

1 Identification

Product identifier

Trade name: 636W46 - Loctite 242

Recommended use and restrictions on use

General use: Anaerobe sealing agent, Screw Locking Agent,
For orthopedic procedures.
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

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Email: 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 telephone number

COLLECT, Telephone: (613) 996-6666

2 Hazard identification

Classification

Skin Irritation 2

Eye Irritation 2A

Specific Target Organ Toxicity (Repeated Exposure) 2

Aquatic toxicity - acute 2

Causes skin irritation.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure.

Toxic to aquatic life.

Information elements

Symbols:



Signal word:

Warning

Hazard statements:

- Causes skin irritation.
- Causes serious eye irritation.
- May cause damage to organs through prolonged or repeated exposure.
- Toxic to aquatic life.

Precautionary statements:

- Do not breathe mist/vapours/spray.
- Wash hands and face thoroughly after handling.
- 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.
- Get medical advice/attention if you feel unwell.
- Specific treatment (see 'First aid' on this label).
- If skin irritation occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- Dispose of contents/container to hazardous or special waste collection point.

Other hazards known to the supplier with respect to the product

Special danger of slipping by leaking/spilling product.

3 Composition/Information on ingredients

Mixture

Chemical name: Anaerobe sealing agent on the basis of polyethylene glycol dimethacrylate.

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 9004-96-0	Oleic acid, ethoxylated	25 - 30 %	Aquatic toxicity - acute 2.
CAS 7631-86-9	Silicon dioxide nanoparticle	5 - < 10 %	Specific Target Organ Toxicity (Repeated Exposure) 2.
CAS 25736-86-1	2-Hydroxyethyl methacrylate, ethoxylated	1 - 5 %	Aquatic toxicity - acute 3.
CAS 80-15-9	Cumene hydroperoxide	1 - < 2.5 %	Flammable Liquid 4. Organic Peroxide E. Acute Toxicity 4 (oral). Acute Toxicity 4 (dermal). Acute Toxicity 3 (inhalative). Skin Corrosion 1B. Specific Target Organ Toxicity (Repeated Exposure) 2. Aquatic toxicity - acute 2. Aquatic toxicity - chronic 2.
CAS 613-48-9	N,N-diethyl-p-toluidine	0.1 - < 1 %	Flammable Liquid 4. Acute Toxicity 3 (oral). Acute Toxicity 3 (dermal). Acute Toxicity 3 (inhalative). Skin Irritation 2. Specific Target Organ Toxicity (Repeated Exposure) 2. Aquatic toxicity - acute 3. Aquatic toxicity - chronic 3.
CAS 79-41-4	Methacrylic acid	0.1 - < 1 %	Flammable Liquid 4. Acute Toxicity 4 (oral). Acute Toxicity 3 (dermal). Acute Toxicity 4 (inhalative). Skin Corrosion 1A. Eye Damage 1. Specific Target Organ Toxicity (Single Exposure) 3. Aquatic toxicity - acute 3.
CAS 130-15-4	1,4-Naphthoquinone	< 0.1 %	Acute Toxicity 3 (oral). Acute Toxicity 2 (inhalative). Skin Corrosion 1C. Eye Damage 1. Sensitization - skin 1. Specific Target Organ Toxicity (Single Exposure) 3. Aquatic toxicity - acute 1 (M-factor = 10). Aquatic toxicity - chronic 1 (M-factor = 1).

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

4 First-aid measures

Description of necessary first-aid measures

General information:	If medical advice is needed, have product container or label at hand.
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.
In case of swallowing:	Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention.

In case of skin contact: After contact with skin, wash immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. Seek medical treatment in case of troubles.

In case of 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.

Most important symptoms and effects, whether acute or delayed

Causes skin irritation.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

5 Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water spray jet, Extinguishing powder, foam, carbon dioxide

Unsuitable extinguishing media:

Full water jet

Specific hazards arising from the product

Emits toxic fumes under fire conditions.

In case of fire may be liberated: Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters

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

Additional information:

Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water. Contaminated fire-fighting water must be collected separately.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing mist/vapours/spray. Avoid contact with the substance.

If possible, eliminate leakage. Provide adequate ventilation. Wear appropriate protective equipment. 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.

Methods and material for containment and cleaning up

Smaller amounts:

Collect spilled material using paper towels and dispose.

Large amounts:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal.

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:

Provide adequate ventilation, and local exhaust as needed. Do not breathe mist/vapours/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, hot surfaces, sparks, open flames and other ignition sources. 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 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, reducing agents, acids, bases.

