enters soil, it will be mobile and may contaminate groundwater.

**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**

No effects known.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**

**Disposal recommendations**

Dispose of waste according to applicable legislation.  
After influx of water disposal as construction rubble (not construction waste)

**List of Wastes Code - residues/unused products**

180101 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; sharps (except 18 01 03)

**List of Wastes Code - used product**

180101 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; sharps (except 18 01 03)

**List of Wastes Code - contaminated packaging**

200139 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS; separately collected fractions (except 15 01); Plastics

**Contaminated packaging**

Contaminated packages must be completely emptied and can be re-used following proper cleaning.

**SECTION 14: Transport information****Land transport (ADR/RID)**

**14.1. UN number or ID number:** UN 0000  
**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.

**Other applicable information (land transport)**

Not restricted

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 0000  
**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.

**Other applicable information (inland waterways transport)**

Not restricted

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 0000  
**14.2. UN proper shipping name:** Not a hazardous material with respect to transportation regulations.  
**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.

**Other applicable information (marine transport)**

Not restricted

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 0000  
**14.2. UN proper shipping name:** Not a hazardous material with respect to transportation regulations.  
**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.

**Other applicable information (air transport)**

Not restricted

**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**

2004/42/EC (VOC): none  
Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)  
Additional information: 0

**Additional information**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP]. According to EC directives or the corresponding national regulations the product does not have to be labelled.

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

**National regulatory information**

Water hazard class (D): - - non-hazardous to water

**Additional information**

Betriebssicherheitsverordnung (BetrSichV) ---

"ZH 1/134 „Information on Breathing Protection""

"ZH 1/105 „Information on Protective Clothing""

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****Changes**

\* 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

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)

**Relevant H and EUH statements (number and full text)**

H302 Harmful if swallowed.  
H332 Harmful if inhaled.  
H372 Causes damage to organs through prolonged or repeated exposure.  
EUH210 Safety data sheet available on request.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

**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.)*