

## 1 Identification

### Product identifier

Trade name: 636W60 - Loctite 243

### 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

WWW: [www.ottobock.ca](http://www.ottobock.ca)

Email: [info.canada@ottobock.com](mailto: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

Sensitization - skin 1 May cause an allergic skin reaction.

Aquatic toxicity - acute 2 Toxic to aquatic life.

Aquatic toxicity - chronic 3 Harmful to aquatic life with long lasting effects.

### Information elements

Symbols:



Signal word:

**Warning**

Hazard statements:

May cause an allergic skin reaction.

Toxic to aquatic life.

Harmful to aquatic life with long lasting effects.

Precautionary statements:

Avoid breathing mist/vapours/spray.  
 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.  
 Specific treatment (see ' First aid ' on this label).  
 If skin irritation or rash occurs: 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

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 2082-81-7	Tetramethylene dimethacrylate	20 - 40 %	Sensitization - skin 1. Aquatic toxicity - acute 2.
CAS 101-37-1	2,4,6-Triallyloxy-s-triazine	5 - 10 %	Acute Toxicity 4 (oral). Aquatic toxicity - acute 2. Aquatic toxicity - chronic 2.
CAS 109-16-0	2,2'-Ethylenedioxydiethyl dimethacrylate	1 - 5 %	Sensitization - skin 1. Aquatic toxicity - acute 3.
CAS 51978-15-5	[2-[(2-Methyl-1-oxoallyl)oxy]ethyl] hydrogen maleate	< 1 %	Skin Corrosion 1B. Eye Damage 1. Sensitization - skin 1.
CAS 79-41-4	Methacrylic acid	< 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 108-31-6	Maleic anhydride	0.001 - 0.01 %	Acute Toxicity 4 (oral). Skin Corrosion 1B. Eye Damage 1. Respiratory Sensitizer 1. Sensitization - skin 1. Specific Target Organ Toxicity (Repeated Exposure) 1. Aquatic toxicity - acute 3.

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

Additional information: Contains silicon dioxide, polyethylene.

The maximum workplace exposure limits are, where necessary, listed in section 8.

### 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:	Move victim to fresh air. If you feel unwell, seek medical advice.
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. Consult physician.
In case of skin contact:	Remove residues with soap and water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.
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. In case of eye irritation consult an ophthalmologist.

#### Most important symptoms and effects, whether acute or delayed

May cause an allergic skin reaction.

#### 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 skin and eyes. 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. If necessary, notify appropriate authorities.

### 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. Avoid breathing mist/vapours/spray. Avoid contact with skin and eyes.

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Wear appropriate protective equipment.

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 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: Acids, reducing agents, strong bases, strong oxidizing agents.

## 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 <sup>3</sup> ; 20 ppm
		Canada: BC, OEL TWA	20 ppm
		Canada: Québec, VEMP	70 mg/m <sup>3</sup> ; 20 ppm
108-31-6	Maleic anhydride	Canada: Alberta, OEL 8 hour	0.4 mg/m <sup>3</sup> ; 0.1 ppm
		Canada: BC, OEL TWA	0.1 ppm
		Canada: Québec, VEMP	0.01 mg/m <sup>3</sup>

### 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: $\geq 0.4$ mm. Breakthrough time: $\geq 480$ 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 (acryl)
Odour threshold:	No data available
Melting point and freezing point:	$< -30$ °C
Boiling point or initial boiling point and boiling range:	$> 150$ °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 <sup>2</sup> /s
Dynamic viscosity:	1,300 - 3,000 mPa*s (Brookfield)
Water solubility:	Not miscible in every proportion

Partition coefficient — n-octanol/water:	3.1 log P(o/w) (Tetramethylene dimethacrylate) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected. at 20 °C: 2.8 log P(o/w) (2,4,6-Triallyloxy-s-triazine) Based on the n-octanol/water partition coefficient significant accumulation in organisms is not expected.
Vapour pressure:	at 27 °C: < 1.33 hPa
Density and/or relative density	1.08 g/mL
Vapour density:	1 (Air = 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:	Acids, reducing agent, strong bases, strong oxidizing agents
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): Lack of data.

Acute toxicity (dermal): Lack of data.

Acute toxicity (inhalative): Lack of data.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.

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): Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

#### Other information:

Information about Tetramethylene dimethacrylate (CAS 2082-81-7):

LD50 Rat, oral: 10,660 mg/kg (OECD 401)

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

Information about 2,4,6-Triallyloxy-s-triazine (CAS 101-37-1):

LD50 Rat, oral: 753mg/kg (OECD 401)

LD50 Rabbit, dermal: > 2,000 mg/kg (OECD 402), no mortality occurred

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)

### Symptoms

After contact with skin: Skin rash, urticaria

## 12 Ecological information

### Ecotoxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

Information about Tetramethylene dimethacrylate (CAS 2082-81-7):

Fish toxicity:

LC50 Danio rerio (zebrafish): 3.34 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 28.4 mg/L/48h (data obtained by analogy conclusion, e.g. (Q)SAR)

NOEC Daphnia magna (Big water flea): 5.09 mg/L/21d (OECD 211)

Algae toxicity:

ErC50 Desmodesmus subspicatus (green algae): 9.79 mg/L/72h (OECD 201)

NOEC Desmodesmus subspicatus (green algae): 2.11 mg/L/72h (OECD 201)

Information about 2,4,6-Triallyloxy-s-triazine (CAS 101-37-1):

Fish toxicity:

LC50 Danio rerio (zebrafish): 7.05 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 40 mg/L/48h (OECD 202)

Algae toxicity:

ErC50 Desmodesmus subspicatus (green algae): 10.52 mg/L/72h (OECD 201)

NOEC Desmodesmus subspicatus (green algae): 2.5 mg/L/72h (OECD 201)

Effects in sewage plants: Information about 2,4,6-Triallyloxy-s-triazine (CAS 101-37-1):

EC50 activated sludge: > 1,000 mg/L/3h

### Persistence and degradability

Further details: Biodegradability:

Information about Tetramethylene dimethacrylate (CAS 2082-81-7):

Formation of carbon dioxide: 84%/28d (OECD 310), easily bio-degradable

Information about 2,4,6-Triallyloxy-s-triazine (CAS 101-37-1):

Formation of carbon dioxide: 9%/28d (OECD 301 B), not easily bio-degradable

### Bioaccumulative potential

Information about 2,4,6-Triallyloxy-s-triazine (CAS 101-37-1):

Bioconcentration factor (BCF): 29.24

Partition coefficient — n-octanol/water:

3.1 log P(o/w) (Tetramethylene dimethacrylate)

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

at 20 °C: 2.8 log P(o/w) (2,4,6-Triallyloxy-s-triazine)

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

### Mobility in soil

Information about 2,4,6-Triallyloxy-s-triazine (CAS 101-37-1):

log KOC: 2.6

### 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

Tetramethylene dimethacrylate:	DSL: listed
2,4,6-Triallyloxy-s-triazine:	DSL: listed
2,2'-Ethylenedioxydiethyl dimethacrylate:	DSL: listed
[2-[(2-Methyl-1-oxoallyl)oxy]ethyl] hydrogen maleate:	NDSL: listed
Methacrylic acid:	DSL: listed
Maleic anhydride:	DSL: listed
Polyethylene:	DSL: listed
Silicon dioxide:	DSL: listed

### Further regulations, limitations and legal requirements

No data available

## 16 Other information

Text for labelling:	Contains: Tetramethylene dimethacrylate 2,2'-Ethylenedioxydiethyl dimethacrylate [2-[(2-Methyl-1-oxoallyl)oxy]ethyl]hydrogenmaleat
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:	<p>Acute Toxicity: Acute toxicity</p> <p>Aquatic toxicity - acute: Hazardous to the aquatic environment - acute</p> <p>Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic</p> <p>AS/NZS: Australian Standards/New Zealand Standards</p> <p>BCF: Bioconcentration Factor</p> <p>CAS: Chemical Abstracts Service</p> <p>CFR: Code of Federal Regulations</p> <p>CLP: Classification, Labelling and Packaging</p> <p>DMEL: Derived minimal effect level</p> <p>DNEL: Derived no-effect level</p> <p>DSL: Domestic Substances List</p> <p>EC: European Community</p> <p>EC50: Effective Concentration 50%</p> <p>EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods</p> <p>EN: European Standard</p> <p>EQ: Excepted quantities</p> <p>Eye Damage: Eye damage</p> <p>Flammable Liquid: Flammable liquid</p> <p>IATA: International Air Transport Association</p> <p>IATA-DGR: International Air Transport Association – Dangerous Goods Regulations</p> <p>IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk</p> <p>IMDG Code: International Maritime Dangerous Goods Code</p> <p>IMO: International Maritime Organization</p> <p>LC50: Median lethal concentration</p> <p>LD50: Lethal dose 50%</p> <p>LEL: Lower Explosion Limit</p> <p>log P(o/w): Partition coefficient: octanol/water</p> <p>MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships</p>

NDSL: Non-Domestic Substances List  
NOEC: No Observed Effect Concentration  
OECD: Organisation for Economic Co-operation and Development  
OEL: Occupational Exposure Limit Value  
OSHA: Occupational Safety and Health Administration  
PBT: Persistent, bioaccumulative and toxic  
PNEC: Predicted no-effect concentration  
QSAR: Quantitative Structure-Activity Relationship  
Respiratory Sensitizer: Sensitisation to the respiratory tract  
Sensitization - skin: Skin sensitisation  
Skin Corrosion: Skin corrosion  
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.