

1. Identification

Product identifier

Trade name: 617HG5 - OrthoEpoxy 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

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

2. Hazard identification

Classification of the substance or mixture

Acute Toxicity - oral - Category 4

Harmful if swallowed.

Skin Irritation - Category 2

Causes skin irritation.

Eye Damage - Category 1

Causes serious eye damage.

Sensitization - skin - Category 1

May cause an allergic skin reaction.

Germ cell mutagenicity - Category 2

Suspected of causing genetic defects.

Aquatic toxicity - chronic - Category 3

Harmful to aquatic life with long lasting effects.

Label elements

Symbols:



Signal word:

Danger

Hazard statements:

- Harmful if swallowed.
- Causes skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- Suspected of causing genetic defects.
- Harmful to aquatic life with long lasting effects.

Precautionary statements:

- Do not handle until all safety precautions have been read and understood.
- Avoid breathing mist/vapors/spray.
- Avoid release to the environment.
- Wear protective gloves/protective clothing/eye protection.

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.

Take off contaminated clothing and wash it before reuse.

Other hazards

Special danger of slipping by leaking/spilling product.

3. Composition/information on ingredients

Mixtures

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 2425-79-8	1,4-Bis(2,3-epoxypropoxy) butane	25 - 50 %	Acute Toxicity - oral - Category 4. Acute Toxicity - dermal - Category 4. Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2. Eye Damage - Category 1. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 3.
CAS 13236-02-7	1,2,3-tris(2,3-Epoxypropoxy) propane	10 - 25 %	Acute Toxicity - oral - Category 4. Eye Damage - Category 1. Germ cell mutagenicity - Category 2. Aquatic toxicity - chronic - Category 3.
CAS 1384855-91-7	Esterification products of acrylic acid and 2,2,2',2'-tetrakis(hydroxymethyl)-3,3'-oxydipropan-1-ol	10 - 25 %	Eye Irritation - Category 2A. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 3.
CAS 13048-34-5	1,10-Decanediyl diacrylate	2.5 - 10 %	Skin Irritation - Category 2. Eye Irritation - Category 2A.

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

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 contaminated clothing and wash it before reuse.
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. 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. 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. Seek medical attention.

Most important symptoms/effects, acute and delayed

Causes serious eye damage. Causes skin irritation. May cause an allergic skin reaction. Harmful if swallowed.

Information to physician

Treat symptomatically.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

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, protective equipment and emergency procedures

Avoid exposure. Provide adequate ventilation. If possible, eliminate leakage.

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

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

Environmental precautions:

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

Methods and material for containment and cleaning up

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.

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

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Obtain special instructions before use.
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 contaminated clothing and wash it before reuse.
Have eye wash bottle or eye rinse ready at work place.

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.

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.

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

Appropriate engineering controls

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

Personal protection equipment (PPE)

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.

Hand protection: Protective gloves according to OSHA Standard - 29 CFR: 1910.138.
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 suitable protective clothing.

General hygiene considerations: Obtain special instructions before use.
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 contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

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

Physical state at 68 °F and 101.3 kPa	liquid
	Form: viscous
Color:	yellow
	clear
Odor:	No data available
Odor threshold:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flammability:	No data available
Explosion limits:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	6 - 8
Viscosity:	No data available
Water solubility:	Not miscible in every proportion
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	No data available
Density:	>= 1 g/mL
Vapor density:	No data available
Particle characteristics:	Not applicable

Additional information

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:

Strong oxidizing agents

Hazardous decomposition products:

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

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

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.

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: Germ cell mutagenicity -
Category 2 = Suspected of causing genetic defects.

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 1,4-Bis(2,3-epoxypropoxy)butane:

LD50 Rat, oral: 1,163 mg/kg/bw (OECD 401)

LD50 Rat, dermal: > 2,150 mg/kg/bw (OECD 402)

Information about 1,2,3-tris(2,3-Epoxypropoxy)propane:

LD50 Rat, oral: 300 - 2,000 mg/kg/bw (OECD 423)

LD50 Rat, dermal: > 2,000 mg/kg (OECD 402)

Information about Esterification products of acrylic acid and

2,2,2',2'-tetrakis(hydroxymethyl)-3,3'-oxydipropyl-1-ol:

LD50 Rat, oral: > 2,000 mg/kg (OECD 423)

LD50 Rabbit, dermal: > 2,000 mg/kg (read across)

Symptoms

In case of ingestion:

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

After contact with skin: Irritation, redness

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

12. Ecological information

Ecotoxicity

Aquatic toxicity: Harmful to aquatic life with long lasting effects.
 Information about 1,4-Bis(2,3-epoxypropoxy)butane:
 Fish toxicity:
 EC50 Danio rerio (zebrafish): 24 mg/L/96h (OECD 203)
 Daphnia toxicity:
 EC50 Daphnia magna (Big water flea): 76 mg/L/24h (OECD 202)
 Algae toxicity:
 EL50 Pseudokirchneriella subcapitata (green algae), growth rate: > 160 mg/L/72h (OECD 201)
 NOELR Pseudokirchneriella subcapitata (green algae), growth rate: 40 mg/L/72h (OECD 201)

Persistence and degradability

Further details: No data available

Bioaccumulative potential

Partition coefficient: n-octanol/water:
 No data available

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: 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

DOT, IMDG, IATA-DGR: not applicable

UN proper shipping name

DOT, IMDG, IATA-DGR: Not restricted

Transport hazard class(es)

DOT, IMDG, IATA-DGR: not applicable

Packing group

DOT, IMDG, IATA-DGR: not applicable

Environmental hazards

Marine pollutant: no

Transport in bulk according to IMO instruments

No data available

Special precautions for user

USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: no

Air transport (IATA)

Proper shipping name: Not restricted

Further information

No dangerous good in sense of these transport regulations.

15. Regulatory information

National regulations - U.S. Federal Regulations

1,4-Bis(2,3-epoxypropoxy)butane:

TSCA Inventory: listed

1,2,3-tris(2,3-Epoxypropoxy)propane:

TSCA Inventory: listed

Esterification products of acrylic acid and

TSCA Inventory: listed; UVCB

2,2,2',2'-tetrakis(hydroxymethyl)-3,3'-oxydipropan-1-ol:

1,10-Decanediyl diacrylate:

TSCA Inventory: listed

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 25 - 50 % 1,4-Bis(2,3-epoxypropoxy)butane, 10 - 25 %
1,2,3-tris(2,3-Epoxypropoxy)propane, 10 - 25 % Esterification products of acrylic acid and
2,2,2',2'-tetrakis(hydroxymethyl)-3,3'-oxydipropan-1-ol, 2.5 - 10 % 1,10-Decanediyl
diacrylate.

Revision date: 1/20/2026

Date of first version: 2/15/2022

Reason of change: Changes in section 1: UFI
Changes in section 9: Paint, pH

Hazard rating systems:



NFPA Hazard Rating:

Health: 3 (Serious)

Fire: 2 (Moderate)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 3 (Serious) - Chronic effects

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
 Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
 AS/NZS: Australian Standards/New Zealand Standards
 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: European Community
 EC50: Effective Concentration 50%
 EL50: Effective loading rate 50%
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
 EN: European Standard
 EQ: Excepted quantities
 Eye Damage: Eye damage
 Eye Irritation: Eye irritation
 Germ cell mutagenicity: Mutagenicity
 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
 LD50: Lethal dose 50%
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
 MFSU: Manufacture, formulation, supply and use
 OECD: Organisation for Economic Co-operation and Development
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, bioaccumulative and toxic
 PNEC: Predicted no-effect concentration
 Sensitization - skin: Skin sensitisation
 Skin Irritation: Skin irritation
 TRGS: Technical Rules for Hazardous Substances
 UFI: Unique Formula Identifier
 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.