

## 1 Identification

### Product identifier

Trade name: 636K14 - Loctite 601

### Recommended use and restrictions on use

General use: Anaerobic adhesive, 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

Skin Irritation 2

Eye Irritation 2A

Sensitization - skin 1

Specific Target Organ Toxicity (Repeated Exposure) 2

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure.

### Information elements

Symbols:



Signal word:

**Warning**

Hazard statements: Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements: Do not breathe vapours.  
Wear protective gloves/protective clothing/eye protection.  
  
Get medical attention if you feel unwell.  
If skin irritation occurs: Get medical advice/attention.  
Wash contaminated clothing 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: Anaerobic adhesive with polyethylene glycol dimethacrylate base.

### Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 109-16-0	2,2'-Ethylenedioxydiethyl dimethacrylate	50 - 100 %	Sensitization - skin 1.
CAS 868-77-9	2-Hydroxyethyl methacrylate	10 - 20 %	Skin Irritation 2. Eye Irritation 2A. Sensitization - skin 1.
CAS 63393-89-5	Coumarone-Indene Resin	< 10 %	Eye Irritation 2A.
CAS 80-15-9	Cumene hydroperoxide	< 2.5 %	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 - chronic 2.
CAS 613-48-9	N,N-diethyl-p-toluidine	< 1 %	Acute Toxicity 3 (oral). Acute Toxicity 3 (dermal). Acute Toxicity 3 (inhalative). Specific Target Organ Toxicity (Repeated Exposure) 2. Aquatic toxicity - chronic 3.
CAS 609-72-3	N,N-Dimethyl-o-toluidine	< 1 %	Acute Toxicity 3 (oral). Acute Toxicity 3 (dermal). Acute Toxicity 3 (inhalative). Specific Target Organ Toxicity (Repeated Exposure) 2. Aquatic toxicity - chronic 3.
CAS 79-41-4	Methacrylic acid	< 1 %	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.

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

## 4 First-aid measures

### Description of necessary first-aid measures

General information:	Take off contaminated clothing and wash it before reuse. If medical advice is needed, have product container or label at hand.
In case of inhalation:	Move victim to fresh air. Seek medical attention if problems persist.
In case of swallowing:	Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Consult physician.
In case of skin contact:	After contact with skin, wash immediately with soap and plenty of water. Seek medical attention if irritation persists.
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. Consult doctor afterwards.

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

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

### 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:

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 (NO<sub>x</sub>), 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:

Use fine water spray to cool endangered containers.

Do not allow water used to extinguish fire to enter drains, ground or waterways.

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

Provide adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours.

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. Special waste.

Clean contaminated area with soap and water. Provide adequate ventilation.

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 vapours.

Avoid contact with skin, eyes, and clothing. Wear appropriate protective equipment. 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.

### Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

- Keep only in the original container.
- Do not return unused portions of product to original container.

Hints on joint storage:

- Do not store together with Strong oxidizing agents.

## 8 Exposure controls/Personal protection

### Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
63393-89-5	Coumarone-Indene Resin	Canada: Ontario, OEL TWA	5 mg/m <sup>3</sup>
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

### Appropriate engineering controls

- Provide local exhaust as close as possible to point of adhesion.
- To minimize skin contact, Loctite applicators are recommended. Do not breathe vapours.

### Individual protection measures, such as personal protective equipment

- Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use filter type A (= against vapours 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.  
Glove material: Nitrile rubber - Layer thickness:  $\geq 0,4$  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:  
Do not breathe vapours. Keep away from food and drinks. Do not eat, drink or smoke when using this product.  
Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash it before reuse.  
Wash hands before breaks and after work. Follow up by applying skin cream.  
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 20 °C and 101.3 kPa	liquid
Colour:	green
Odour:	characteristic
Odour threshold:	No data available
Melting point and freezing point:	No data available
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	No data available
Lower and upper explosion limit or lower and upper flammability limit:	No data available
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
Water solubility:	immiscible
Partition coefficient — n-octanol/water:	No data available
Vapour pressure:	No data available
Density and/or relative density	at 25 °C: 1.098 g/mL
Vapour density:	No data available
Particle characteristics:	Not applicable

### Additional information

Additional information:	Possible separation of some components at < -10°C, but no hardening. Boiling point cannot be determined since strong heating will lead to polymerization.
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## 10 Stability and reactivity

Reactivity:	Refer to subsection "Possibility of hazardous reactions".
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Reacts with strong oxidizing agents.
Conditions to avoid:	Keep away from heat.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon monoxide and carbon dioxide.

## 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: 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: Sensitization - skin 1 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Lack of data.

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

Information about 2,2'-Ethylenedioxydiethyl dimethacrylate:

Specific symptoms in animal studies, Rat, oral: NOAEL P, F1  $\geq$  1,000 mg/kg/d (OECD 422, read across)

Information about 2-Hydroxyethyl methacrylate:

Specific symptoms in animal studies, Rat, oral: NOAEL P,F1  $\geq$  1,000 mg/kg/d (OECD 422, read across)

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. Information about 2,2'-Ethylenedioxydiethyl dimethacrylate:

Specific symptoms in animal studies, Rat, oral: NOAEL = 1,000 mg/kg/d (OECD 422, read across)

Information about 2-Hydroxyethyl methacrylate:

Specific symptoms in animal studies, Rat, oral: NOAEL = 100 mg/kg/d (OECD 422, read across)

Aspiration hazard: Lack of data.

