



SAFETY DATA SHEET

page 1/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

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

1.1 Product identifier

Trade Name:

RETENTION BEADS 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

Category 2

HEALTH HAZARDS

ACUTE TOXICITY-INHALATION (VAPOURS)

Category 3

ACUTE TOXICITY-INHALATION (DUST, MIST)

Category 3

SKIN CORROSION/IRRITATION

Category 2

EYE DAMAGE/IRRITATION

Category 2A

TOXIC TO REPRODUCTION

Category 2

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)

Category 1 (respiratory system)

Category 2 (central nervous system)

Category 3 (narcotic effects)

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)

Category 1 (nervous system)

Category 2 (respiratory organ, liver)

ENVIRONMENTAL HAZARD

HAZARDOUS TO THE AQUATIC ENVIRONMENT-ACUTE HAZARD

Category 2

2.2 Label elements

SYMBOL:

Version Number 7

Revision date: May 7, 2024



SAFETY DATA SHEET

page 2/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024



GHS02 GHS06 GHS08

SIGNAL WORD: Danger

HAZARD STATEMENTS

Highly flammable liquid and vapor.
Causes skin irritation.
Causes serious eye irritation.
Toxic if inhaled.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.
Causes damage to organs (respiratory system).
May cause damage to organs (nervous system).
Causes damage to organs through prolonged or repeated exposure (nervous system).
May cause damage to organs through prolonged or repeated exposure (respiratory organ, liver).
Toxic to aquatic life.

PRECAUTIONARY STATEMENTS

[Prevention]

Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.

[Storage]

Store in a cool and dark area.

[Disposal]

Dispose of contents and container in accordance with regulation.



SAFETY DATA SHEET

page 3/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

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 %
Di-n-butyl phthalate	84-74-2	10-30
N-Butyl acetate	123-86-4	30-40
Ethyl acetate	141-78-6	1-10
Acrylic ester	—	≈ 30
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

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:

Easily flammable liquid in room temp.

Fire may produce irritating, corrosive and/or toxic gases.

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.



SAFETY DATA SHEET

page 4/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

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 stable 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 place.

Keep away from open flames, sparks and sources of heat. No smoking.

Do not empty into drain.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a well ventilated dark area, keep away from ignition sources.

7.3 Specific end use(s):

No further relevant information available.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters:

Exposure limits:

Component	ACGIH (TLV)	OSHA (PEL)
Di-n-butyl phthalate	5 mg/m ³ (TWA)	5 mg/m ³ (TWA)
N-Butyl acetate	150 ppm (TWA), 200 ppm (STEL)	150 ppm (TWA)
Ethyl acetate	400 ppm (TWA), A4	400 ppm (TWA)

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.



SAFETY DATA SHEET

page 5/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

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:	Colorless transparent liquid.
Odour threshold:	Not determined.
pH:	Not determined.
Melting point/freezing point:	Not determined.
Boiling point:	Not determined.
Flash point:	< 3 °C (closed)
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:	0.9 (water=1)
Solubility: water solubility	Insoluble
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:

Reacts with strong oxidants and poses a risk of fire and explosion.

10.2 Chemical stability:

Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions:

Reacts with strong oxidants and strong acids.



SAFETY DATA SHEET

page 6/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

10.4 Condition to Avoid:

Sunlight, Heating, High temperature.

10.5 Incompatible materials:

Strong acid, strong oxidizer, strong base

10.6 Hazardous Decomposition Products:

When burned, carbon monoxide, carbon dioxide, etc. are produced.

SECTION 11. Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:

Acute Tox. 3; H331 Toxic if inhaled.

Di-n-butyl phthalate;

Oral	rat	LD50	7499 mg/kg
Skin	rabbit	LD50	> 20000 mg/kg
Inhalation	rat	LC50	> 15.69 mg/L (4H)

n-Butyl acetate;

Oral	rat	LD50	10768 mg/kg
Dermal	rabbit	LD50	> 17600 mg/kg
Inhalation	rat	LC50	300 ppm (4H)

Ethyl acetate;

Oral	rat	LD50	10200 mg/kg
Dermal	rabbit	LD50	> 18000 mg/kg
Inhalation	rat	LC50	58 mg/L (8H)

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:

Repr. 2; H361 Suspected of damaging fertility or the unborn child.

Effects on or via lactation:

Lack of data.

Specific target organ toxicity (single exposure):

STOT SE 1; H370 Causes damage to organs (respiratory system).

STOT SE 2; H371 May cause damage to organs (nervous system).

STOT SE 3; H336 May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure):

STOT RE 1; H372 Causes damage to organs through prolonged or repeated exposure (nervous system).

STOT RE 2; H373 May cause damage to organs through prolonged or repeated exposure (respiratory organ, liver).

Aspiration hazard:

Based on available data, the classification criteria are not met.

11.2 Information on other hazards:

No further relevant information available.



SAFETY DATA SHEET

page 7/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

SECTION 12. Ecological information

12.1 Toxicity:

Di-n-butyl phthalate; Data not yet available.

n-Butyl acetate; Harmful to aquatic organisms.

Fish toxicity;

Fish (Fathead minnow); LC50/96H 18 mg/L

Ethyl acetate;

Fish toxicity;

Fish (Fathead minnow); LC50/96H 230 mg/L

Crustacea(Daphnia magna); LC50/24H 2500 mg/L

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:

1123

14.2 UN proper shipping name:

Butyl acetate

14.3 Transport hazard class (es):

3 Flammable liquids

14.4 Packing group:

III

14.5 Environmental hazards:

No further relevant information available.

14.6 Special precautions for user:

Warning: Flammable liquids.

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).

NFPA ratings (scale 0-4)



Health = 2

Fire = 3

Reactivity = 0

Version Number 7

Revision date: May 7, 2024



SAFETY DATA SHEET

page 8/8
RETENTION BEADS LIQUID

Printing date: May 7, 2024

HMIS ratings (scale 0-4)

Health Hazard	2
Fire Hazard	3
Reactivity	0

Health = 2
Fire = 3
Reactivity = 0

Relevant phrases:

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H336 May cause drowsiness or dizziness.
- H361 Suspected of damaging fertility or the unborn child.
- H370 Causes damage to organs (respiratory organ).
- H371 May cause damage to organs (nervous system).
- H372 Causes damage to organs through prolonged or repeated exposure (nervous system).
- H373 May cause damage to organs through prolonged or repeated exposure (respiratory organ, liver).
- H401 Toxic to aquatic life.

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