

1. Identification

Product identifier

Trade name: 617PG37=0.150 Hardening powder phthalat-free

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

General use: Polymerization initiator.
Reserved for industrial and professional use.

Details of the supplier of the safety data sheet

Company name: Otto Bock Health Care
Street/POB-No.: 3820 W. Great Lakes Drive
Zip code, city: Salt Lake City, UT 84120
USA
WWW: www.ottobockus.com
Telephone: +1 (801) 956-2400
Telefax: +1 (801) 956-2401
Department responsible for information: Quality Department,
Telephone: +1 (801) 954-2304 (7 AM – 3 PM, Mountain Time),
Email: USRegulatory@ottobock.com
Additional information: Corporate headquarters:
Ottobock SE & Co. KGaA
Max-Näder-Straße 15
Duderstadt
Germany

Emergency telephone number

CHEMTREC, Telephone: +1 (800) 424-9300
Transport:
CONSULTANK Lutz Harder GmbH (Contract QUALI003)
Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2. Hazard identification

Classification of the substance or mixture

Organic Peroxide - Category D	Heating may cause a fire.
Eye Irritation - Category 2A	Causes serious eye irritation.
Sensitization - skin - Category 1	May cause an allergic skin reaction.
Aquatic toxicity - acute - Category 1	Very toxic to aquatic life.
Aquatic toxicity - chronic - Category 1	Very toxic to aquatic life with long lasting effects.

Label elements

Symbols:



Signal word: **Danger**

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Hazard statements: Heating may cause a fire.
May cause an allergic skin reaction.
Causes serious eye irritation.
Very toxic to aquatic life with long lasting effects.

Precautionary statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep only in original container.
Keep cool.
Ground/bond container and receiving equipment.
Avoid breathing dust/gas/mist/vapors.
Wash hands and face thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection.

IF ON SKIN: Wash with plenty of water/soap.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see 'First aid' on this label).
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use ... to extinguish.
Collect spillage.

Store in a well-ventilated place.
Protect from sunlight.
Store at temperatures not exceeding 30 °C/86 °F.
Store separately.

Dispose of contents/container to hazardous or special waste collection point.

Other hazards

Hazardous, self-accelerating decomposition reaction is possible. Under certain conditions an explosion or fire may occur as a result of direct contact with incompatible substances or through thermal decomposition.
May form explosible dust-air mixture if dispersed.

3. Composition/information on ingredients

Mixtures

Chemical characterization: Mixture of the substances listed below with non-hazardous additions:

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 94-36-0	Dibenzoyl peroxide	49 - 52.5 %	Organic Peroxide - Category B. Eye Irritation - Category 2. Sensitization - skin - Category 1. Aquatic toxicity - acute - Category 1 (M-factor = 10). Aquatic toxicity - chronic - Category 1 (M-factor = 10).
CAS 94-49-5	Ethylene dibenzoate	47.5 - 51 %	Aquatic toxicity - chronic - Category 2.

The actual concentration or concentration range is withheld as a trade secret.

Additional information: Contains: Silicon dioxide.
The maximum workplace exposure limits are, where necessary, listed in section 8.

4. First aid measures

General information:	If medical advice is needed, have product container or label at hand. First aider: Pay attention to self-protection!
In case of inhalation:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if problems persist.
Following skin contact:	Immediately clean with water and soap followed by thorough rinsing. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently consult an ophthalmologist.
After swallowing:	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention.

Most important symptoms/effects, acute and delayed

May cause an allergic skin reaction. Causes serious eye irritation.

Information to physician

Treat symptomatically.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Atomized water, foam, sand and carbon dioxide.

Extinguishing media which must not be used for safety reasons: Full water jet

Specific hazards arising from the chemical

Combustible. Heating may cause a fire. Vapors form explosive mixtures with air. In case of 131 °F (Self-accelerating decomposition temperature (SADT)): explosive decomposition
Furthermore, there may develop: Oxygen, carbon dioxide, benzene, A mixture of: Biphenyl, benzoic acid, phenyl benzoate.

