

617PG5 - OrthoEpoX Hardener GreenLine

Material number 617PG5

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1. Product and company identification

Product identifier

Trade name: 617PG5 - OrthoEpoX Hardener GreenLine

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

General use: For orthopedic procedures, for producing molds.

Details of the supplier of the safety data sheet

Company name: Otto Bock Health Care
Street/POB-No.: 3820 W. Great Lakes Drive
Postal 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 phone 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. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: liquid
Odor: No data available
Classification: Acute Toxicity - oral - Category 4. Skin Corrosion - Category 1B. Eye Damage - Category 1. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 2.

Hazard symbols:



Signal word:

Danger

Hazard statements:

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

Precautionary statements:

Do not breathe mist/vapors/spray.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/or shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards not otherwise classified

Special danger of slipping by leaking/spilling product.
see section 11: Toxicological information

3. Composition / Information on ingredients

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 39423-51-3	Trimethylolpropane poly(oxypropylene) triamine	25 - 50 %	Acute Toxicity - oral - Category 4. Acute Toxicity - dermal - Category 4. Eye Damage - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 2855-13-2	3-Aminomethyl-3,5,5-trimethylcyclohexylamine	25 - 50 %	Acute Toxicity - oral - Category 4. Skin Corrosion - Category 1B. Eye Damage - Category 1. Sensitization - skin - Category 1A. Aquatic toxicity - chronic - Category 3.
CAS 90-72-2	2,4,6-Tris(dimethylaminomethyl)phenol	2.5 - 10 %	Skin Corrosion - Category 1C. Sensitization - skin - Category 1B.
CAS 71074-89-0	Bis(dimethylamino)methylphenol	< 2.5 %	Skin Corrosion - Category 1C. Eye Damage - Category 1.
CAS 112-24-3	Triethylenetetramine	< 2.5 %	Acute Toxicity - dermal - Category 4. Skin Corrosion - Category 1B. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 3.

4. First aid measures

General information:

First aider: Pay attention to self-protection!
If medical advice is needed, have product container or label at hand.
Take off immediately all contaminated clothing and wash it before reuse.

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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. Immediately get medical attention.
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. Seek the attention of an ophthalmologist immediately.
After swallowing:	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. In case of vomiting, position victim on their side. Keep airway open. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if swallowed.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature:

No data available

Suitable extinguishing media:

Water spray jet, foam, dry chemical powder, carbon dioxide

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

May form dangerous gases and vapors in case of fire.

Furthermore, there may develop: Carbon black, Carbon monoxide and carbon dioxide

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Heating will lead to pressure increase: Danger of bursting and explosion. Keep containers cool with water spray.

Do not allow fire water to penetrate into surface or ground water.

Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

6. Accidental release measures

Personal precautions:

Provide adequate ventilation. If possible, eliminate leakage.

Do not breathe mist/vapors/spray. Avoid contact with the substance.

Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse. Keep unprotected people away.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains. If necessary, notify appropriate authorities.

Methods for clean-up: Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Never return spills in original containers for re-use.
Carefully neutralize with acid. Final cleaning. Do not use any organic solvents.

Additional information: Special danger of slipping by leaking/spilling product.

7. Handling and storage

Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Precautions against fire and explosion:
Keep away from heat.
When handling larger quantities, take precautionary measures against electrostatic charging.
Keep away from sources of ignition - No smoking.

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.

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.
Do not store together with: Strong oxidizing agents

8. Exposure controls / personal protection

Engineering controls

Provide for good ventilation or exhaust system or work with completely self-contained 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 suitable protective clothing.
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
Glove material: Natural latex, PVC (polyvinyl chloride)
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: In case of inadequate ventilation wear respiratory protection.
The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.
Recommendation: Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:
Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

Environmental exposure controls

Do not allow to enter into ground-water, surface water or drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 68 °F and 101.3 kPa: liquid
Odor:	No data available
Odor threshold:	No data available
pH:	strongly alkaline
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	>= 1 g/mL
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	No data available

10. Stability and reactivity

Reactivity:	Refer to subsection "Possibility of hazardous reactions".
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No hazardous reaction when handled and stored according to provisions.
Conditions to avoid:	Keep away from heat sources, sparks and open flames. Protect from direct sunlight.

Incompatible materials: No data available

Hazardous decomposition products:

No hazardous decomposition products when regulations for storage and handling are observed.

Thermal decomposition: No data available

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): Acute Toxicity - oral - Category 4 = Harmful if swallowed.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Corrosion -

Category 1B = Causes severe skin burns and eye damage.

Serious eye damage/irritation: Eye Damage - Category 1 = Causes serious eye damage.

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 Trimethylolpropane poly(oxypropylene)triamine:

LD50 Rat, oral: 550 mg/kg

LD50 Rat, dermal: > 1,000 mg/kg

Information about 3-Aminomethyl-3,5,5-trimethylcyclohexylamine:

LD50 Rat, oral: 1,030 mg/kg

Information about Bis[(dimethylamino)methyl]phenol:

LD50 Rat, oral: 2,169 mg/kg

Symptoms

In case of ingestion:

Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Burns.

After contact with skin: Irritation, redness, burns.

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

12. Ecological information

Ecotoxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.
Information about Trimethylolpropane poly(oxypropylene)triamine:
Fish toxicity:
LC50: > 100 mg/L/96h (OECD 203)
Daphnia toxicity:
EC50 DaphniaSp.: 13 mg/L/48h (OECD 202)
Algae toxicity:
EC50 growth rate: 4.4 mg/L/72h
NOEC: 1 mg/L/72h

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: Do not dispose of with household waste.
Special waste. Incinerate according to applicable local, state and federal regulations.

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 2735

UN proper shipping name

ADR/RID, IMDG, IATA-DGR:
UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S.
(Trimethylolpropane poly(oxypropylene)triamine)

Transport hazard class(es)

ADR/RID: Class 8, Code: C7
IMDG: Class 8, Subrisk -
IATA-DGR: Class 8

Packing group

ADR/RID, IMDG, IATA-DGR:
II

Environmental hazards

Marine pollutant: yes

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

No data available

USA: Department of Transportation (DOT)

Identification number: UN2735
Proper shipping name: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S.
(Trimethylolpropane poly(oxypropylene)triamine)
Hazard class or Division: 8
Packing Group: II
Labels: 8
Symbols: G
Special Provisions: B2, IB2, T11, TP1, TP27
Packaging – Exceptions: 154
Packaging – Non-bulk: 202
Packaging – Bulk: 242
Quantity limitations – Passenger aircraft / rail: 1 L
Quantity limitations – Cargo only: 30 L
Vessel stowage – Location: A
Vessel stowage – Other: 52



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Sea transport (IMDG)

UN number: UN 2735
Proper shipping name:: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S.
(Trimethylolpropane poly(oxypropylene)triamine)
Class or division, Subsidiary risk: Class 8, Subrisk -
Packing Group: II
EmS: F-A, S-B
Special Provisions: 274
Limited quantities: 1 L
Excepted quantities: E2
Package - Instructions: P001
Package - Provisions: -
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T11
Tank instructions - Provisions: TP1, TP27
Stowage and handling: Category A.
Segregation: SG35
Properties and observations: Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. React violently with acids. Cause burns to skin, eyes and mucous membranes.
Marine pollutant: yes
Segregation group: 18

Air transport (IATA)

UN/ID number: UN 2735
Proper shipping name:: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S.
(Trimethylolpropane poly(oxypropylene)triamine)
Class or division, Subsidiary risk: Class 8
Packing Group: II
Hazard label: Corrosive
Excepted Quantity Code: E2
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y840 - Max. Net Qty/Pkg. 0.5 L
Passenger and Cargo Aircraft: Pack.Instr. 851 - Max. Net Qty/Pkg. 1 L
Cargo Aircraft only: Pack.Instr. 855 - Max. Net Qty/Pkg. 30 L
Special Provisions: A3 A803
Emergency Response Guide-Code (ERG): 8L

15. Regulatory information

National regulations - U.S. Federal Regulations

Trimethylolpropane poly(oxypropylene)triamine: TSCA Inventory: listed
3-Aminomethyl-3,5,5-trimethylcyclohexylamine: TSCA Inventory: listed
2,4,6-Tris(dimethylaminomethyl)phenol: TSCA Inventory: listed
Triethylenetetramine: TSCA Inventory: listed

National regulations - U.S. State Regulations

Triethylentetramine: California Proposition 65 code: -
Massachusetts Haz. Substance codes:
6
Pennsylvania Haz. Substance code: -

16. Other information

Text for labeling:

Contains 25 - 50 % Trimethylolpropane poly(oxypropylene)triamine, 25 - 50 %
3-Aminomethyl-3,5,5-trimethylcyclohexylamine, 2.5 - 10 %
2,4,6-Tris(dimethylaminomethyl)phenol, < 2.5 % Bis[(dimethylamino)methyl]phenol, <
2.5 % Triethylentetramine. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:

Health: 3 (Serious)
Fire: 2 (Moderate)
Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 3 (Serious)
Flammability: 2 (Moderate)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

HEALTH	3
FLAMMABILITY	2
PHYSICAL HAZARD	0
	X

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity
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 - chronic: Hazardous to the aquatic environment - chronic
AS/NZS: Australian Standards/New Zealand Standards
Bw: Body weight
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: European Community
EC50: Effective Concentration 50%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
Eye Damage: Eye damage
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%
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
MFSU: Manufacture, formulation, supply and use
NOEC: No Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
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
Sensitization - skin: Skin sensitisation
Skin Corrosion: Skin corrosion
TRGS: Technical Rules for Hazardous Substances
UN: United Nations
vPvB: Very persistent and very bioaccumulative



SAFETY DATA SHEET

according to 29 CFR 1910.1200 and ANSI standard Z400.1-2010

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Material number 617PG5

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Reason of change: General revision

Date of first version: 2/15/2022

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.