## Other information:

Information about 2,2'-Ethylenedioxydiethyl dimethacrylate

Acute toxicity:

LD50 Rat, oral 10,837 mg/kg

LD50 Mouse, dermal &gt; 2,000 mg/kg

Information about 2-Hydroxyethyl methacrylate

Acute toxicity:

LD50 Rat, oral &gt; 5,000 mg/kg

LD50 Rabbit, dermal &gt; 5,000 mg/kg

Information about Coumarone-Indene Resin

Acute toxicity:

LD50 Rat, oral &gt; 16,000 mg/kg

Information about Cumene hydroperoxide:

Acute toxicity:

LD50 Rat, oral 550 mg/kg

LD50, dermal 1,200 - 1,520 mg/kg

Information about Methacrylic acid:

LD50 Rat, oral &gt; 1,320 mg/kg (OECD 401, read across)

LD50 dermal 500 mg/kg (ATE)

**Symptoms**

In case of inhalation:

Irritant. cough, shortness of breath, shortage of breath, cramp feeling in breast.

In case of ingestion: Irritant

After contact with skin: skin rash, urticaria

After eye contact: irritation, redness

## 12 Ecological information

### Ecotoxicity

Aquatic toxicity:

Cumene hydroperoxide:

Algae toxicity: *Pseudokirchneriella subcapitata* (green algae): ErC 3.1 mg/L/72h, OECD 201, read across

Daphnia toxicity: *Daphnia magna* (Big water flea) EC50: 18 mg/L/48h, OECD 202, read across

Fish toxicity: *Oncorhynchus mykiss* LC50: 3.9 mg/L/96h, OECD 203, read across

Bacterial toxicity: EC10: 70 mg/L/30min

2-Hydroxyethyl methacrylate

Algae toxicity: *Pseudokirchneriella subcapitata* (green algae): EC50 836 mg/L/72h; NOEC 400 mg/L/72h, OECD 201, read across

Daphnia toxicity: *Daphnia magna* (Big water flea) EC50: 380 mg/L/48h OECD 202, read across; NOEC 24.1 mg/L/21d, OECD 211, read across

Fish toxicity: *Oryzias latipes* LC50: > 100 mg/L/96h, OECD 203, read across

2,2'-Ethylenedioxydiethyl dimethacrylate

Algae toxicity: *Pseudokirchneriella subcapitata* (green algae): EC50 > 100 mg/L/72h; NOEC 18.6 mg/L/72h, OECD 201, read across

Daphnia toxicity: *Daphnia magna* (Big water flea) NOEC: 32 mg/L/21d, OECD 211, read across

Fish toxicity: *Danio rerio* (zebrafish) LC50: 16.4 mg/L/96h, OECD 203, read across

Methacrylic acid

Algae toxicity: *Pseudokirchneriella subcapitata* (green algae): EC50 > 45 mg/L/72h; NOEC 8.2 mg/L/72h, OECD 201, read across

Daphnia toxicity: *Daphnia magna* (Big water flea) EC50: > 130 mg/L/48h, EPA OTS 797.1300, read across

Fish toxicity: *Oncorhynchus mykiss* LC50: 85 mg/L/96h, EPA OTS 797.1400, read across

Bacterial toxicity: EC10: 100 mg/L/17h

### Persistence and degradability

Further details:

2-Hydroxyethyl methacrylate: easily bio-degradable, Degradation aerobic: 92 - 100 %, OECD 301 C, read across

Cumene hydroperoxide: Degradation: 0 %, OECD 301 B, read across

2,2'-Ethylenedioxydiethyl dimethacrylate: easily bio-degradable, Degradation aerobic: 85 % OECD 301 B, read across

Methacrylic acid: easily bio-degradable, Degradation aerobic: 100 % OECD 302 B, read across

### Bioaccumulative potential

Cumene hydroperoxide: Distribution coefficient: 2.16

Methacrylic acid: Distribution coefficient (22 °C): 0.93 OECD 107, read across

2-Hydroxyethyl methacrylate: Distribution coefficient (25 °C): 0.42 OECD 107, read across

2,2'-Ethylenedioxydiethyl dimethacrylate: Distribution coefficient: 2.3 OECD 117, read across

Bioconcentration factor (BCF):

Cumene hydroperoxide: Bioconcentration factor (BCF): 9,1, OECD 305, read across

### Mobility in soil

No data available

### 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: Special waste. 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

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

2,2'-Ethylenedioxydiethyl dimethacrylate: DSL: listed

2-Hydroxyethyl methacrylate: DSL: listed

Coumarone-Indene Resin: DSL: listed

Cumene hydroperoxide: DSL: listed

N,N-diethyl-p-toluidine: DSL: listed

N,N-Dimethyl-o-toluidine: DSL: listed

Methacrylic acid: DSL: listed

### Further regulations, limitations and legal requirements

No data available

## 16 Other information

Text for labelling: Contains 2,2'-Ethylenedioxydiethyl dimethacrylate, cumene hydroperoxide and 2-Hydroxyethyl methacrylate

Revision date: 17/12/2025

Date of first version: 23/6/2017

Reason of change: General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022

### Abbreviations and acronyms:

Acute Toxicity: Acute toxicity  
 Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic  
 AS/NZS: Australian Standards/New Zealand Standards  
 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  
 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  
 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.