Protective equipment and precautions for firefighters

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information: Extinguish small fires with powder or carbon dioxide; then apply water to avoid a repeated ignition.
Use fine water spray to cool endangered containers.
Do not allow water used to extinguish fire to enter drains, ground or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Avoid contact with the substance. Eliminate all ignition sources if safe to do so.
Avoid breathing dust/gas/mist/vapors. Wear appropriate protective equipment. Do not get in eyes, on skin, or on clothing.
Take off contaminated clothing and wash it before reuse.
Keep unprotected people away.

Environmental precautions:

Do not allow to enter into ground-water, surface water or drains.
If necessary, notify appropriate authorities.

Methods and material for containment and cleaning up

Methods for clean-up: Plug leak if safely possible. Collect in closed and suitable containers for disposal.

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Avoid formation of flammable and explosive vapor concentrations in the air and exceeding the exposure limit values. Provide adequate ventilation, and local exhaust as needed.
Avoid breathing dust/gas/mist/vapors. Avoid contact with the substance.
Wear appropriate protective equipment. Do not get in eyes, on skin, or on clothing.
Wash hands thoroughly after handling. Take off contaminated clothing and wash it before reuse.
Do not eat, drink or smoke when using this product. Have eye wash bottle or eye rinse ready at work place.
Processing temperature: $\leq 77\text{ }^{\circ}\text{F}$

Precautions against fire and explosion:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight.
Store containers in upright position. Explosion protection required.
Storage temperature $< 30\text{ }^{\circ}\text{C}$
Suitable container/equipment material: polyethylene, polypropylene, refined steel

Hints on joint storage: Do not store together with: acids, alkali and amines.
Keep away from food, drink and animal feedingstuffs.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
94-36-0	Dibenzoyl peroxide	USA: ACGIH: TWA	5 mg/m ³
		USA: IDLH: TWA	1,500 mg/m ³
		USA: NIOSH: TWA	5 mg/m ³
		USA: OSHA: TWA	5 mg/m ³
7631-86-9	Silicon dioxide	USA: IDLH: TWA	3,000 mg/m ³
		USA: NIOSH: TWA	6 mg/m ³
		USA: OSHA: TWA	20 mppcf
		USA: OSHA: TWA	80 mg/m ³ (total dust)

Appropriate engineering controls

Provide adequate ventilation, and local exhaust as needed. Minimise exposure using measures such as closed systems, dedicated facilities and suitable general/local exhaust ventilation Use only explosion-proof equipment.

Personal protection equipment (PPE)

Respiratory protection: Respiratory protection mask with adequate filter. Recommended filter type: A
The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.

Hand protection: Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: PVC or butyl caoutchouc (butyl rubber).
Breakthrough time: > 8h
Layer thickness: 0.5 mm
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Body protection: Wear flame-resistant antistatic protective clothing.

General hygiene considerations:
Avoid breathing dust/gas/mist/vapors. Do not get in eyes, on skin, or on clothing.
Take off contaminated clothing and wash it before reuse.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Have eye wash bottle or eye rinse ready at work place.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state at 68 °F and 101.3 kPa	solid
Color:	Form: Powder white
Odor:	Odorless
Odor threshold:	No data available
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flammability:	Combustible
Explosion limits:	LEL (Lower Explosion Limit): Not applicable UEL (Upper Explosive Limit): Not applicable
Flash point/flash point range:	Not determined
Evaporation rate:	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Self-accelerating decomposition temperature (SADT): 131 °F
pH:	approx. 7
Dynamic viscosity:	Not applicable
Viscosity, kinematic:	Not applicable
Solubility:	soluble (Dichloromethane, Acetone)
Water solubility:	Insoluble
Partition coefficient: n-octanol/water:	Not determined
Vapor pressure:	Not determined
Density:	No data available
Vapor density:	Not determined
Particle characteristics:	No data available

