

617PG37=0.150 Hardening powder phthalat-free

Material number 617PG37

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1. Product and company identification

Product identifier

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

Recommended use and restrictions on use

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

Initial supplier identifier

Company name: Otto Bock HealthCare Canada Ltd.

Street/POB-No.: 5470 Harvester Road

Postal Code, city: Burlington, ON L7L 5N5, CA
Canada

WWW: www.ottobock.ca

E-mail: info.canada@ottobock.com

Telephone: (800) 665-3327

Telefax: (800) 463-3659

Department responsible for information:

Mark Agro, Telephone: (800) 665-3327 (9 am - 5 pm)

Additional information:

Corporate headquarters:
Ottobock SE & Co. KGaA
Max-Näder-Straße 15
Duderstadt
Germany

Emergency phone number

COLLECT, Telephone: (613) 996-6666

Transport:

CONSULTANK Lutz Harder GmbH (Contract QUALI003)

Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2. Hazards identification

Emergency overview

Appearance: Physical state at 20 °C and 101.3 kPa: solid

Form: Powder

Color: white

Odor:

Odorless

Classification:

Organic Peroxide D. Eye Irritation 2A. Sensitization - skin 1. Aquatic toxicity - acute 1.
Aquatic toxicity - chronic 1.

Hazard symbols:



Signal word:

Danger

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.
- Avoid breathing dust/gas/mist/vapors.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection.
- Take off contaminated clothing and wash it before reuse.
- Collect spillage.
- Store at temperatures not exceeding 30 °C/86 °F.

Regulatory status

This material is considered hazardous by the WHMIS in Canada.

Hazards not otherwise classified

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.

see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterisation: 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 B. Eye Irritation 2A. Sensitization - skin 1. Aquatic toxicity - acute 1 (M-factor = 10). Aquatic toxicity - chronic 1 (M-factor = 10).
CAS 94-49-5	Ethylene dibenzoate	47.5 - 51 %	Aquatic toxicity - chronic 2.

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.

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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 and effects, both acute and delayed

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

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

Not determined

Auto-ignition temperature: Not determined

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 55 °C (Self-accelerating decomposition temperature (SADT)): explosive decomposition
Furthermore, there may develop: Oxygen, carbon dioxide, benzene, A mixture of: Biphenyl, benzoic acid, phenyl benzoate.

Special protective equipment and precautions for fire-fighters:

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:

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 for clean-up:

Plug leak if safely possible. Collect in closed and suitable containers for disposal.

7. Handling and storage

Handling

Advices on safe handling: Avoid formation of flammable and explosive vapour 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: $\leq 25\text{ }^{\circ}\text{C}$

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.

Storage

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

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
94-36-0	Dibenzoyl peroxide	Canada: OEL 8 hour	5 mg/m ³
		Canada: OEL TWA	5 mg/m ³
		Canada: VEMP	5 mg/m ³
		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)

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.
See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection:	Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.
Skin protection:	Wear flame-resistant antistatic protective clothing. 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.
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.
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

Appearance:	Physical state at 20 °C and 101.3 kPa: solid Form: Powder Color: white
Odor:	Odorless
Odor threshold:	No data available
pH:	approx. 7
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point/flash point range:	Not determined
Evaporation rate:	Not determined
Flammability:	Combustible
Explosion limits:	LEL (Lower Explosion Limit): Not applicable UEL (Upper Explosive Limit): Not applicable
Vapor pressure:	Not determined
Vapor density:	Not determined
Density:	No data available
Solubility:	soluble (Dichloromethane, Acetone)
Water solubility:	Insoluble
Partition coefficient: n-octanol/water:	Not determined
Auto-ignition temperature:	Not determined
Thermal decomposition:	Self-accelerating decomposition temperature (SADT): 55 °C

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Viscosity, dynamic:	Not applicable
Viscosity, kinematic:	Not applicable
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: 55 °C

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 55 °C (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
Thermal decomposition:	Self-accelerating decomposition temperature (SADT): 55 °C

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11. Toxicological information

Toxicological tests

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 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Sensitization - skin 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.

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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)

Mobility in soil

No data available

Persistence and degradability

Further details:

No data available

Additional ecological information

General information:

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

13. Disposal considerations

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.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

UN 3106

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UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 3106, ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide)

Transport hazard class(es)

ADR/RID:

Class 5.2, Code: P1

IMDG:

Class 5.2, Subrisk -

IATA-DGR:

Class 5.2

Packing group

ADR/RID, IATA-DGR:

not applicable

IMDG:

-

Environmental hazards

Marine pollutant:

yes



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

No data available

Canada: Transportation of Dangerous Goods (TDG)

UN Number:

UN3106

Shipping name:

UN 3106, ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide)

TDG class:

5.2

Packing group:

II

Special provisions:

16, 38

Explosive limit and limited quantity index:

0.5 kg

Passenger carrying ship index:

Forbidden

Passenger carrying road or rail index:

5 kg

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Sea transport (IMDG)

UN number: UN 3106
Proper shipping name: UN 3106, ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide)
Class or division, Subsidiary risk: Class 5.2, Subrisk -
Packing Group: -
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)

UN/ID number: UN 3106
Proper shipping name: UN 3106, ORGANIC PEROXIDE TYPE D, SOLID (dibenzoyl peroxide)
Class or division, Subsidiary risk: Class 5.2
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 - Canada

Dibenzoyl peroxide: DSL: listed
Silicon dioxide: DSL: listed

16. Other information

Text for labeling: Contains 49 - 52.5 % Dibenzoyl peroxide, 47.5 - 51 % Ethylene dibenzoate.

Hazard rating systems: HMIS Version III Rating:
Health: 2 (Moderate)
Flammability: 1 (Slight)
Physical Hazard: 2 (Moderate)
Personal Protection: X = Consult your supervisor

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	2
	X

Classification procedure: Physical hazards: on basis of test data
Health hazards, environmental hazards: calculation method

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
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
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
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
SADT: Self-Accelerating Decomposition Temperature
Sensitization - skin: Skin sensitisation
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative
WHMIS: Workplace Hazardous Materials Information System

Reason of change: Changes in section 7: suitable container/equipment material
Changes in section 9: Bulk density, Self-Accelerating Decomposition Temperature
General revision

Date of first version: 24/11/2020

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.