




# SAFETY DATA SHEET


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HY-Bond Zinc Phosphate Cement  
POWDER  
Printing date: May 1, 2024


## SECTION 1. Identification of the substance or mixture and of the supplier

- 1.1 Product identifier  
Trade Name:  
**HY-Bond Zinc Phosphate Cement "POWDER"**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against  
Relevant identified uses: Dental material  
Uses advised against: No further data
- 1.3 Details of the supplier of the safety data sheet  
Company/Undertaking identification  
Manufacturer's Name: **SHOFU DENTAL CORPORATION**  
Address: 1225 Stone Drive, San Marcos, CA 92078 USA  
Toll Free: 1-800-827-4638  
Phone: 760-736-3277  
Fax: 760-736-3276  
E-Mail: customer-service@shofu.com  
Section in Charge: Quality Management & Regulatory Affairs
- 1.4 Emergency Telephone Number  
For emergencies only. Call CHEMTREC: +1 703-741-5970 / 1-800-424-9300 (24 hours)

## SECTION 2. Hazards identification

- 2.1 GHS Classification  
HEALTH HAZARDS  
SKIN CORROSION/IRRITATION Category 2  
EYE DAMAGE/IRRITATION Category 1  
SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)  
Category 1 (systemic toxicity)  
Category 2 (bone)  
SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)  
Category 1(lung)
- ENVIRONMENTAL HAZARD  
HAZARDOUS TO THE AQUATIC ENVIRONMENT-ACUTE HAZARD  
Category 1  
HAZARDOUS TO THE AQUATIC ENVIRONMENT-CHRONIC HAZARD  
Category 1
- 2.2 Label elements  
SYMBOL
-   
GHS05

  
GHS08

  
GHS09
- SIGNAL WORD: Danger
- HAZARD STATEMENTS  
Causes skin irritation.



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Causes serious eye damage.  
Causes damage to organs (systemic toxicity).  
May cause damage to organs (bone).  
Causes damage to organs through prolonged or repeated exposure (lung).  
Toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

## PRECAUTIONARY STATEMENTS

### [Prevention]

Obtain special instruction before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.

### [Response]

IF ON SKIN: Wash with plenty of water and soap.  
If skin irritation occurs: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Get medical advice/attention if you feel unwell.  
Collect spillage.

### [Storage]

Store in a cool and dark area.

### [Disposal]

Dispose of contents and container in accordance with regulation.

## 2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

## SECTION 3. Composition/information on ingredients

### 3.1 Chemical characterization: Mixtures

### 3.2 Ingredients and composition:

Component	CAS-No	Weight %
Zinc Oxide	1314-13-2	80-90
Magnesia (MgO)	1309-48-4	
Others	—	

### 3.3 Additional information: For the wording of the listed risk phrases refer to section 2

## SECTION 4. First-aid measures

### 4.1 Description of first aid measures



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- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present. and easy to do. If eye irritation persists, get medical advice/attention.
- Skin contact: Wash immediately with soap and plenty of water. If on skin, skin irritation, get medical advice/attention.
- Ingestion: Rinse mouth and seek medical advice if necessary.
- Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptom concerning breath goes out, call a POISON CENTER or doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## SECTION 5. Fire-fighting measures

5.1 Extinguishing Media:

This product is not flammable.

5.2 Special hazards arising from the substance or mixture:

No further relevant information available.

5.3 Advice for firefighters:

No special measures required.

## SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

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

6.2 Environmental Precautions:

Do not allow product to reach sewage system or water bodies.

Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning Up:

Wipe up and discard in a suitable container.

6.4 Reference to other section:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## SECTION 7. Handling and storage

7.1 Precautions for safe handling:

Handle in a well ventilated area. Avoid prolonged inhalation.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool and dry conditions with lid tightly closed.

7.3 Specific end use(s):

No further relevant information available.

## SECTION 8. Exposure controls/personal protection

8.1 Control parameters:



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Exposure limits: Zinc Oxide;  
[ACGIH 2013] TLV-TWA 2 mg/m<sup>3</sup> (R)  
TLV-STEL 10 mg/m<sup>3</sup> (R)

## 8.2 Exposure controls:

### Respiratory Protection:

Dust mask

### Skin Protection:

Hand Protection

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### • Material of 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.

#### • Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### • For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:

Butyl rubber, BR  
Nitrile rubber, NBR

Eye Protection: Safety goggles

## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties:

Appearance/Odor/Colour:	White odourless powder.
Odour threshold:	Not determined.
pH:	Not determined.
Melting point/freezing point:	Not determined.
Boiling point:	Not determined.
Flash point:	Not determined.
Evaporation rate:	Not determined.
Flammability (solid, gas):	Not applicable.
Upper/lower flammability or explosive limits:	Not determined.
Vapour pressure:	Not determined.
Vapour density:	Not determined.
Relative density:	≈ 2.5 (water=1)
Solubility: water solubility	Insoluble.
Partition coefficient (n-octanol/water):	Not determined.



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Auto-ignition temperature: Not determined.  
Decomposition temperature: Not determined.  
Viscosity: Not determined.  
Explosive properties: Not applicable.  
Oxidising properties: Not applicable.

9.2 Other information:  
No further relevant information available.

## SECTION 10. Stability and reactivity

10.1 Reactivity:  
No further relevant information available.  
10.2 Chemical stability:  
Stable under normal temperatures and pressures.  
10.3 Possibility of hazardous reactions:  
No dangerous reactions known.  
10.4 Condition to Avoid:  
Avoid direct sunlight and high temperature.  
10.5 Incompatible materials:  
No further relevant information available.  
10.6 Hazardous Decomposition Products:  
None under normal conditions of storage and use.

## SECTION 11. Toxicological information

11.1 Information on toxicological effects:  
Acute toxicity: Zinc oxide;  
Oral rat LD50 > 5000 mg/kg  
Dermal rabbit LD50 > 5000 mg/kg  
Inhalation (dust) rat LC50 > 5.7 mg/L  
Skin corrosion/irritation: Skin Irrit. 2; H315 Causes skin irritation.  
Eye damage/irritation: Eye Dam.1; H318 Causes serious eye damage.  
Sensitization to the respiratory tract:  
Based on available data, the classification criteria are not met.  
Skin sensitization: Based on available data, the classification criteria are not met.  
Germ cell mutagenicity/Genotoxicity:  
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.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure):  
STOT SE 1; H370 Causes damage to organs (systemic toxicity).  
STOT SE 2; H371 May cause damage to organs (bone).  
Specific target organ toxicity (repeated exposure):  
STOT RE 1; H372 Causes damage to organs through prolonged or repeated exposure (lung).  
Aspiration hazard: Based on available data, the classification criteria are not met.



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- 11.2 Information on other hazards:  
No further relevant information available.

## SECTION 12. Ecological information

- 12.1 Toxicity:  
No further relevant information available.
- 12.2 Persistence and degradability:  
No further relevant information available.
- 12.3 Bioaccumulative potential:  
No further relevant information available.
- 12.4 Mobility in soil:  
No further relevant information available.
- 12.5 Results of PBT and vPvB assessment:  
Not applicable.
- 12.6 Other adverse effects:  
No further relevant information available.

## SECTION 13. Disposal considerations

- 13.1 Waste treatment methods:  
Dispose of contents/container to in accordance with local/regional/national/international regulations.

## SECTION 14. Transport information

- 14.1 UN number: 3077
- 14.2 UN proper shipping name: Environmentally hazardous substances, solid, n.o.s. (zinc oxide)
- 14.3 Transport hazard class (es): 9
- 14.4 Packing group: III
- 14.5 Environmental hazards: Yes
- 14.6 Special precautions for user: Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:  
Not applicable.

## SECTION 15. Regulatory information

Follow all regulations in your country.

## SECTION 16. Other information

This product is intended for use by dental professionals (instrument/material).

Relevant phrases:

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H370 Causes damage to organs (systemic toxicity).
- H371 May cause damage to organs (bone).



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H372 Causes damage to organs through prolonged or repeated exposure (lung).

H401 Toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

## Abbreviations and acronyms:

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative