This SDS packet was issued with item:
076362420

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

076362446
Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

HY-Bond Zinc Phosphate Cement Powder

Section I
Manufacturer's Name
Shofu Dental Corporation
Address (Number, Street, City, State and ZIP Code)
4025 Bohannon Drive
Menlo Park, CA 94025

Emergency Telephone Number
(415) 324-0085

Date Prepared
May 6, 1988

Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Section III - Physical/Chemical Characteristics

Section IV - Fire and Explosion Hazard Data

Section V - Reactivity Data

Section VI - Health Hazard Data

Section VII - Precautions

Section VIII - Control Measures

U.S. Department of Labor
Occupational Safety and Health Administration
Non-Mandatory Form
Form Approved
OMB No. 1218-0072

Note: Blank spaces are not permitted if any text is not applicable or if information is available, the space must be marked as空白.

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity Common Names)

OSHA REL
ACGIH TLV
Other Limits Recommended
% Removal

Section III - Physical/Chemical Characteristics

Appearance and Odor
Fine, white, odorless powder

Solubility in Water
Insoluble

Specific Gravity (g/dL + 1)
N/A

Melting Point
N/A

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)
N/A

Expansion Rate
N/A

Extinguishing Media
N/A

Special Fire Fighting Procedures
N/A

Flammable Limits
N/A

Upper (UEL)

Section V - Reactivity Data

Stability
Unstable

Conditions to Avoid

Incompatibility (Materials to Avoid)

N/A

Hazardous Decomposition or Byproducts

N/A

Section VI - Health Hazard Data

Health Hazards (Acute and Chronic)

Possible

Some may cause irritation due to foreign body reaction

Section VII - Precautions

Safe Handling and Use

Handling of product exclusively by dental specialists according to instructions for use.

Other Precautions

Section VIII - Control Measures

Protective Equipment

Avoid prolonged inhalation or eye contact

Emergency and First Aid Procedures

Inhalation for prolonged period: Remove to fresh air. Consult physician if necessary.

Section IX - Disposal

Disposal in accordance with federal, state, and local regulations

Section X - Transportation Information

Section XI - Regulatory Information

OSHA 1/4, Sept 1988

May 6, 1988

Shofu Dental Corporation

4025 Bohannon Drive
Menlo Park, CA 94025

Material Safety Data Sheet

Hazardous Ingredients/Identity Information

U.S. Department of Labor
Occupational Safety and Health Administration
Form Adopted
OMB No. 1218-0072

Identification (As Listed on Label and List)
HT-Hond Zinc Phosphate Cement Liquid

Section I - Physical/Chemical Characteristics

Boiling Point
50°F

Vapor Pressure (mm Hg)
0.001

Vapor Density (Air = 1)
1.4

Solubility in Water
Miscible

Appearance and Odor
Viscous, colorless, odorless liquid

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)
N/A

Extinguishing Media
N/A

Special Fire Fighting Procedures
N/A

Unusual Fire and Explosion Hazards
N/A

Section V - Reactivity Data

Stability
Unstable

Conditions to Avoid
N/A

Incompatibility (Materials to Avoid)
Strong caustics, most metals

Hazardous Decomposition or Byproducts
Phosphoric Acid fumes

Section VI - Health Hazard Data

Routes of Entry
Inhalation: Possible
Skin: Possible
Ingestion: Possible

Health Hazards (Acute and Chronic)
Acute: eyes - irritation and eye burns
Chronic: Irritation of the skin

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled
Wipe up and discard in a suitable manner

Section VIII - Control Measures

Respiratory Protection (Specify Type)
Avoid prolonged inhalation

Ventilation
Local Exhaust

Protective Clothing or Equipment
N/A

Other Precautions
Handling of product exclusively by dental specialists according to instruction for use.
1. Identification of the substance or mixture and of the supplier

1.1 Product Name:

HY-Bond Zinc Phosphate Cement “LIQUID”

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

<table>
<thead>
<tr>
<th>GHS CLASSIFICATION</th>
<th>PHYSICAL HAZARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SELF-REACTIVE SUBSTANCES AND MIXTURES</td>
</tr>
<tr>
<td></td>
<td>SUBSTANCES AND MIXTURES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GAS</td>
</tr>
</tbody>
</table>

| HEALTH HAZARDS | ACUTE TOXICITY—ORAL | Category 4 |
|                | ACUTE TOXICITY—DERMAL | Not Classified |
|                | ACUTE TOXICITY—INHALATION (DUST) | Not Classified |
|                | ACUTE TOXICITY—INHALATION (MIST) | Not Classified |
|                | SKIN CORROSION/IRRITATION | Category 1A |
|                | 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 2 |
|                | (systemic toxicity) | Category 3 |
|                | (respiratory tract irritation) | |
|                | SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE) | division 2(lung) |

| ENVIRONMENTAL HAZARD | HAZARDOUS TO THE AQUATIC | Category 2 |
| ENVIRONMENT—ACUTE HAZARD |
| HAZARDOUS TO THE AQUATIC | Category 2 |
| ENVIRONMENT—CHRONIC HAZARD |

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

LABEL ELEMENTS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>SIGNAL WORD</th>
<th>HAZARD STATEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Danger</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

SAFETY DATA SHEET

May cause respiratory irritation
Causes damage to organs(systemic toxicity)
Causes damage to organs through prolonged or repeated exposure(lung)
Toxic to aquatic life
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.
Wear protective gloves and eye/face protection.
Do not breathe dust/fume/gas/mist/vapours/spray.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Keep container tightly closed.
Wash hands thoroughly after handling.
Avoid release to the environment.

