

SAFETY DATA SHEET

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

2. Hazards identification

GHS CLASSIFICATION

PHYSICAL HAZARDS	FLAMMABLE SOLIDS	Not Classified
	PYROPHORIC SOLIDS	Not Classified
	SELF-HEATING SUBSTANCES AND MIXTURES	Not Classified
	SUBSTANCES AND MIXTURES WHICH,IN CONTACT WITH WATER,EMIT FLAMMABLE GASAS	Not Classified
HEALTH HAZARDS	OXIDIZING SOLIDS	Not Classified
	ACUTE TOXICITY-ORAL	Not Classified
	ACUTE TOXICITY-INHALATION(DUST)	Not Classified
	SKIN CORROSION/IRRITATION	Category 2
	EYE DAMAGE/IRRITATION	Category 1
	SENSITIZATION-SKIN	Not Classified
	CARCINOGENICITY	Not Classified
	TOXIC TO REPRODUCTION	Not Classified
	SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)	Category 1 (systemic toxicity)
	SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)	Category 1(lung) 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.

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.

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

Composition

Zinc Oxide (ZnO) [Cas No.1314-13-2] > 80%

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 soap 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 fresh air and keep at rest in a position comfortable for breathing. If symptom concerning breath goes 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.

SAFETY DATA SHEET

8.Exposure controls/personal protection

<i>8.1 Exposure limits:</i>	Chemical name	ACGIH TLV.
	Zinc Oxide	2 mg/m ³ (TWA)
	Magnesium Oxide	10 mg/m ³ (TWA)
<i>8.2 Respiratory Protection:</i>	Dust mask(may be)	
<i>8.3 Hand Protection:</i>	Latex or rubber gloves	
<i>8.4 Eye Protection:</i>	Safety goggles or eye protection.	
<i>8.5 Skin Protection:</i>	Not required. General protective overalls.	

9.Physical and chemical properties

<i>9.1 Appearance/Odour/pH</i>	Yellowish white odorless powder
<i>9.2 Boiling Point/Boiling Range:</i>	N/D
<i>9.3 Melting Point/Melting Range:</i>	N/D
<i>9.4 Flash point:</i>	N/D
<i>9.5 Auto flammability:</i>	N/D
<i>9.6 Explosive Properties:</i>	N/D
<i>9.7 Oxidizing Properties:</i>	N/D
<i>9.8 Vapour Pressure:</i>	N/D
<i>9.9 Relative Density:</i>	≐2.3
<i>9.10 Solubility: water solubility</i>	Insoluble

10.Stability and reactivity

<i>10.1 Stability:</i>	Stable under recommended storage conditions.
<i>10.2 Reactivity:</i>	N/A
<i>10.3 Condition to avoid:</i>	Avoid direct sunlight and high temperature.
<i>10.4 Materials to avoid:</i>	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/m ³ (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
 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

SAFETY DATA SHEET

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)



SAFETY DATA SHEET

page 1/5
HY-Bond Polycarboxylate Cement
LIQUID
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 Polycarboxylate Cement "LIQUID"
- 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
PHYSICAL HAZARDS
FLAMMABLE LIQUIDS Not Classified

The thing without mention is out of a classification object. Or cannot classify it.
- 2.2 Label elements
SYMBOL Void
SIGNAL WORD Void
HAZARD STATEMENTS Void
PRECAUTIONARY STATEMENTS
[Prevention]
Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
[Response]
Get medical advice/attention if you feel unwell.
[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.



SAFETY DATA SHEET

page 2/5
HY-Bond Polycarboxylate Cement
LIQUID
Printing date: August 26, 2019

SECTION 3. Composition/information on ingredients

- 3.1 Chemical characterization: Mixtures
- 3.2 Description: -
- 3.3 Dangerous components: Void
 - Copolymer of acrylic acid and tricarboxylic acid (Water solution)
 - Tartaric acid [Cas No.87-69-4] 0.5-1 %
 - Others
- 3.4 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
 - 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:
 - Foam, CO₂, Powder, Dry sand
- 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.
- 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.



SAFETY DATA SHEET

page 3/5
HY-Bond Polycarboxylate Cement
LIQUID
Printing date: August 26, 2019

SECTION 7. Handling and storage

- 7.1 Precautions for safe handling:
Avoid inhaling and contact with eyes and skin.
Keep away from ignition sources and separate from strong oxidizer.
- 7.2 Conditions for safe storage, including any incompatibilities:
Store in a cool and dry place out of direct sunlight and source of ignition.
Separated from organic peroxide. Keep containers closed.
- 7.3 Specific end use(s):
No further relevant information available.

SECTION 8. Exposure controls/personal protection

- 8.1 Control parameters:
Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- 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: | Odourless, color less liquid |
| Odour threshold | Not determined. |
| pH | Not determined. |



SAFETY DATA SHEET

page 4/5
HY-Bond Polycarboxylate Cement
LIQUID
Printing date: August 26, 2019

Melting point/freezing point	Not determined.
Boiling Point:	≈ 100 °C
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:	≈ 1.2 (water=1)
Solubility: water solubility	Soluble.
Partition coefficient: n-octanol/water	Not determined.
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: | Based on available data, the classification criteria are not met. |
| Skin corrosion/irritation: | Based on available data, the classification criteria are not met. |
| Eye damage/irritation: | Based on available data, the classification criteria are not met. |
| 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. |



SAFETY DATA SHEET

page 5/5
HY-Bond Polycarboxylate Cement
LIQUID
Printing date: August 26, 2019

Specific target organ toxicity (single exposure):
Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure):
Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

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: Void
- 14.2 UN proper shipping name: Void
- 14.3 Transport hazard class(es): Void
- 14.4 Packing group: Void
- 14.5 Environmental hazards: No
- 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)

Abbreviations and acronyms:

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative