Tecfi S.p.A. - Fixing Systems
Head Office:
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www.tecfi.it *info@tecfi.it*

SAFETY DATA SHEET
According to Annex II to REACH - Regulation 2015/830

ZN
Refractory mastic / sealant for very high temperature
based on inert mineral fillers in aqueous media

Revision n. **02**
Dated **01/04/2021**
Printed on **01/04/2021**

Replaced revision: 01
(Dated: 20/10/2014)

1 - Identification of the substance/mixture and of the company/undertaking

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

Intended use	Refractory mastic / sealant for very high temperature , based on inert mineral fillers in aqueous media

1.3. Details of the supplier of the safety data sheet

Name	Tecfi S.p.A.
Full Address	S.S.Appia km 193
District and Country	81050 Pastorano (CE) - Italia - tel. 0823 88 3338 - fax 0823 - 883260
e-mail (of the competent person responsible for the Safety Data Sheet)	rdc@tecfi.it

1.4. Emergency telephone number

For urgent inquiries refer to	Osp. NIGUARDA CA' GRANDA – Milano 02/66101029 CAV Policlinico "A. Gemelli" - Roma 06/3054343 Osp. "A. Cardarelli" - Napoli 081/7472870

2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Specific target organ toxicity - repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure
Serious eye damage, category 1	H318	Causes serious eye damage
Skin irritation, category 2	H315	Causes skin irritation

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements

Hazard pictograms

Signal words: Danger

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Hazard statements:	
H372	Causes damage to organs through prolonged or repeated exposure
H318	Causes serious eye damage
H315	Causes skin irritation

Precautionary statements:	
P501	Dispose of contents / container according to local regulations on waste treatement
P102	Keep out of reach of children
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P101	If medical advice is needed, have product container or label at hand
P260	Do not breathe dust
P280	Wear protective gloves/ protective clothing / eye protection / face protection
P302+P352	IF ON SKIN: Wash with plenty of water
Contiene	QUARTZ (RCS> 10%) Silicic acid, sodium salt (1,6<MR<2,6)

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%

3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification QUARTZ (RCS> 10%)	**x = Conc. %**	**Classification 1272/2008 (CLP)**
CAS 14808-60-7 EC 238-878-4 INDEX. -	54 ≤ x < 58	STOT RE 1 H372
Silicic acid, sodium salt		
CAS 1344-09-8 EC 215-687-4 INDEX. - Reg. no. 01-2119448725-31	18,5 ≤ x < 20	Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335

The full wording of hazard (H) phrases is given in section 16 of the sheet

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4. First aid measures

4.1. Description of first aid measures

EYES: Rinse eyes with plenty of water at room temperature for at least 15 minutes. Prevent the affected person from rubbing or closing his eyes. In the event that the interested person is wearing contact lenses, they must be removed as long as they are not attached to the eyes, since in that case additional damage may occur. In all cases, after washing, contact your doctor as soon as possible with the product safety data sheet.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.
INHALATION: It is a product not classified as dangerous by inhalation, however it is recommended in case of symptoms of intoxication to take away the person involved from the place of exposure, take it to the open air and keep it at rest. If symptoms persist require a doctor's intervention.
INGESTION: Do not induce vomiting, if it is naturally caused to keep the head tilted forward to avoid suction. Keep the person involved at rest. Rinse mouth and throat, as there is the possibility that they have been damaged with the ingestion.

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

Specific information on symptoms and effects caused by the product are unknown

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

Information not available

5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2.Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details

Store at temperatures between 5 and 30 ° C

7.3.Specific end use(s)

Information not available

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8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:
DEU - Deutschland TRGS 900 (Fassung 31.1.2018 ber.) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP - España INSHT - Límites de exposición profesional para agentes químicos en España 2017
GBR - United Kingdom EH40/2005 Workplace exposure limits
TLV-ACGIH ACGIH 2018

QUARZ (RCS> 10%)

Threshold Limit Value

Type	Country	TWA/8h mg/m3	ppm	STEL/15min mg/m3	ppm
MAK	DEU	0,15	-	-	-
VLA	ESP	0,05	-	-	-
WEL	GBR	0,3	-	-	-
TLV-ACGIH	-	0,025	-	-	-