[Response]
If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
If you feel un-well, get medical advice/attention.
Take of immediately contaminated clothing.
Wash contaminated clothing before reuse.
Collect spillage.
If in eyes, rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
If eye irritation persists, get medical advice/attention.
If swallowed, rinse mouth. Get medical advice/attention.

[Storage]
Store in a cool and dark area.

[Disposal]
Dispose of contents and container in accordance with regulation.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Composition</th>
<th>Hazard type</th>
<th>Hazard type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid [Cas No.7664–38–2]</td>
<td>≥ 55 %</td>
<td>C</td>
</tr>
<tr>
<td>Aluminium hydroxide</td>
<td>≥ 10 %</td>
<td></td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>&lt; 5 %</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>&gt; 30 %</td>
<td></td>
</tr>
</tbody>
</table>

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. Get medical advice/attention.
4.4 Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms concerning breath go 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. 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 for Cleaning Up:** Wipe up and discard in a suitable container.

7. Handling and storage

- **7.1 Handling:** Avoid contact with skin and eyes. Avoid inhaling and contact with eyes and skin. Local dust extraction measures are recommended.
- **7.2 Storage:** Store under normal dry conditions. Keep containers closed. Keep out of reach of children.

8. Exposure controls/personal protection

- **8.1 Exposure limits:** ACGIH TLV.
  - Phosphoric acid 1mg/m³ (TWA)
- **8.2 Respiratory Protection:** Local exhaust
- **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:** Odourless, colorless liquid
- **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
- **9.8 Vapour Pressure:** N/D
- **9.9 Relative Density:** 1.59
- **9.10 Solubility:** water solubility Soluble
- **9.11 pH:** 1~3 (as a 2% solution)

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

Phosphoric acid
SAFETY DATA SHEET

Oral  rat  LD50 1250 mg/kg
       rabbit LD50 2740 mg/kg
Zinc oxide  Oral  rat  LD50 >5000 mg/kg
        Inhalation (Dust,Mist)
             rat  LC50 >5.7 mg/L

12. Ecological information
The product should not be allowed to drain into sewers.

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

14. Transport information
UN/ID No. 1805, (Haz Class 8 • Pack Group Ⅲ) as Phosphoric acid, solution

15. Regulatory information
Follow all regulations in your country.

16. Other information
This product is intended for use by dental professionals. (instrument/material)
Material Safety Data Sheet

Section I - Identification

Material: Yellow liquid smelling of clove and olive oil

Section II - Hazards Identification

Health Hazards Acute and Chronic: Avoid eye contact

Section III - Physical/Chemical Characteristics

Appearance and Odor: Yellow liquid smelling of clove and olive oil

Physical Properties: Insoluble

Section IV - Fire and Explosion Hazard Data

Incompatible Materials: N/A

Section V - Reactivity Data

Stability: Undetermined

Section VI - Health Hazard Data

Inhalation: None

Section VII - Precautions for Safe Handling and Use

Precautions to be Taken in Handling and Storage: Do not use or store in a manner that will contaminate the environment. Store in a cool, dark area with lid tightly closed.

Section VIII - Control Measures

Respiratory Protection (Special Type): N/A

Ventilation: Local Exhaust

Personal Protective Equipment: N/A

Other Precautions: Avoid eye contact.

Obtained by Global Safety Management, Inc. www.globalsafetynet.com (Tel: 1-813-435-5161)
### SECTION 1. Identification of the substance or mixture and of the supplier

1.1 **Product identifier**
   - **Trade Name:** HY-Bond Temporary Cement A ZINC OXIDE EUGNOL 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**
   - **HEALTH HAZARDS**
     - **SKIN CORROSION/IRRITATION** Category 2
     - **EYE DAMAGE/IRRITATION** Category 2A
     - **SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)** Category 3 (respiratory tract irritation)

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

2.2 **Label elements**
   - **SYMBOL**

   ![GHS07]

   **GHS07**
   - **SIGNAL WORD** Warning

   **HAZARD STATEMENTS**
   - Causes skin irritation
   - Causes serious eye irritation
   - May cause respiratory irritation
SAFETY DATA SHEET

HY-Bond Temporary Cement
A ZINC OXIDE EUGNOL CEMENT LIQUID

Printing date: August 26, 2019

PRECAUTIONARY STATEMENTS

[Prevention]
Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
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 INHALED: Remove person to fresh air and keep comfortable for breathing.
Get medical advice/attention if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

[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: Substance
3.2 Description: -
3.3 Dangerous components: Void
Clove Oil [Cas No.8000-34-8]
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:
- Irritation gas and fume may emit.

5.3 Advice for firefighters:
- Wear fire protective cloth and self-contained breathing apparatus, if necessary.

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.

SECTION 7. Handling and storage

7.1 Precautions for safe handling:
- Avoid inhaling and contact with eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities:
- Store in a cool and dry place out of direct sunlight and source of ignition.
- 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:
  - Protective 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: Yellowish sticky liquid with stimulate Odor
Odour threshold: Not determined.
P pH: Not determined.
Melting point/freezing point: Not determined.
Boiling Point: Not determined.
Flash point: 126 ºC
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: 1.1 (water=1)
Solubility: water solubility: Immiscible with water
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:
   Clove Oil: Oral rat LD50 1370 mg/kg
   Dermal rabbit LD50 1200 mg/kg

   Skin corrosion/irritation: Skin Irrit. 2; H315 Causes skin irritation.

   Eye damage/irritation: Eye Irrit. 2A; H319 Causes serious eye irritation.

   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 3; H335 May cause respiratory irritation.

   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 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.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Abbreviations and acronyms:  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative