

BPO HARDENER

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
dibenzoyl peroxide, benzoyl peroxide	(CAS-No.) 94-36-0	43 - 63	Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
DIMETHYL PHTHALATE	(CAS-No.) 131-11-3	23 - 43	Not classified
ethanediol, ethylene glycol	(CAS-No.) 107-21-1	< 23	Acute Tox. 4 (Oral), H302

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : 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.
- 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 after skin contact : 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 : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

- Fire hazard : Heating may cause a fire.
- Reactivity : Heating may cause a fire.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Other information : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Protective clothing. Gloves.
- Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing fume, vapors.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Do not allow to dry. Collect spillage.
- Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
- Other information : Ensure adequate ventilation. Dispose of materials or solid residues at an authorized site.

BPO HARDENER

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Take precautions against electrostatic charges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing fume, vapors.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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

- Storage conditions : Store away from other materials. Protect from sunlight. Keep only in original container. Keep cool. Store in a well-ventilated place.
- Incompatible products : Keep away from reducing agents/(strong) acids /(strong) bases and metals.
- Incompatible materials : Combustible materials.
- Storage temperature : 5 - 25 °C (reccomended)
- Storage area : Store in a well-ventilated place.
- Special rules on packaging : Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OWN BPO (OWNBPO-US)		
ACGIH	Local name	Benzoyl peroxide
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
ACGIH	Remark (ACGIH)	URT & skin irr
ACGIH	Regulatory reference	ACGIH 2017
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA
DIMETHYL PHTHALATE (131-11-3)		
ACGIH	Local name	Dimethyl phthalate
ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
ethanediol, ethylene glycol (107-21-1)		
ACGIH	Local name	Ethylene glycol
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³
ACGIH	Remark (ACGIH)	URT & eye irr
dibenzoyl peroxide, benzoyl peroxide (94-36-0)		
Not applicable		

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Protective clothing. Safety glasses.

Materials for protective clothing:

Impermeable clothing

BPO HARDENER

Hand protection:

Protective gloves

Type	Material	Permeation	Thickness (mm)	Permeation
Protective gloves	Neoprene rubber (HNBR), Nitrile rubber (NBR)	2 (> 30 minutes)	≥0.14mm	

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste.
Color	: Various
Odor	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: May cause fire. Heating may cause a fire.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable
Specific gravity / density	: ≈ 1.1 g/cm ³
Solubility	: insoluble in water.
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

SADT	: 50 °C
VOC content	: 0 g/l

BPO HARDENER

SECTION 10: Stability and reactivity

10.1. Reactivity

Heating may cause a fire.

10.2. Chemical stability

SADT.

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

Combustible materials.

10.6. Hazardous decomposition products

Benzene.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

ethanediol, ethylene glycol (107-21-1)

ATE US (oral)	500 mg/kg body weight
---------------	-----------------------

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

dibenzoyl peroxide, benzoyl peroxide (94-36-0)

IARC group	3 - Not classifiable
------------	----------------------

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

BPO HARDENER

SECTION 13: Disposal considerations

13.1. Disposal methods

- Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

- Transport document description : UN3108 Organic peroxide type E, solid, 5.2, II
UN-No.(DOT) : UN3108
Proper Shipping Name (DOT) : Organic peroxide type E, solid
Class (DOT) : 5.2 - Class 5.2 - Organic Peroxide 49 CFR 173.128
Packing group (DOT) : II - Medium Danger
Hazard labels (DOT) : 5.2 - Organic peroxide



- Dangerous for the environment : Yes
Marine pollutant : Yes



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 225
DOT Packaging Bulk (49 CFR 173.xxx) : None
DOT Symbols : G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx) : 152
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 10 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 25 kg
DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other : 12 - Keep as cool as reasonably practicable,40 - Stow "clear of living quarters",52 - Stow "separated from" acids,53 - Stow "separated from" alkaline compounds
Other information : No supplementary information available.

Transportation of Dangerous Goods

- Transport document description : UN3108 ORGANIC PEROXIDE TYPE E, SOLID, 5.2, II
UN-No. (TDG) : UN3108
Proper Shipping Name (Transportation of Dangerous Goods) : ORGANIC PEROXIDE TYPE E, SOLID
TDG Primary Hazard Classes : 5.2 - Class 5.2 - Organic Peroxides
Packing group : II - Medium Danger

BPO HARDENER

TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a)UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; (b)UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.; (c)UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.; (d)UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or (e)UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a)UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b)UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306,38 - A person must not handle, offer for transport or transport these dangerous goods in a large means of containment if they are in direct contact with the large means of containment. SOR/2014-306
Explosive Limit and Limited Quantity Index	: 0.5 kg
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 10 kg
Passenger Carrying Ship Index	: Forbidden

Transport by sea

Transport document description (IMDG)	: UN 3108 ORGANIC PEROXIDE TYPE E, SOLID, 5.2, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
UN-No. (IMDG)	: 3108
Proper Shipping Name (IMDG)	: ORGANIC PEROXIDE TYPE E, SOLID
Class (IMDG)	: 5.2 - Organic peroxides
Marine pollutant	: Yes



Air transport

Transport document description (IATA)	: UN 3108 Organic peroxide type e, solid, 5.2, ENVIRONMENTALLY HAZARDOUS
UN-No. (IATA)	: 3108
Proper Shipping Name (IATA)	: Organic peroxide type e, solid
Class (IATA)	: 5.2 - Organic Peroxides

SECTION 15: Regulatory information

15.1. US Federal regulations

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Chemical Name	CAS-No.	Percentage
DIMETHYL PHTHALATE	131-11-3	23 - 43%
ethanediol, ethylene glycol	107-21-1	< 23%
dibenzoyl peroxide, benzoyl peroxide (HRED525)	94-36-0	43 - 63%

DIMETHYL PHTHALATE (131-11-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb
ethanediol, ethylene glycol (107-21-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb

BPO HARDENER

dibenzoyl peroxide, benzoyl peroxide (94-36-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

DIMETHYL PHTHALATE (131-11-3)

Listed on the Canadian DSL (Domestic Substances List)

ethanediol, ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

dibenzoyl peroxide, benzoyl peroxide (94-36-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

DIMETHYL PHTHALATE (131-11-3)

Listed on EPA Hazardous Air Pollutant (HAPS)

ethanediol, ethylene glycol (107-21-1)

Listed on EPA Hazardous Air Pollutant (HAPS)

15.3. US State regulations

⚠ WARNING This product can expose you to ethanediol, ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

ethanediol, ethylene glycol (107-21-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		

SECTION 16: Other information

Revision date: 5/13/2024 Version: 2

Full text of H-phrases:

H241	Heating may cause a fire or explosion
H302	Harmful if swallowed
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard

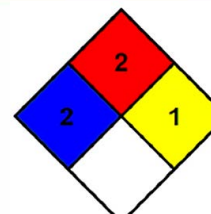
2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



SDS US (GHS HazCom 2012)

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