Silicic acid, sodium salt (1,6<Rm<2,6)

Predicted no-effect concentration - PNEC			
Normal value in fresh water	-	7-5	mg/l
Normal value in marine water	-	1	mg/l
Normal value for water, intermittent release	-	7-5	mg/l
Normal value of STP microorganisms	-	348	mg/l

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,8 mg/kg				
Inhalation				1,38 mg/m3				5,61 mg/m3
Skin				0,8 mg/kg				1,59 mg/kg

Legend:
(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

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HAND PROTECTION
Chemical resistant gloves category I. Choose the weight for the breakthrough time is greater than the time of reuse of the product (see standard EN 374). The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Protective clothing category I. Safety shoes Anti-static and chemical resistant category II (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Goggles category II (see standard EN 166).
In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION
None required under usual conditions. Avoid exceeding the occupational exposure limit.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	pasty	Lower explosive limit	Not applicable
Colour	dark grey	Upper explosive limit	Not applicable
Odour	imperceptible	Vapour pressure	2350 Pa - Temperature:20°C
Odour threshold	Not applicable	Vapour density	Not applicable
pH	Not determined	Relative density	1,99 - 2,09
Melting point / freezing point	Not available	Solubility	soluble in water
Initial boiling point	> 100 °C	Partition coefficient: n-octanol/water	Not available
Boiling range	Not available	Auto-ignition temperature	Not available
Flash point	> 60 °C	Decomposition temperature	Not applicable
Evaporation Rate	Not applicable	Viscosity	>20,5 cSt -Temperature:40°C
Flammability of solids and gases	not flammable	Explosive properties	not applicable
Lower inflammability limit	Not applicable	Oxidising properties	not applicable
Upper inflammability limit	Not applicable		

9.2. Other information

VOC (Directivea 2010/75/CE)	0
VOC (volatile carbon)	0

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10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected

10.5. Incompatible materials

Avoid strong acids, strong bases

10.6. Hazardous decomposition products

Information not available

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure
Information not available
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Information not available
Interactive effects
Information not available
ACUTE TOXICITY
LC50 (Inhalation) of the mixture:
Not classified (no significant component)

LD50 (Oral) of the mixture:
Not classified (no significant component)
LD50 (Dermal) of the mixture:
Not classified (no significant component)

QUARTZ (RCS> 10%)
LD50 (Oral) > 2000 mg/kg
LD50 (Dermal) > 2000 mg/kg
LC50 (Inhalation) > 5 mg/l/4h

Silicic acid, sodium salt (1,6<MR<2,6)
LD50 (Oral) > 2000 mg/kg
LD50 (Dermal) > 2000 mg/kg
LC50 (Inhalation) > 5 mg/l/4h

>>>

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SKIN CORROSION / IRRITATION
Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION
Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION
Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY
Does not meet the classification criteria for this hazard class

CARCINOGENICITY
Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY
Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE
Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE
Causes damage to organs

ASPIRATION HAZARD
Does not meet the classification criteria for this hazard class

12. Ecological information

12.1. Toxicity

Silicic acid, sodium salt (1,6<MR<2,6)
LC50 - for Fish 260 mg/l/96h
EC50 - for Crustacea 750 mg/l/48h
EC50 - for Algae / Aquatic Plants 345 mg/l/72h

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulative potential

Informazioni non disponibili

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

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13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.
The correct disposal code (determined by the generation of the waste) can not be specified by the manufacturer in the case of products used in various sectors.
CER code (recommended): 08 04 09.
Regulation (EU) 1357/2014: HP4 Irritant - skin irritation and eye damage; HP5 Specific target organ toxicity (STOT) / aspiration

14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

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15.Regulatory information

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

Seveso Category:Directive 2012/18/EC: None
Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product: Punto. 3
Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.
Substances subject to authorisation (Annex XIV REACH)
None
Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None
Substances subject to the Rotterdam Convention:
None
Substances subject to the Stockholm Convention:
None
Healthcare controls
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains

16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H372	Causes damage to organs through prolonged or repeated exposure
H318	Causes serious eye damage
H315	Causes skin irritation
H335	May cause respiratory irritation

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LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German)

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(Dated: 20/10/2014)

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.