8 Exposure controls/Personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
79-41-4	Methacrylic acid	Canada: Alberta, OEL 8 hour	70 mg/m ³ ; 20 ppm
		Canada: BC, OEL TWA	20 ppm
		Canada: Québec, VEMP	70 mg/m ³ ; 20 ppm

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Respiratory protection:	Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. In case of inadequate ventilation wear respiratory protection. Recommendation: Use filter type A (= against vapours of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product.
Hand protection:	Protective gloves according to OSHA Standard - 29 CFR: 1910.138 Glove material: Nitrile rubber - Layer thickness: ≥ 0.4 mm. Breakthrough time: ≥ 480 min. 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:	Avoid breathing mist/vapours/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

Refer to 6.: Section "Environmental precautions".

9 Physical and chemical properties

Information on basic physical and chemical properties

Physical state at 20 °C and 101.3 kPa	liquid
Colour:	blue
Odour:	Mild, like acryl
Odour threshold:	No data available
Melting point and freezing point:	< -30 °C
Boiling point or initial boiling point and boiling range:	> 149 °C
Flammability:	This material is combustible, but will not ignite readily.
Lower and upper explosion limit or lower and upper flammability limit:	LEL (Lower Explosion Limit): Not determined UEL (Upper Explosive Limit): Not determined
Flash point/flash point range:	> 100 °C
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Kinematic viscosity:	at 40 °C: > 20.5 mm ² /s
Solubility:	Soluble in acetone
Water solubility:	Not miscible in every proportion

Partition coefficient — n-octanol/water:	1.71 log P(o/w) (1,4-Naphthoquinone) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected. at 25 °C: 1.6 log P(o/w) (Cumene hydroperoxide) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
Vapour pressure:	at 20 °C: < 0.13 hPa at 50 °C: < 300 hPa
Density and/or relative density	at 20 °C: 1.08 g/mL
Vapour density:	at 20 °C: > 1
Particle characteristics:	Not applicable

Additional information

Ignition temperature:	Not determined
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10 Stability and reactivity

Reactivity:	Refer to subsection "Possibility of hazardous reactions".
Chemical stability:	Product is stable under normal storage conditions.
Possibility of hazardous reactions:	Exothermic polymerization may occur.
Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Incompatible materials:	Strong oxidizing agents, reducing agent, acids, bases
Hazardous decomposition products:	No hazardous decomposition products when regulations for storage and handling are observed.

11 Toxicological information

Information on the likely routes of exposure

No data available

Health hazard information

Acute toxicity (oral): Based on available data, the classification criteria are not met.

ATEmix (calculated): 2,828 mg/kg

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

ATEmix (calculated): > 5,000 mg/kg

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

ATEmix (vapour, calculated): 25.07 mg/L/4h

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

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

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Lack of data.

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): Specific Target Organ Toxicity (Repeated Exposure) 2 = May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Lack of data.

Other information:

Information about Oleic acid, ethoxylated (CAS 9004-96-0):

LD50 Rat, oral: > 2,000 mg/kg, no mortality occurred

Information about Cumene hydroperoxide (CAS 80-15-9):

LD50 oral: 382 mg/kg

ATE dermal: 1,100 mg/kg

ATE inhalative (dust/mist): 0.5 mg/L/4h

Information about N,N-diethyl-p-toluidine (CAS 613-48-9):

ATE oral: 100 mg/kg

ATE dermal: 300 mg/kg

ATE inhalative (vapour): 3 mg/L/4h

Information about Methacrylic acid (CAS 79-41-4):

LD50 Rat, oral: 1,320 mg/kg (OECD 401)

LD50 Rabbit, dermal: > 500 mg/kg

LC50 Rat, inhalative (dust/mist): 3.19 mg/L/4h (OECD 403)

Information about 1,4-Naphthoquinone (CAS 130-15-4):

LD50 Rat, oral: 124 mg/kg (OECD 401)

LC50 Rat, inhalative (dust/mist): 0.046 mg/L/4h (OECD 403)

Symptoms

In case of inhalation: Irritation, Cough, shortness of breath, shortage of breath

After contact with skin: Repeated exposure may cause skin dryness or cracking.

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

12 Ecological information

Ecotoxicity

Aquatic toxicity:

Toxic to aquatic life.