Additional information

Explosive properties:	May form explosible dust-air mixture if dispersed.
Oxidizing characteristics:	Organic peroxide
Bulk density:	560 - 580 kg/m ³
Additional information:	Available oxygen content: 3.24 - 3.47 % w/w Self-Accelerating Decomposition Temperature: 131 °F

10. Stability and reactivity

Reactivity:	Heating may cause a fire. Can explode if overheated.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Hazardous, self-accelerating decomposition reaction is possible. Under certain conditions an explosion or fire may occur as a result of direct contact with incompatible substances or through thermal decomposition. In case of 131 °F (Self-accelerating decomposition temperature (SADT)): explosive decomposition.

Conditions to avoid: Keep away from heat sources, sparks and open flames. Keep away from corrosion.

Incompatible materials: acids, alkalis and amines.

Hazardous decomposition products: Oxygen, carbon dioxide, benzene, A mixture of: Biphenyl, benzoic acid, phenyl benzoate

11. Toxicological information

Information on toxicological effects

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.
ATEmix (calculated): ATE > 2,000 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.
ATEmix (calculated): ATE > 2,000 mg/kg

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Lack of data.

Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Other information: Information about dibenzoyl peroxide:
LD50, Mouse, oral: 2,000 mg/kg/ dw (OECD 401)
LC50, Rat, inhalative: 24,300 mg/m³/4h (OECD 403)

Information about Ethylene dibenzoate
LD50, Rat, oral: > 2,000 mg/kg (OECD 423)
LD50, Rat, dermal: > 2,000 mg/kg (OECD 402)

Symptoms

After eye contact: Upon direct contact with eyes may cause burning, tearing, redness.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Information about dibenzoyl peroxide:

Fish toxicity:

EC50 Oncorhynchus mykiss: 0.06 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 0.11 mg/L/48h (OECD 202)

NOEC Daphnia magna (Big water flea): 0.0765 mg/L/48h (OECD 202)

EC10 Daphnia magna (Big water flea): 0.001 mg/L/21d (OECD 211)

Algae toxicity:

EC50 Raphidocelis subcapitata (green algae), growth rate: 0.071 mg/L/72h (OECD 201)

NOEC Raphidocelis subcapitata (green algae), growth rate: 0.02 mg/L/72h (OECD 201)

Information about Ethylene dibenzoate

Fish toxicity:

LC50, short-term, Danio rerio (zebrafish): 100 mg/L/96h (OECD 203)

EC10, long-term, Danio rerio (zebrafish): 0.073 mg/L/24h (OECD 210)

Daphnia toxicity:

EC50, short-term, Daphnia magna (Big water flea): 2.4 mg/L/ 48h (OECD 202)

EC10, long-term, Daphnia magna (Big water flea): 0.79 mg/L/21d (OECD 211)

Algae toxicity:

EC50; Pseudokirchneriella subcapitata (green algae): 0.87 mg/L/72h (OECD 201)

Persistence and degradability

Further details: No data available

Bioaccumulative potential

Partition coefficient: n-octanol/water:
Not determined

Mobility in soil

No data available

Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

13. Disposal considerations

Waste treatment methods

Product

Recommendation: Dispose of waste according to applicable legislation.

Package

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself. Non-contaminated packages may be recycled.

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14. Transport information**UN number**

DOT: UN3106

IMDG, IATA-DGR: UN 3106

UN proper shipping name

DOT, IMDG, IATA-DGR: UN 3106, ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide)

Transport hazard class(es)

DOT: 5.2

IMDG: Class 5.2, Subrisk -

IATA-DGR: Class 5.2

**Packing group**

DOT, IATA-DGR: not applicable

IMDG: -

Environmental hazards

Marine pollutant: yes

Transport in bulk according to IMO instruments

No data available

Special precautions for user**USA: Department of Transportation (DOT)**

Labels: 5.2

Symbols: G

Packaging – Exceptions: 152

Packaging – Non-bulk: 225

Packaging – Bulk: None

Quantity limitations – Passenger aircraft / rail:

