



Material Safety Data Sheet

- Meta P&Bond -

METABIOMED CO., LTD.

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Meta P&Bond

Product code : D1PNB00

1.2. Relevant identified uses of the substance or mixture and uses advised against

Resin tooth bonding agent

1.3. Details of the supplier of the safety data sheet

Registered company name : METABIOMED CO., LTD.

Address : Head Office & Osong Factory) 270, Osongsaengmyeong1-ro, Osong-eup, Heungdeok-gu,
Cheongju-si, Chungcheongbuk-do, Korea

Cheongju Factory) 136, Mochung-ro, Seowon-gu, Cheongju-si, Chungcheongbuk-do, Korea

Telephone : (82-43) 216-0433, 0434

Fax : (82-43) 216-0438

e-mail : info@meta-biomed.com

Manufacturer : METABIOMED CO., LTD.

1.4. Emergency telephone number

(82-43) 216-0433, 0434

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin Sensitizer (Category 1), H317

Causes serious eye damage (Category 1), H318

Causes serious eye irritation (Category 1), H319

Flammable Liquid (Category 2), H226

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

* GHS label elements including precautionary statements

- Hazard Pictograms



GHS02



GHS07



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- Signal word : Warning
- Hazard statement(s) : H317 may cause an allergic skin reaction
H319 Causes serious eye irritation
H225 Highly flammable liquid and vapor.
H336 May cause drowsiness or dizziness.
- Precautionary Statement(s) :
- Prevention : P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling
P271 Use only in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves and eye/face protection.
- Response : P305 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337 If eye irritation persists: Get medical advice/attention.
P332 If skin irritation occurs: Get medical advice/attention
P363 Wash contaminated clothing before reuse.
P304 +P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 +P361 +P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P301 +P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P370 In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.
- Disposal : P501 Dispose of contents/container according to the related regulations

2.3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



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3. Composition/information on ingredients

3.1. Substances

Not Applicable

3.2. Mixtures

Chemical Name	CAS No.	EC No.	Wt. %	Classification according to Directive 67/548/EEC	Classification according to Regulation(EC) No 1272/2008[CLP]
Bisphenol A Glycerolate dimethacrylate	1565-94-2	-	15-20	Xi Irritant R43 Xi Irritant R41	Serious eye damage (Category 1),H318 Skin sensitization (Category 1),H317
Urethane Dimethacrylate	72869-86-4	276-957-5	5-10	-	Skin sensitization (Category 1),H317
Pyromellitic glyceryl dimethacrylate	148019-46-9	-	5-10	-	-
2-Hydroxy ethyl methacrylate	868-77-9	212-782-2	8-15	-	Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 Skin sensitisation (Category 1), H317
Ethyl alcohol	64-17-5	200-578-6	40-50	-	Flammable liquids (Category 2), H225 Eye irritation (Category 2), H319

4. First aids measures

4.1. Description of first aid measures

- Inhalation : Remove person to fresh air. If you feel unwell, get medical attention
- Skin Contact : Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.
- Eye Contact : Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.



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- If Swallowed : Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Inhalation : Exposures needed to cause the following health effect(s) are not expected during normal, intended use: Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).
- Skin Contact : Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.
- Eye Contact : Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.
- Ingestion : May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

No further relevant information available

5. Fire fighting measures

5.1. Extinguishing media

- Extinguishing media : Water, Foam, Carbon Dioxide, Dry Chemical

5.2. Special hazards arising from the substance or mixture

- Hazardous combustion products : Burning may produce :Carbon Monoxide, Carbon Dioxide
- Explosion hazards : Not Determined
- Fire explosion : Not Determined
- Sensitive to static discharge : Not Determined
- Sensitivity to impact : Not Determined

5.3. Advice for firefighters

- Firefighting procedures : General: Evacuate all personnel; use protective equipment for fire-fighting. Use self-contained breathing apparatus when product is involved in fire.
- Firefighting equipment : Non-combustible

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide



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mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Prevent the inflow of this product to waterways, drains, basements, and confined spaces.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Not Applicable

7. Handling and storage

7.1. Precautions for safe handling

Always wear gloves and eye protection. Product is intended for dental use only.

7.2. Conditions for safe storage, including any incompatibilities

Keep out of reach of children. Protect from exposure to direct sun light. Keep container closed. Store in cool place.

7.3. Specific end use(s)

Use only professional dentist

8. Exposure controls and personal protection

8.1. Control parameters

Not determined

8.2. Exposure controls

- Eye protection : Wear safety glasses.
- Skin protection : Wear suitable protective clothing and gloves.
- Respiratory protection : None required

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

- | | | | |
|--------------|-------------------------|--|-------|
| - Appearance | : Liquid | - Vapor pressure | : N/A |
| - Odor | : Slightly acrylic odor | - Vapor density | : N/A |
| | | - Density | : N/A |
| - Color | : Yellowish | - Specific gravity(H ₂ O=1) | : N/A |



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- pH	: N/A	- Solubility(ies)	: Slightly soluble
- Melting point	: -90~100°C	- Partition coefficient :	: N/A
- boiling point	: 80~90°C	n-octanol/water	
- Flash point	: -2 ~ 8°C	- Auto-ignition temperature	: N/A
- Evaporation rate	: N/A	- Decomposition temperature	
- Flammability(solid, gas)	: N/A	- Viscosity	: N/A
- Upper/lower flammability or explosive limits	: N/A	- Explosive properties	: N/A
		- Oxidising properties	: N/A

9.2. Other information

None

10. Stability and reactivity

10.1. Reactivity

Stable

10.2. Chemical stability

Stable when stored and handled under recommended conditions.

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

None known.

10.5 Incompatible materials

None known.

10.6. Hazardous decomposition products

CO

11. Toxicological information

11.1. Information on toxicological effects

- Acute toxicity	: N/A
- Primary effects to skin	: May mildly irritate skin
- Primary effects to eyes	: May mildly irritate the eye
- Primary effects to respiratory system	: Not an acute inhalation hazard
- Sensitization	: Repeated or prolonged contact with the not polymerized may cause sensitization for methacrylates.



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- Additional toxicological info : N/A

12. Ecological information

12.1. Toxicity

- Toxicity : Not determined
- Aquatic toxicity(acute) : Not determined

12.2. Persistence and degradability

Not determined

12.3. Bioaccumulative potential

Not determined

12.4. Mobility in soil

Not determined

12.5. Results of PBT and vPvB assessment

Not determined

12.6. Other adverse effects

None known

13. Disposal considerations

13.1. Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.
Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

14. Transport information

14.1. UN Number

N/A

14.2. UN proper shipping name

N/A

14.3. Transport hazard class(es)

N/A

14.4. Packing Group

N/A



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14.5. Environmental hazards

N/A

14.6. Special precautions for user

- ADR - road : N/A

- RID - rail : N/A

- IMDG - sea : N/A

- IATA - air : N/A

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk : N/A

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

RoHS : Please refer to Medical Devices Directive 93/42/EEC

15.2. Chemical safety assessment

Chemical safety assessment : See Section 11

16. Other information

The information contained in the Safety data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

HISTORY

- **Date of creation** : 2015.03.15
- **Revision number and Revision date**
 - * Revision number : 1
 - * Date of last revision : 2016.11.30
- **Prepared by** : METABIOMED CO., LTD.