Information about Oleic acid, ethoxylated (CAS 9004-96-0):

Fish toxicity:

LC50 fish: 1 - 10 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 1 - 10 mg/L/48h (OECD 202)

Information about 2-Hydroxyethyl methacrylate, ethoxylated (CAS 25736-86-1):

Fish toxicity:

LC50 fish: 10 - 100 mg/L/96h (OECD 203)

Information about Cumene hydroperoxide (CAS 80-15-9):

Fish toxicity:

LC50 Oncorhynchus mykiss: 3.9 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 18.84 mg/L/48h (OECD 202)

Algae toxicity:

ErC50 Desmodesmus subspicatus (green algae): 3.1 mg/L/72h (OECD 201)

NOEC Desmodesmus subspicatus (green algae): 1 mg/L/72h (OECD 201)

Information about 1,4-Naphthoquinone (CAS 130-15-4):

Fish toxicity:

LC50 Oryzias latipes (Ricefish): 0.045 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 0.026 mg/L/48h (OECD 202)

Algae toxicity:

ErC50 Pseudokirchneriella subcapitata (green algae): 0.42 mg/L/72h (OECD 201)

NOEC Pseudokirchneriella subcapitata (green algae): 0.07 mg/L/72h (OECD 201)

Persistence and degradability

Further details:

Product is not readily biodegradable.

Biodegradability:

Information about Oleic acid, ethoxylated (CAS 9004-96-0): easily bio-degradable

Information about 2-Hydroxyethyl methacrylate, ethoxylated (CAS 25736-86-1): easily bio-degradable

Information about Cumene hydroperoxide (CAS 80-15-9):

Formation of carbon dioxide: 3%/28 d (OECD 301 B)

Information about 1,4-Naphthoquinone (CAS 130-15-4):

Oxygen consumption: 0%/28d (OECD 301 F)

Bioaccumulative potential

Information about Cumene hydroperoxide (CAS 80-15-9):

Bioconcentration factor (BCF): 9,1 (OECD 305)

Partition coefficient — n-octanol/water:

1.71 log P(o/w) (1,4-Naphthoquinone)

Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

at 25 °C: 1.6 log P(o/w) (Cumene hydroperoxide)

Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.

Mobility in soil

Information about Cumene hydroperoxide (CAS 80-15-9):

Adsorption coefficient: log KOC: 1.6

Other adverse effects

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

13 Disposal considerations

Waste treatment methods

Product

Recommendation: Dispose of waste according to applicable legislation. Do not allow to enter drains.

Package

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

14 Transport information

UN number

TDG, IMDG, IATA-DGR: not applicable

UN proper shipping name

TDG, IMDG, IATA-DGR: Not restricted

Transport hazard class

TDG, IMDG, IATA-DGR: not applicable

Packing group

TDG, IMDG, IATA-DGR: not applicable

Environmental hazards

Marine pollutant: no

Special precautions in connection with transport or conveyance either within or outside the premises

Canada: Transportation of Dangerous Goods (TDG)

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 - Canada

Oleic acid, ethoxylated: DSL: listed
Silicon dioxide nanoparticle: DSL: listed
2-Hydroxyethyl methacrylate, ethoxylated: NDSL: listed
Cumene hydroperoxide: DSL: listed
N,N-diethyl-p-toluidine: DSL: listed
Methacrylic acid: DSL: listed
1,4-Naphthoquinone: DSL: listed

Further regulations, limitations and legal requirements

No data available

16 Other information

Text for labelling: Contains:
Cumene hydroperoxide
Revision date: 17/12/2025
Date of first version: 24/2/2005
Reason of change: General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022
Classification procedure: Physical hazards: on basis of test data
Health hazards, environmental hazards: calculation method

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity
 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
 BCF: Bioconcentration Factor
 CAS: Chemical Abstracts Service
 CFR: Code of Federal Regulations
 CLP: Classification, Labelling and Packaging
 DMEL: Derived minimal effect level
 DNEL: Derived no-effect level
 DSL: Domestic Substances List
 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
 Eye Irritation: Eye irritation
 Flammable Liquid: Flammable liquid
 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
 log P(o/w): Partition coefficient: octanol/water
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
 M-factor: Multiplication factor
 NDSL: Non-Domestic Substances List
 NOEC: No Observed Effect Concentration
 OECD: Organisation for Economic Co-operation and Development
 OEL: Occupational Exposure Limit Value
 Organic Peroxide: Organic peroxide
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, bioaccumulative and toxic
 PNEC: Predicted no-effect concentration
 Sensitization - skin: Skin sensitisation
 Skin Corrosion: Skin corrosion
 Skin Irritation: Skin irritation
 STOT RE: Specific target organ toxicity - repeated exposure
 STOT SE: Specific target organ toxicity - single exposure
 TDG: Transportation of Dangerous Goods Regulation in Canada
 TLV: Threshold Limit Value
 TRGS: Technical Rules for Hazardous Substances
 vPvB: Very persistent and very bioaccumulative
 WEL: Workplace Exposure Limit

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.