# This SDS packet was issued with item:

076362396

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

076362420

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

1.1 Product Name:

### HY-Bond Polycarboxylate Cement "POWDER"

1.2 Company /Undertaking identification

Manufacturer's Name: SHOFU INC.

Address: 11 Kamitakamatsu-cho, Fukuine, Higashiyama-ku, Kyoto 605-0983, JAPAN

Phone: +81-75-561-1112 Fax: +81-75-561-2273

Section in Charge: Quality Assurance Section

Date Prepared: 2014.9.25

1.3 Emergency Telephone Number

+81-75-561-1112

Z.maz	zard	SIC	ient	ITIC	ati	on

PHYSICAL HAZARDS FLAMMABLE SOLIDS Not Classified

PYROPHORIC SOLIDS Not Classified SELF-HEATING SUBSTANCES AND MIXTURES Not Classified SUBSTANCES AND MIXTURES WHICH,IN CONTACT Not Classified

WITH WATER, EMIT FLAMMABLE GASAS

OXIDIZING SOLIDS Not Classified

HEALTH HAZARDS ACUTE TOXICITY-ORAL Not Classified

ACUTE TOXICITY-INHALATION(DUST)

SKIN CORROSION/IRRITATION

EYE DAMAGE/IRRITATION

SENSITIZATION-SKIN

CARCINOGENICITY

TOXIC TO REPRODUCTION

SPECIFIC TARGET ORGAN SYSTEMIC

Not Classified
Not Classified

Not Classified

Category 1

TOXICITY (SINGLE EXPOSURE) (systemic toxicity)
SPECIFIC TARGET ORGAN SYSTEMIC Category 1(lung)
TOXICITY (REPEATED EXPOSURE) Category 2(bone)

The thing without mention is out of a classification object. Or cannot classify it.

LABEL ELEMENTS SYMBOL





SIGNAL WORD

Danger

HAZARD STATEMENTS Causes skin irritation

Causes serious eye damage

Causes damage to organs(systemic toxicity)

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

Waming May cause damage to organs through prolonged or

repeated exposure(bone)

PRECAUTIONARY STATEMENTS

[Prevention]

Obtain special instruction before use.

Do not handle until all safety precautions have been read and understood.

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

Do not breathe dust.

Use personal protective equipment as required.

Wash hands thoroughly after handling.

[Response]

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash before reuse.

IF ON SKIN: Wash with plenty of soap and water.

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.

[Storage]

Store in a cool and dark area.

[Disposal]

Dispose of contents and container in accordance with regulation.

#### 3. Composition/information on ingredients

C omposition

Zinc Oxide (ZnO) [Cas No.1314-13-2] Magnesia(MgO) [Cas No.1309-48-4] >80%

Others

#### 4.First-aid measures

4.1 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.

4.2 Skin contact: Wash immediately with saop and plenty of water. If on skin, skin irritation, get medical

advice/attention.

4.3 Ingestion: Rinse mouth and seek medical advice if necessary.

4.4 Inhalation; Remove victim to flesh air and keep at rest in a position comfortable for breathing.

If symptom concerning breath gose out, call a POISON CENTER to doctor.

### 5.Fire-fighting measures

#### This product is non-flammable.

5.1 Suitable Extinguishing Media: N/A
5.2 Extinguishing Media Should not be used: N/A
5.3 Special Exposure Hazards Arising: N/A
5.4 Special Protective Equipment: N/A

#### 6.Accidental release measures

6.1 Personal Precautions: See section 8. Do not breath dust.

6.2 Environmental Precautions: Send to approved treatment/disposal company or

dispose according to local, state and federal regulations.

6.3 Methods for Cleaning Up: Wipe up and discard in a suitable container.

### 7.Handling and storage

7.1 Handling: Handle in a well ventilated area. Avoid prolonged inhalation.

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

#### 8.Exposure controls/personal protection

ACGIH TLV. 8.1Exposure limits: Chemical name

> $2 \text{ mg/m}^3(\text{TWA})$ Zinc Oxide  $10 \text{ mg/m}^3(\text{TWA})$

Magnesium Oxide

8.2 Respiratory Protection: Dust mask(may be) 8.3 Hand Protection: Latex or rubber gloves

8.4 Eye Protection: Safety goggles or eye protection.

8.5 Skin Protection: Not required. General protective overalls.

### 9. Physical and chemical properties

9.1 Appearance/Odour/pH Yellowish white odorless powder

9.2 Boiling Point/Boiling Range: N/D 9.3 Melting Point/Melting Range: N/D 9.4 Flash point: N/D 9.5 Auto flammability: N/D 9.6 Explosive Properties: N/D N/D 9.7 Oxidizing Properties: 9.8 Vapour Pressure: N/D ≒2.3 9.9 Relative Density: 9.10 Solubility: water solubility Insoluble

#### 10.Stability and reactivity

10.1 Stability: Stable under recommended storage conditions.

10.2 Reactivity: N/A

10.3 Condition to avoid: Avoid direct sunlight and high temperature.

10.4 Materials to avoid: N/A

#### 11.Toxicological information

Zinc Oxide (ZnO) Oral LD50 >5000mg/kg rat

> Inhalation (dust) LC50 > 5.7 mg/kgrat

TCLo(ihl,human): 400mg/m<sup>3</sup>(38MKAJ 2A,1745,1981) Magnesia(MgO)

#### 12. Ecological information

DECOMPOSITION : No data available. PERSISTENCE : No data available. AQUATIC TOXICITY: No data available.

### 13.Disposal considerations

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

### 14.Transport information

Hazard class or division: Not classified as hazardous. AIR: Transport in accordance with ICAO IATA-DGR

UN Number: Not applicable

Protect from direct sun light in transportation, and confirm the container does not leak. Carefully load it onto a transporter without dropping, overturning or damaging so that it will

stably stays on the transporter.

# 15.Regulatory information

Follow all regulations in your country.

### 16.Other information

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

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

1.1 Product Name:

HY-Bond Zinc Phosphate Cement "POWDER"

1.2 Company / Undertaking identification

Manufacturer's Name: SHOFU INC.

Address: 11 Kamitakamatsu-cho, Fukunine, Higashiyama-ku, Kyoto 605-0983 ,JAPAN

Phone: +81-75-561-1112 Fax: +81-75-561-2273

Section in Charge: Quality Assurance Section

Date Prepared: 2014.9.26

1.3 Emergency Telephone Number

+81-75-561-1112

2.Hazards	identification

GHS CLASSIFICATION

PHYSICAL HAZARDA FLAMMABLE SOLIDS Not Classified

PYROPHORIC SOLIDS

Not Classified SELF-HEATING SUBSTANCES AND MIXTURES

Not Classified SUBSTANCES AND MIXTURES WHICH,IN CONTACT Not Classified

WITH WATER, EMIT FLAMMABLE GASAS

OXIDIZING SOLIDS Not Classified
HEALTH HAZARDS ACUTE TOXICITY-ORAL Not Classified

ACUTE TOXICITY-INHALATION(DUST)

SKIN CORROSION/IRRITATION

EYE DAMAGE/IRRITATION

SENSITIZATION-SKIN

CARCINOGENICITY

TOXIC TO REPRODUCTION

SPECIFIC TARGET ORGAN SYSTEMIC

Not Classified
Not Classified
Category 1

TOXICITY (SINGLE EXPOSURE) (systemic toxicity)
SPECIFIC TARGET ORGAN SYSTEMIC Category 1(lung)
TOXICITY (REPEATED EXPOSURE) Category 2(bone)

The thing without mention is out of a classification object. Or cannot classify it.

LABEL ELEMENTS SYMBOL





Danger

SIGNAL WORD

HAZARD STATEMENTS Causes skin irritation

Causes serious eye damage

Causes damage to organs(systemic toxicity)

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

Waming May cause damage to organs through prolonged or

repeated exposure(bone)

PRECAUTIONARY STATEMENTS

[Prevention]

Obtain special instruction before use.

# MATERIAL SAFETY DATA SHEET

Do not handle until all safety precautions have been read and understood.

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

Wear protective gloves/protective clothing/eye protection/face

protection.

Do not breathe dust.

Wash hands thoroughly after handling.

[Response]

Get medical advice/attention if you feel unwell.

Take off contaminated clothing and wash before reuse.

IF ON SKIN: Wash with plenty of soap and water .

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.

[Storage]

Store in a cool and dark area.

[Disposal]

Dispose of contents and container in accordance with regulation.

> 80%

### 3. Composition/Information on Ingredients

C omposition

Zinc Oxide (ZnO) [Cas No.1314-13-2]

Magnesia(MgO) [Cas No.1309-48-4]

Others

# 4.First-aid measures

4.1 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.

4.2 Skin contact: Wash immediately with saop and plenty of water. If on skin, skin irritation, get medical

advice/attention.

4.3 Ingestion: Rinse mouth and seek medical advice if necessary.

4.4 Inhalation: Remove victim to flesh air and keep at rest in a position comfortable for breathing.

If symptom concerning breath gose out, call a POISON CENTER to doctor.

### 5. Fire-fighting measures

This product is non-flammable.

5.1 Suitable Extinguishing Media: N/A
5.2 Extinguishing Media Should not be used: N/A
5.3 Special Exposure Hazards Arising: N/A
5.4 Special Protective Equipment: N/A

### 6.Accidental release measures

6.1 Personal Precautions: See section 8. Do not breath dust.

6.2 Environmental Precautions: Send to approved treatment/disposal company or

dispose according to local, state and federal regulations.

6.3 Methods for Cleaning Up: Wipe up and discard in a suitable container.

### 7. Handling and storage

7.1 Handling: Handle in a well ventilated area. Avoid prolonged inhalation.

# MATERIAL SAFETY DATA SHEET

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

8.Exposure controls/personal protection

8.1Exposure limits: Chemical name ACGIH TLV.

Zinc Oxide 2 mg/m3(TWA)

Magnesium Oxide 10 mg/m3(TWA)

8.2 Respiratory Protection: Dust mask(may be)8.3 Hand Protection: Latex or rubber gloves

8.4 Eye Protection: Safety goggles or eye protection.

8.5 Skin Protection: Not required. General protective overalls.

# 9. Physical and chemical properties

9.1 Appearance/Odour/pH White odourless powder

9.2 Boiling Point/Boiling Range: N/D 9.3 Melting Point/Melting Range: N/D 9.4 Flash point: N/D 9.5 Auto flammability: N/D 9.6 Explosive Properties: N/D 9.7 Oxidizing Properties: N/D N/D 9.8 Vapour Pressure: 9.9 Relative Density: 2.5 9.10 Solubility: water solubility Insoluble

### 10.Stability and reactivity

10.1 Stability: Stable under recommended storage conditions.

10.2 Reactivity: N/A

10.3 Condition to avoid: Avoid direct sunlight and high temperature.

10.4 Materials to avoid: N/A

### 11.Toxicological information

Zinc Oxide (ZnO) Oral rat LD50 > 5000mg/kg

Inhalation (dust) rat LC50 > 5.7mg/kg

Magnesia(MgO) TCLo(ihl,human): 400mg/m3(38MKAJ 2A,1745,1981)

### 12. Ecological information

DECOMPOSITION : No data available.
PERSISTENCE : No data available.
AQUATIC TOXICITY : No data available.

### 13.Disposal considerations

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

# 14.Transport information

Hazard class or division: Not classified as hazardous. AIR: Transport in accordance with ICAO·IATA-DGR

UN Number: Not applicable

# MATERIAL SAFETY DATA SHEET

Protect from direct sun light in transportation, and confirm the container does not leak. Carefully load it onto a transporter without dropping, overturning or damaging so that it will stably stays on the transporter.

# 15.Regulatory information

Follow all regulations in your country.

# 16.Other information

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



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HY-Bond Zinc Phosphate Cement
POWDER

Printing date: August 26, 2019

### 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 date 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 2

HAZARDOUS TO THE AQUATIC ENVIRONMENT-CHRONIC HAZARD

Category 3

The thing without mention is out of a classification object. Or cannot classify it.

2.2 Label elements SYMBOL



GHS05 GHS08

SIGNAL WORD Danger

Version Number 12



HY-Bond Zinc Phosphate Cement POWDER

Printing date: August 26, 2019

#### HAZARD STATEMENTS

Causes skin irritation

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.

Harmful 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 Description: Mixture of substances listed below with nonhazardous additions.
- 3.3 Dangerous components:

Zinc Oxide [Cas No. 1314-13-2] 80-90 %

Other components:

Magnesia(MgO) [Cas No.1309-48-4]

Others

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

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HY-Bond Zinc Phosphate Cement POWDER

Printing date: August 26, 2019

#### SECTION 4. First-aid measures

4.1 Description of first aid measures

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:

Send to approved treatment/disposal company or dispose according to local, state and federal regulations.

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.

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Printing date: August 26, 2019

### SECTION 8. Exposure controls/personal protection

8.1 Control parameters:

Exposure limits Zinc Oxide;

[ACGIH 2013] TLV-TWA  $2 \text{ mg/m}^3 (R)$ 

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

1 Information on basic physical and chemical properties

Appearance/Odor/Colour: White odourless powder

Odour threshold Not determined. Not determined. Hq 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:  $\approx$  2.5 (water=1) Solubility: water solubility Insoluble.

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Printing date: August 26, 2019

Partition coefficient: n-octanol/water
Auto-ignition temperature

Decomposition temperature

Viscosity

Not determined.

Not determined.

Not determined.

Not determined.

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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HY-Bond Zinc Phosphate Cement
POWDER
Printing data: August 26, 2010

Printing date: August 26, 2019

### **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 substance, solid, n.o.s.

14.3 Transport hazard class(es):914.4 Packing group: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 informati**

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)

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

H401 Toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

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

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page 7/7 SAFETY DATA SHEET

HY-Bond Zinc Phosphate Cement

	POWDER
LCEO, Lethal concentration FO nargent	Printing date: August 26, 2019
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	

Version Number 12 Revision date: August 9, 2019