

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

FINOVLIES Mould Ring Liners

REF 40809 / 40810

UFI: 6R0N-K3UR-N00W-57UX

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

Lining of the mould ring for an unimpeded expansion of the investment material.

Uses advised against

People who suffer from skin sensitization problems, asthma, allergies, chronic or recurring respiratory illnesses should not be deployed in any process using this mixture.

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

Carc. 1B; H350i

Full text of hazard statements: see SECTION 16.

2.2. Label elements
GB CLP Regulation
Hazard components for labelling

Aluminosilicat (Aluminiumsilikatwolle amorph)

Signal word: Danger

Pictograms:

Hazard statements

H350i May cause cancer by inhalation.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P281	Use personal protective equipment as required.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P405	Store locked up.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Special labelling of certain mixtures

No further data.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

"The fibre is classified as „a carcinogen substance according to category 2"" according to TRGS 905 as well as EU directive 97/67/EC. (Substances that should be regarded as carcinogen for humans)"

In October 2001 the IARC (International Agency for Research on Cancer) has confirmed that category 2b (potentially carcinogen for humans) apply as a appropriate IARC classification for RCF fibres

Exposure to fibre dust may lead to a slight irritation of skin, eyes and the upper respiratory tract.

Experiments in animals have shown that extended exposure to a high dosage of ceramic fibre dusts may cause damage of the lungs (fibrosis, development of tumours).

Critical health hazards are not to expect ed if the recommended use and the valid threshold values are observed.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

ceramic fibre paper with quality designation 1260. (2-15%)

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
142844-00-6	Aluminosilicat (Aluminiumsilikatwolle amorph)			100 %
	266-046-0		01-2119458050-50	
	Carc. 1B; H350i			

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		
142844-00-6	266-046-0	Aluminosilicat (Aluminiumsilikatwolle amorph)	100 %
	Carc. 1B; H350i: >= - 100		

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

Remove affected person from the danger area and lay down.

Irritations and inflammations are ascribed to the possible mechanical rubbing of the substance.

After inhalation

Provide fresh air.

In case of respiratory tract irritation, consult a physician.

After contact with skin

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

If skin irritation occurs: Get medical advice/attention.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent

symptoms, consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

Call a physician immediately.

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

Irritation to respiratory tract

Causes skin irritation.

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.

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to the escape of irritating gases and vapours.

5.3. Advice for firefighters

irritating organic vapors.

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

Avoid dust formation. Use personal protection equipment. Access to the affected area should be restricted to the absolutely necessary, minimum number of persons.

For non-emergency personnel

Emergency procedures

Remove victim out of the danger area. Remove affected person from the danger area and lay down.

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.

Use personal protection equipment.

6.2. Environmental precautions

Knock down dust with water spray jet. Do not allow to enter into surface water or drains.

Observe in addition any national regulations!

6.3. Methods and material for containment and cleaning up**For containment**

Cover drains.

Use only antistatically equipped (spark-free) tools. Personal protection equipment

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Contain leaks or spills within cabinets with removable trays.

For cleaning up

Collect in closed and suitable containers for disposal.

Ventilate affected area. Wash contaminated clothing before reuse.

Other information

Use approved industrial vacuum cleaner for removal. High efficiency particulate air filter (HEPA filter) Wet clean or vacuum up solids. Do not use a brush or compressed air for cleaning surfaces or clothing. The handling of the product should be used with caution in order to avoid dust formation.

6.4. Reference to other sections

See protective measures under point 7 and 8.

Treat the recovered material as prescribed in the section on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid dust formation.

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

All work processes must always be designed so that the following is excluded: Do not breathe dust.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

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

Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

Further information on handling

Take up dust-free and set down dust-free.

Clean contaminated articles and floor according to the environmental legislation.

Protect skin by using skin protective cream.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container. Keep container tightly closed. Protect containers against damage.

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

Packaging materials: Plastic articles: Packaging (excluding food packaging)

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

No special precautionary measures.

Storage class

Betriebssicherheitsverordnung (BetrSichV) ---

7.3. Specific end use(s)

Restrictions on use: heat insulating/Mould Ring Liners

The product is intended for professional use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PNEC values

CAS No	Substance	
Environmental compartment		Value
142844-00-6	Aluminosilicat (Aluminiumsilikatwolle amorph)	

Additional advice on limit values

Keep the formation of dust low through technical protective measures e.g. dust extraction. Especially for this field of activity: Access to the affected area should be restricted to the absolutely necessary, minimum number of persons.

Conditions to avoid: Dust deposits

The lists valid during the making were used as basis.

The general dust threshold value for alveolar penetrating dust fractions of 3 mg/m³ must be observed.

(MAC-values 2009, TRGS 900)

8.2. Exposure controls



Appropriate engineering controls

Use technical precautions (dust extraction and other technical installations) to reduce the dust formation.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses.

Do not wear contact lenses.

Hand protection

Wear suitable gloves. Chromate-free leather Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Breakthrough times and swelling properties of the material must be taken into consideration. Protective gloves Replace when worn.

Skin protection

Wear suitable protective clothing. Wash contaminated clothing prior to re-use. "Release of fibre dust; therefore reduce exposure to the technically lowest possible level." Street clothing should be stored separately from work clothing.

Respiratory protection

Half-face mask or quarter facepiece: 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 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

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

Use appropriate container to avoid environmental contamination.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	white
Odour:	odourless

Changes in the physical state

Melting point/freezing point:	1650 °C
Boiling point or initial boiling point and boiling range:	not applicable
Softening point:	not determined
Flash point:	not applicable

Flammability

Solid/liquid:	not applicable
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Explosive properties

Product is not explosive.

Lower explosion limits:	---
Upper explosion limits:	---
Auto-ignition temperature:	not applicable

Self-ignition temperature

Solid:	not applicable
pH-Value:	not applicable
Viscosity / dynamic:	---
Water solubility:	< 0,001 g/L
Vapour pressure:	not applicable

9.2. Other information**Other safety characteristics**Relative density 200-300 kg/m³**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 chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Oxidation products of the acrylic-latex-binder are formed at first heating in the temperature range of 180 °C to a maximum of 600 °C. The mass content of the respective binder is maximum 10%. Ventilate working area well and/or switch on ventilator-supported fume extraction.

10.4. Conditions to avoid

Avoid dust formation.

10.5. Incompatible materials

Oxidising agent, strong Alkali (lye), concentrated

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.

Irritation and corrosivity

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

Results for the test according to proven methods (directive 67/548/EC, appendix 5, method B4) were negative for the ceramic fibres. All artificial mineral fibres as well as some natural fibres might cause a slight irritation with the result of a light itch or rather rarely in case of sensitive skin types a slight reddening of the skin. Compared to other irritation these are not allergenic or chemical skin damages but exclusively a mechanical effect of temporary nature.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer by inhalation. (Aluminosilicat (Aluminiumsilikatwolle amorph))

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

"The fibre is classified as „a carcinogen substance according to category 2"" according to TRGS 905 as well as EU directive 97/67/EC. (Substances that should be regarded as carcinogen for humans)"

In October 2001 the IARC (International Agency for Research on Cancer) has confirmed that category 2b (potentially carcinogen for humans) apply as a appropriate IARC classification for RCF fibres

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.

In connection with the exposure to ceramic fibres diseases have not been reported although these fibres have been used for the last forty years. Research concerning the affection of the lungs has been done among European and American workers. American research reports about deposits on the pleura (pleural plaque) in 2.9% of the examined workers. The plaque neither causes any symptoms nor does it develop to a disease.

Aspiration hazard

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

Specific effects in experiment on an animal

In earlier studies ceramic fibres together with other artificial mineral fibres were regarded as inactive. In the 70s and 80s tumours were observed after intra pleural and intra peritoneal injection but the different inhalation studies have lead to indecisive results.

"In 1990 chronic inhalation studies, known as „RCC experiments"" were conducted with fibre samples of different sizes." Fibrosis, lung tumours and mesothelioms were observed in animals, which were exposed to very high concentrations for 24 month. Afterwards it was discovered that the process of selection of the different fibre dimensions had resulted in a precarious contamination of the samples with non-fibre particles. The inhaled particles lead consequently to conditions, which constrained the self-cleaning effect of the lung so far that an overload situation resulted. "Experts are presently busy looking into the validity of the results from the „RCC Experiments"".

In further tests scientifically sound fibre samples showed a considerably lower bioactivity.

Additional information on tests

Toxicological analyses are not available.

Practical experience

No special references.

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

No special precautionary measures.

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

If used in accordance with specifications no environmental effects are to expect.

12.2. Persistence and degradability

No classification known.

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

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.

This substance does 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**

Dust deposits

Delivery to an approved waste disposal company.

Dispose of contents/container in accordance with local/regional/national/international regulations.

List of Wastes Code - residues/unused products

101299 WASTES FROM THERMAL PROCESSES; wastes from manufacture of ceramic goods, bricks, tiles and construction products; wastes not otherwise specified

List of Wastes Code - used product

101299 WASTES FROM THERMAL PROCESSES; wastes from manufacture of ceramic goods, bricks, tiles and construction products; wastes not otherwise specified

Contaminated packaging

Dispose of waste according to applicable legislation.

Non-contaminated packaging can be supplied to a recycling system.

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.

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.

Marine transport (IMDG)

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.

Air transport (ICAO-TI/IATA-DGR)

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.

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

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

Aluminosilicat (Aluminiumsilikatwolle amorph)

2004/42/EC (VOC): no classification

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information: 0

Additional information

The product is classified and labelled according to EC directives or corresponding national laws. Labelling

according to Regulation (EC) No. 1272/2008 [CLP]

National regulatory information

Employment restrictions: Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): - - non-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**

* Data changed compared with the previous version.

Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
CLP: Classification, Labelling and Packaging
ATE: Acute toxicity estimates.
DNEL: Derived No-Effect Level (REACH)
EC50: Median effective concentration
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
EEC: European Economic Community
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
IATA: International Air Transport Association
"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)"
IMDG: International Maritime Code for Dangerous Goods
LC50: Lethal concentration, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted No-Effect Concentration (REACH)
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SVHC: Substances of Very High Concern
TRGS: Technical rules for hazardous substances
PPM: Parts per million
vPvB: very Persistent and very Bioaccumulative
BCF: Bioconcentration factor
DGR: Dangerous Goods Regulations
IMDG-Code: International Maritime Dangerous Goods Code
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Acute Tox. 4: Acute toxicity, Hazard Category 4
Carc. 2: Carcinogenicity, Hazard Category 2

Relevant H and EUH statements (number and full text)

H350i May cause cancer by inhalation.

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. 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

PC: Product categories

ERC: Environmental release categories

TF: Technical functions

SU: Sectors of use

PROC: Process categories

AC: Article categories

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