



SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006 (REACH)
Zircocem-1

Date of Printing: 10.04.2024

SDS/ZIRCOCEM-1/REV 3

Created:10/04/2024

➤ **Section 1.0 Identification of the substance / mixture and of the company**

1.1 Product Identifier

Product Name : Zircocem 1
HSN Code : 3816 0000
Physical state : Powder / Liquid
Formula : NA
Synonyms : NA
Chemical family : Inorganic Silicate

1.2 Recommended use of the substance/mixture and restrictions on use

Recommended use : High Temperature Adhesive for Refractory and Ceramic

Non-isolated Intermediate
For research and industrial use only

1.3 Details of the supplier of the safety data sheet



Jyoti Ceramic Industries Pvt Ltd
C-21, N.I.C.E, Satpur Nashik Maharashtra India
Tel +91-253-2350120/2351251; Fax +91-253-2350023
www.jyoticeramic.com
E-mail: info@jyoticeramic.com

For EU member states:



Jyoti Ceramic GmbH
Frankenstr. 12, 90762 Fürth, Germany
Tel: +49 911 7871 2084; Fax +49 911 7871 2082
E-Mail: sales@jyoticeramic.com

1.4 Emergency Telephone Number

Jyoti Ceramic Industries Pvt Ltd
+ 91-253-2350120
Reachable during office hours (Indian Standard time): Sunday - Friday: 9.00 AM – 5.00 PM

Jyoti Ceramic GmbH
+49 911 7871 2084;
Reachable during office hours (Central European time): Monday - Friday: 8.30 AM – 5.00 PM



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➤ **Section 2.0 Hazard(s) identification**

2.1 Classification of the substance or mixture :

H290 : May be corrosive to metals
H301 : Toxic if swallowed
H315 : Causes skin irritation
H318 : Causes serious eye damage
H319 : Causes serious eye irritation
H335 : May cause respiratory irritation

Precautionary: Prevention
P264, P265, P270, 280

Precautionary: Response
P301, P302, P304, P305, P316, P317, P319, P321, P330, P332, P338, P340, P352,
P354, P362+P364



2.2 Label elements

:

2.3 Hazards not otherwise classified (HNOC) : No additional information available

➤ **Section 3.0 Composition / Information on Ingredients**

3.1 Substance : Not Applicable

3.2 Mixture

Name : Not available
CAS No. : Not available

Name of ingredient	CAS No	EINECS No	Wt %	GHS classification	REACH Reg.
PART 1: POWDER					
Zirconium Silicate	14940-68-2	239-019-6	> 75	Not classified	
Additive*			< 20	H301	
Quartz	14808-60-7	238-878-4	< 10	Not classified	
PART 2: LIQUID					
Potassium Silicate	1312-76-1	215-199-1	100	H290 H315 H318 H319 H335	01-2119456888

*The chemical identity is withheld because it is trade secret information of Jyoti Ceramic Industries

Full text of hazard classes and H-statement : see section 15



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➤ **Section 4.0 Description of First Aid measures**

4.1 Description of first aid measures

- General : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; If not available show packaging or label.
- After inhaled : In case there symptoms of cough or shortness of breath, move from exposure to a well ventilated place, and if breathing difficulty occurs then consult a physician.
- After skin contact : If irritation to skin occurs wash the affected area with fresh and clean water.
- After eye contact : If irritation occurs flush the eyes with fresh clean running tap water. Get medical attention if irritation continues.
- After Ingestion : If substantial quantity is swallowed, dilute with large amount of water, then consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Product and Product dust generated through handling, grinding, sanding or machining may cause irritation to the mucous membrane, eyes, skin and respiratory organs.

- Symptoms/injuries after inhalation : May cause irritation
Symptoms/injuries after skin contact : May cause skin irritation
Symptoms/injuries after eye contact : May cause eye irritation
Symptoms/injuries after ingestion : May cause irritation

4.3 Indication of any immediate medical attention and special treatment method

No additional information available

➤ **Section 5.0 Firefighting measures**

5.1 Extinguishing media

- Suitable extinguishing media : Product is not combustible and non explosive.
Use a suitable extinguishing media for the surrounding fire
- Unsuitable extinguishing media : None known

5.2 Special hazards arising from the substrate or mixture

- Fire hazard : None known

5.3 Advice for firefighters



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Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Avoid contact with skin and eyes. Do not breathe dust.

➤ **Section 6.0 Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8

Emergency procedures : Evacuate unnecessary and unprotected personnel.
Avoid formation of product dust

6.1.2 For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip clean-up crew with proper protection.
Use protective clothing, dust mask, and eye protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2 Environmental precautions : Prevent entry of product into sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3 Methods and material for contamination and cleaning up

For containment : Prevent migration and entry into sewers or streams

Methods for cleaning up : Collect the pieces or dust by vacuum or mechanically for disposal and land filling as per local regulations.
Avoid dust formation during cleaning.

6.4 Reference to other sections:

See Heading 8. Exposure controls and personal protection

➤ **Section 7.0 Handling and storage**

7.1 Precautions for safe handling

Risk of slipping if the product is spilt on the floor. Use safety shoes while handling. Wear safety glasses for eye protection. Sweep up and recover into a container for reuse or disposal. If dust



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is generated then wear personal protecting clothing including particle filter/dust mask and eye protection.

7.2 Hygiene Measures

Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.3 Conditions for safe storage, including any incompatibilities:

Storage conditions	: Keep container tightly closed
Incompatible materials	: Not known
Storage area	: Material should be stored in well protected dry place, in its original packing.

7.4 Specific end uses

See section 1.2

➤ Section 8.0 Exposure controls and personal protection

8.1 Control parameters

Airbourne product dust generated through handling, grinding, or sanding may cause irritation to the mucous membrane, eyes, skin and respiratory organs. The limits of dust concentration (mg/m³) at the work-place have to be considered.

The general dust limit according to the TRGS 900, for dust which does not exhibit any mutagenic, carcinogenic, fibrogenic, allergising or toxic effect applies:

The OEL value for A dust (alveolar dust fraction) is 1.25 mg/m³

The OEL value for E dust (inhalable dust fraction) is 10 mg/m³

Zirconium Oxide (1314-23-4)*		
ACGIH	STEL (mg/m ³)	10 mg/m ³ Zr
	TWA (mg/m ³)	5 mg/m ³ Zr
OSHA	STEL (mg/m ³)	10 mg/m ³ Zr
	TWA (mg/m ³)	5 mg/m ³ Zr
Silicon Dioxide (7631-86-9)**		
ACGIH	TWA (mg/m ³)	10 mg/m ³
DFG	MAK(mg/m ³)	4 mg/m ³

*The values are for total dust containing no asbestos and < 1 % crystalline silica.

8.2 Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Suitable ventilation / dust extraction system must be used in the workplace or on the equipment.

Personal protective equipment : Avoid all unnecessary exposure. Emergency eye



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wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection	: Neoprene or nitrile rubber gloves
Eye protection	: Safety glasses / goggles
Skin and body protection	: Wear suitable protective clothing. After work ensure that skin is cleaned and hand care products are used.
Respiratory protection	: In case of dust exposure respiratory protection equipment must be worn. FFP2/FFP3 dust masks with particle filters are recommended.

➤ **Section 9.0 Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Appearance	Part 1: Powder ,	Part 2: Liquid
Odour	None	
Melting point	Part 1: >1800°C ,	Part 2: NA
Freezing point	Not Applicable	
Ignition point	Non Flammable	
Density (g/cc)	Part 1: 1.1 _(powder) ,	Part 2: 1.5 g/cc
Solubility in water	Part 1: Non soluble,	Part 2: Soluble
PH	Part 1: NA,	Part 2: 12 - 14
Vapour Pressure	Not Applicable	
Viscosity	Part 1: NA,	Part 2: 300 cps
Vapour Density	Not Applicable	
Partition Co-efficient	Not Applicable	
Explosive Properties	Not Applicable	
Oxidising Properties	Not Applicable	

9.2. Other information

No additional information available

➤ **Section 10.0 Stability and reactivity**

10.1 Reactivity	: Not known
10.2 Chemical stability	: Stable
10.3 Possibility of hazardous reactions	: Not known
10.4 Conditions to avoid	: Not known
10.5 Incompatible materials	: Avoid contact with acids, and acid vapors



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10.6 Hazardous decomposition products : Not known

➤ **Section 11.0 Toxicological information**

11.1 Information on the toxicological effects

Acute toxicity

Potassium Silicate

Oral: LD50 (rat, female)

> 5000 mg/kg bw

Inhalation: LC50 (rat)

> 2.06 g/m³

dermal: LD50 (rat)

> 5000 mg/kg bw

Skin corrosion/irritation

Potassium Silicate

Dermal: Long Term, DNEL, (Workers)

1.49 mg/kg bw/day

Serious eye damage/irritation

: H318, H319

Respiratory or skin sensitization

Potassium Silicate

Inhalation: Long Term, DNEL (Workers)

5.61 mg/m³

Germ cell mutagenicity

: Not classified

Carcinogenicity

: No evidence of carcinogenic effect

Reproductive toxicity

: Not classified

Specific target organ toxicity (single exposure)

: Not classified

Specific target organ toxicity (repeated exposure)

: Not classified

Aspiration hazard

: Not classified

Symptoms/injuries after inhalation

: Product dust may cause Respiratory irritation

Symptoms/injuries after skin contact

: Product dust may cause skin irritation

Symptoms/injuries after eye contact

: May cause eye irritation

Symptoms/injuries after ingestion

: H301

➤ **Section 12.0 Ecological information**

If used properly, no environmental problems are anticipated. Do not empty the product or ground water or drains.

12.1 Toxicity

:

Potassium Silicate

PNEC aqua (freshwater)

7.5 mg/L

12.2 Persistence & Degradability

: Not known

12.3 Bioaccumulative Potential

: Not known

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

: Product does not contain PBT or vPvB substances (see. REACH Annex XIII)

12.6 Other Adverse Effect

Effect on ozone layer

: Not known

Effect on the global warming

: No known effects from this product.



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GWP mix comment : No known effects from this product.

➤ **Section 13.0 Disposal considerations**

13.1 Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer

Waste disposal recommendations : Comply with local regulations. If approved, flush with water to chemical sewer. For large quantities, neutralize and landfill solids or flush neutral liquid to sewer with plenty of water.

Ecology - waste materials : Avoid release to the environment

➤ **Section 14.0 Transport information**

No dangerous goods as defined by ADR/RID/ADN/GGVSEB, ICAO/IATA, IMDG, USDOT

14.1 UN number : Not regulated for transport.

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 the user : See section 7 and 8

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
: Not applicable

➤ **Section 15.0 Regulatory information**

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

Classification or labelling applicable in accordance with Regulation (EC) No 1272/2008

H290 : May be corrosive to metals
H301 : Toxic if swallowed
H315 : Causes skin irritation
H318 : Causes serious eye damage
H319 : Causes serious eye irritation
H335 : May cause respiratory irritation



None of the chemicals in this product are considered highly hazardous by OSHA.



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15.2.: Chemical safety assessment

A chemical safety assessment of the product or its components is not available.

➤ Section 16.0 Other information

16.1.: Abbreviations and acronyms

REACH: Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals.

TWA: Time Weighted Average;

OEL: Occupational exposure limit;

ACGIH: American Conference of Governmental Industrial Hygienists;

OSHA: Occupational Safety and Health Administration;

CAS No. : Chemical Abstract Service Registration Number;

EINECS: European Inventory of Existing Commercial Chemical Substances

GHS: The Globally Harmonized System of Classification and labelling;

IATA: International Air Transport Association;

DOT: Department Of Transport;

MARPOL: The International Convention for Prevention of Marine Pollution For Ships

IMDG: International Maritime Dangerous Goods;

RID: Regulations concerning the International Transport of Dangerous Goods by Rail;

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road;

ICAO: International Civil Aviation Organization

PBT: Persistent, bioaccumulative and toxic substances

vPvB: Very persistent and very bioaccumulative substances

Prepared by safety and environment affairs.

Date of issue: 10.04.24

Version: 3.0

This SDS covers the product under the name of Alucem-HT2 Adhesive Cement. The information is based on the current state of our knowledge and relates to the product in its condition as applied. However, no guarantee, warranty or assurance is accepted either explicitly or implicitly for the accuracy, reliability and/or completeness of this information.

We expressly call on the person receiving this information to check on the suitability and completeness of this information for their particular application.