

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : PlanB Bioceramic Sealer

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Dental Adhesive

1.3. Supplier

Manufacturer:
PlanB Dental
315 Bollay Drive
Goleta, CA 93117
T: (805)-899-4529

1.4. Emergency telephone number

Emergency number : 800-528-1590 (North America) / +1 (805) 899-4529 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2	Causes serious eye irritation
Skin sensitization, Category 1	May cause an allergic skin reaction
Reproductive toxicity Category 1B	May damage fertility or the unborn child
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	May cause respiratory irritation

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Highly flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
May cause respiratory irritation
May damage fertility or the unborn child

Precautionary statements (GHS US)

: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Avoid breathing mist, spray, vapors.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye protection, protective gloves.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.
 If exposed or concerned: Get medical advice/attention.
 Call a poison center or doctor if you feel unwell.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 In case of fire: Use alcohol resistant foam, carbon dioxide (CO₂), dry extinguishing powder, Water spray or fog to extinguish.
 Store in a well-ventilated place. Keep container tightly closed.
 Keep cool.
 Store locked up.
 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester	CAS-No.: 1565-94-2	20 – 25	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
Ethyl alcohol	CAS-No.: 64-17-5	18 – 22.5	Flam. Liq. 2, H225 Eye Irrit. 2A, H319
1,2,4,5-Benzenetetracarboxylic acid, 1,4-bis[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-1-[[[(2-methyl-1-oxo-2-propen-1-yl)oxy]methyl]ethyl] ester	CAS-No.: 148019-46-9	15 – 20	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 STOT SE 3, H335
2-Hydroxyethyl methacrylate	CAS-No.: 868-77-9	10 – 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
10- Methacryloyloxydecyl dihydrogen phosphate (10-MDP)	CAS-No.: 85590-00-7	5 – 15	Eye Irrit. 2, H319 Skin Sens. 1, H317
Benzoic acid, 4-(dimethylamino)-, ethyl ester	CAS-No.: 10287-53-3	< 1	Repr. 1B, H360

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SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse immediately with plenty of water for 15 minutes. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: May damage fertility or the unborn child.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Dry powder. Carbon dioxide. Alcohol resistant foam. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor. On combustion, forms: carbon oxides (CO and CO ₂). Nitrogen oxides. Phosphorus oxides. fluorinated compounds.
Explosion hazard	: Vapors may cause fire/explosion if source of ignition is present.
Hazardous decomposition products in case of fire	: Thermal decomposition can lead to the escape of irritating gases and vapors.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Keep away from sources of ignition. Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Avoid breathing mist, spray, vapors.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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Emergency procedures : Eliminate all ignition sources if safe to do so.. Stop leak, if possible without risk. Prevent entry to sewers and public waters.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spillage to prevent material-damage.
Methods for cleaning up : Remove all sources of ignition. Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Notify authorities if product enters sewers or public waters. Collect all waste in suitable and labeled containers and dispose according to local legislation.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Flammable vapors may accumulate in the container.
Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.. Flammable vapors may accumulate in the container. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid breathing spray, mist, vapors. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation.
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Incompatible materials : Strong acids, strong bases and oxidation agents

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available	
2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (1565-94-2)	
No additional information available	
Ethyl alcohol (64-17-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethanol
ACGIH OEL STEL [ppm]	1000 ppm

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Ethyl alcohol (64-17-5)	
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL (TWA) [1]	1900 mg/m³
OSHA PEL (TWA) [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH [ppm]	3300 ppm (10% LEL)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	1900 mg/m³
NIOSH REL TWA [ppm]	1000 ppm
1,2,4,5-Benzenetetracarboxylic acid, 1,4-bis[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-1-[[[(2-methyl-1-oxo-2-propen-1-yl)oxy]methyl]ethyl] ester (148019-46-9)	
No additional information available	
2-Hydroxyethyl methacrylate (868-77-9)	
No additional information available	
10- Methacryloyloxydecyl dihydrogen phosphate (10-MDP) (85590-00-7)	
No additional information available	
Benzoic acid, 4-(dimethylamino)-, ethyl ester (10287-53-3)	
No additional information available	

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Chemically resistant protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Long sleeved protective clothing

Respiratory protection:

Where excessive vapor, mist, or dust may result, use approved respiratory protection equipment. An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Color	: Yellow
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids, strong bases and oxidation agents10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
 Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
 Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Ethyl alcohol (64-17-5)

LD50 oral rat	7060 mg/kg
LC50 Inhalation - Rat	133.8 mg/l/4h

2-Hydroxyethyl methacrylate (868-77-9)

LD50 oral rat	5050 mg/kg
LD50 dermal rabbit	> 3000 mg/kg

Benzoic acid, 4-(dimethylamino)-, ethyl ester (10287-53-3)

LD50 dermal rat	> 2000 mg/kg
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Skin corrosion/irritation : Causes skin irritation.
 Serious eye damage/irritation : Causes serious eye irritation.
 Respiratory or skin sensitization : May cause an allergic skin reaction.
 Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
 Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
 Reproductive toxicity : May damage fertility or the unborn child.
 STOT-single exposure : May cause respiratory irritation.

1,2,4,5-Benzenetetracarboxylic acid, 1,4-bis[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]-1-[[[(2-methyl-1-oxo-2-propen-1-yl)oxy]methyl]ethyl] ester (148019-46-9)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Ethyl alcohol (64-17-5)

NOAEL (subchronic,oral,animal/male,90 days)	< 9700 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (subchronic,oral,animal/female,90 days)	> 9400 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)
 Viscosity, kinematic : No data available
 Symptoms/effects : May damage fertility or the unborn child.
 Symptoms/effects after inhalation : May cause respiratory irritation.
 Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
 Symptoms/effects after eye contact : Eye irritation.
 Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

Ethyl alcohol (64-17-5)

LC50 - Fish [1]	12 – 16 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
LC50 - Other aquatic organisms [1]	5012 mg/l 48 hours- daphnia
EC50 - Crustacea [1]	9268 – 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna)

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Ethyl alcohol (64-17-5)	
EC50 - Other aquatic organisms [1]	5012 mg/l waterflea
LC50 - Fish [2]	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [2]	2 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 - Other aquatic organisms [2]	275 mg/l
ErC50 algae	275 mg/l Source: ECHA
ErC50 other aquatic plants	4432 mg/l
NOEC (acute)	9.6 mg/l Daphnia magna
NOEC (chronic)	9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'
2-Hydroxyethyl methacrylate (868-77-9)	
LC50 - Fish [1]	213 – 242 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	227 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethyl alcohol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.32
2-Hydroxyethyl methacrylate (868-77-9)	
BCF - Fish [1]	1.34 – 1.54
Partition coefficient n-octanol/water (Log Pow)	0.47

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

In accordance with Department of Transport / Transportation of Dangerous Goods / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1993	UN1993	1993	1993

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DOT	TDG	IMDG	IATA
14.2. Proper Shipping Name			
Flammable liquids, n.o.s. (Ethyl alcohol MIXTURE)	FLAMMABLE LIQUID, N.O.S. (Ethyl alcohol MIXTURE)	FLAMMABLE LIQUID, N.O.S. (Ethyl alcohol)	Flammable liquid, n.o.s. (Ethyl alcohol)
14.3. Transport hazard class(es)			
3	3	3	3
			
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
Consult the associated transport regulations for available and applicable exceptions or exemptions.			

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

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Revision date : 01 June 2021

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.