5 kg

Quantity limitations – Cargo only: 10 kg

Vessel stowage – Location: D

Vessel stowage – Other: 12, 25, 52, 53

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Sea transport (IMDG)

EmS:	F-J, S-R
Special Provisions:	122 274
Limited quantities:	500 g
Excepted quantities:	E0
Package - Instructions:	P520
Package - Provisions:	-
IBC - Instructions:	-
IBC - Provisions:	-
Tank instructions - IMO:	-
Tank instructions - UN:	-
Tank instructions - Provisions:	-
Stowage and handling:	Category D. SW1
Segregation:	SG35 SG36 SG72
Properties and observations:	Decomposes at elevated temperatures or in a fire. Burns vigorously. Insoluble in water except for 3-chloroperoxybenzoic acid. Contact with the eyes and skin should be avoided. May evolve irritant or toxic fumes.
Marine pollutant:	yes
Segregation group:	none

Air transport (IATA)

Proper shipping name:	UN 3106, ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide)
Hazard label:	Organic peroxide
Excepted Quantity Code:	E0
Passenger and Cargo Aircraft: Ltd.Qty.:	Forbidden
Passenger and Cargo Aircraft:	Pack.Instr. 570 - Max. Net Qty/Pkg. 5 kg
Cargo Aircraft only:	Pack.Instr. 570 - Max. Net Qty/Pkg. 10 kg
Special Provisions:	A20 A802
Emergency Response Guide-Code (ERG):	5L

15. Regulatory information

National regulations - U.S. Federal Regulations

Dibenzoyl peroxide:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status: IARC Rating: Group 3</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>Other Environmental Laws:</p> <p>SARA Title III, Section 313, Toxic Release: NPFAS; De Minimis <=1.0 %;</p> <p>Thresholds 25000/10000 lbs</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0052</p> <p>OSHA Process Safety Management: Threshold 7500 lbs.</p>
Ethylene dibenzoate:	TSCA Inventory: listed; EPA flags PMN, S, 5E
Silicon dioxide:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status: IARC Rating: Group 3</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0552</p>

National regulations - U.S. State Regulations

No data available

Further regulations, limitations and legal requirements

No data available

16. Other information

Text for labeling:	Contains 49 - 52.5 % Dibenzoyl peroxide, 47.5 - 51 % Ethylene dibenzoate.
Revision date:	11/28/2025
Date of first version:	11/24/2020
Reason of change:	General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)
Classification procedure:	Physical hazards: on basis of test data Health hazards, environmental hazards: calculation method
Hazard rating systems:	<p>HMIS Version III Rating:</p> <p>Health: 2 (Moderate)</p> <p>Flammability: 1 (Slight)</p> <p>Physical Hazard: 2 (Moderate)</p> <p>Personal Protection: X = Consult your supervisor</p>

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	2
	X

Abbreviations and acronyms:

Aquatic toxicity - acute: Hazardous to the aquatic environment - acute
Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
ATE: Acute toxicity estimate
ATEmix: Acute Toxicity Estimate of mixture
CAS: Chemical Abstracts Service
CFR: Code of Federal Regulations
CLP: Classification, Labelling and Packaging
DMEL: Derived minimal effect level
DNEL: Derived no-effect level
DOT: Department of Transportation's Safety Regulations (USA)
EC: Effective Concentration
EC: European Community
EC50: Effective Concentration 50%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
Eye Irritation: Eye irritation
IATA: International Air Transport Association
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG Code: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
LC50: Median lethal concentration
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
M-factor: Multiplication factor
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
Organic Peroxide: Organic peroxide
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
PVC: Polyvinyl chloride
SADT: Self-Accelerating Decomposition Temperature
Sensitization - skin: Skin sensitisation
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative

Department issuing data sheet

Contact person: see section 1: Department responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.