

1. Product and company identification

Product identifier

Trade name: 636K13 - Loctite 241

Recommended use and restrictions on use

General use: Anaerobe sealing 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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E-mail: 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 phone number

COLLECT, Telephone: (613) 996-6666

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 20 °C and 101.3 kPa: liquid

Color: blue

fluorescent

Odor: Mild, like acryl

Classification: Skin Irritation 2. Eye Irritation 2A. Specific Target Organ Toxicity (Repeated Exposure) 2.
Aquatic toxicity - chronic 3.

Hazard symbols:



Signal word:

Warning

Hazard statements:

- Causes skin irritation.
- Causes serious eye irritation.
- May cause damage to organs through prolonged or repeated exposure.
- Harmful 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.
- Get medical advice/attention if you feel unwell.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.

Regulatory status

This material is considered hazardous by the WHMIS in Canada.

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 80-15-9	Cumene hydroperoxide	< 3 %	Organic Peroxide E. Acute Toxicity 4 (oral). Acute Toxicity 4 (dermal). Acute Toxicity 2 (inhalative). Skin Corrosion 1B. Specific Target Organ Toxicity (Single Exposure) 3. Specific Target Organ Toxicity (Repeated Exposure) 2. Aquatic toxicity - chronic 2.
CAS 613-48-9	N,N-diethyl-p-toluidine	< 3 %	Acute Toxicity 3 (oral). Acute Toxicity 3 (dermal). Acute Toxicity 3 (inhalative). Skin Irritation 2. 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.

4. 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. Seek medical attention.

Following skin contact: After contact with skin, wash immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. Consult a doctor if skin irritation persists.

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. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Seek medical attention.

Most important symptoms and effects, both acute and delayed

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

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

> 100 °C

Auto-ignition temperature: No data available

Suitable extinguishing media:

Water spray jet, extinguishing powder, foam, carbon dioxide.

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Emits toxic fumes under fire conditions.
Furthermore, there may develop: Nitrogen oxides (NOx), carbon monoxide and carbon dioxide.

Special protective equipment and precautions for fire-fighters:

Wear a self-contained breathing apparatus and chemical 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:

Avoid contact with skin and eyes. Provide adequate ventilation. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away. Avoid breathing mist/vapors/spray.

Environmental precautions:

Do not allow to enter into ground-water, surface water or drains. If necessary, notify appropriate authorities.

Methods for clean-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. Final cleaning: Remove residues with soap and water.

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.
Avoid contact with skin and eyes. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Avoid breathing mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Have eye wash bottle or eye rinse ready at work place.

Storage

Requirements for storerooms and containers:
Keep only in the original container.
Keep away from sources of ignition and heat.
Do not return unused portions of product to original container.

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

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

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

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: Nitrile rubber - Layer thickness: ≥ 0,4 mm
Breakthrough time: >480 min
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. In case of inadequate ventilation wear respiratory protection. Use filter type A (= against vapors 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/vapor/aerosol/particulates) that may arise when handling the product.

General hygiene considerations: When using do not eat, drink or smoke. Keep away from food and drinks. Avoid contact with skin and eyes. Take off contaminated clothing and wash it before reuse. Avoid breathing mist/vapors/spray. Have eye wash bottle or eye rinse ready at work place. Wash hands before breaks and after work.

Environmental exposure controls

Refer to 6.: Section "Environmental precautions".

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Physical state at 20 °C and 101.3 kPa: liquid
Color: blue
fluorescent

Odor: Mild, like acryl

Odor threshold: No data available

pH: Not applicable

Melting point/freezing point: -30 °C

Initial boiling point and boiling range: > 149 °C

Flash point/flash point range: > 100 °C

Evaporation rate: No data available

Flammability: This material is combustible, but will not ignite readily.

Explosion limits: No data available

Vapor pressure: at 20 °C: ≤ 0.13 hPa
at 25 °C: 0.133 hPa
at 50 °C: ≤ 300 hPa

Vapor density: at 20 °C: ≥ 1

Density: at 20 °C: 1.08 g/mL (DIN 51757)

Solubility: in acetone miscible.

Water solubility: Immiscible

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

Auto-ignition temperature: No data available

Thermal decomposition: No data available

Viscosity, dynamic: 115 - 135 mPa*s

Viscosity, kinematic: at 40 °C: > 20.5 mm²/s

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, acids, reducing agents, strong bases

Conditions to avoid:

Keep away from sources of ignition and heat.

Incompatible materials:

Strong oxidizing agents, acids, reducing agents, strong bases

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

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

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

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

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 Cumene hydroperoxide (CAS 80-15-9):

LD50 Rat, oral: 382 mg/kg

ATE dermal: 1,100 mg/kg (Data obtained by expert judgement.)

LC50 Rat, inhalative (vapor): 1.37 mg/L/4h

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

ATE oral: 100 mg/kg (Data obtained by expert judgement.)

ATE dermal: 300 mg/kg (Data obtained by expert judgement.)

ATE inhalative (vapor): 3 mg/L (Data obtained by expert judgement.)

Information about N,N-Dimethyl-o-toluidine (CAS 609-72-3):

ATE oral: 100 mg/kg (Data obtained by expert judgement.)

ATE dermal: 300 mg/kg (Data obtained by expert judgement.)

ATE inhalative (dust/mist): 0.5 mg/L (Data obtained by expert judgement.)

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

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

LD50 Rat, dermal: 500 - 1,000 mg/kg

ATE dermal: 500 mg/kg (Data obtained by expert judgement.)

LC50 Rat, inhalative (dust/mist): 3.19 - 6.5 mg/L/4h (OECD 403)

ATE inhalative (dust/mist): 3.19 mg/L (Data obtained by expert judgement.)

Symptoms

In case of inhalation:

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

After contact with skin:

Frequently or prolonged contact with skin may cause dermal irritation.

After eye contact:

Upon direct contact with eyes may cause burning, tearing, redness. Conjunctivitis

12. Ecological information

Ecotoxicity

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

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:

EC50 Desmodesmus subspicatus (green algae), growth rate: 3.1 mg/L/72h (OECD 201)

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

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

Fish toxicity:

LC50 Danio rerio (zebrafish): 78.62 mg/L/96h (OECD 203)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 10.34 mg/L/48h (OECD 202)

Algae toxicity:

EC50 Raphidocelis subcapitata (green algae), growth rate: 23.69 mg/L/72h (OECD 201)

Information about N,N-Dimethyl-o-toluidine (CAS 609-72-3):

Fish toxicity:

LC50 Pimephales promelas (fathead minnow): 46 mg/L/96h (OECD 203)

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

Fish toxicity:

LC50 Oncorhynchus mykiss: 85 mg/L/96h (EPA OTS 797.1400)

NOEC Danio rerio (zebrafish): 10 mg/L/35d (OECD 210)

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): > 130 mg/L/48h (EPA OTS 797.1300)

NOEC Daphnia magna (Big water flea): 53 mg/L/21d (OECD 211)

Algae toxicity:

EC50 Selenastrum capricornutum (green algae), growth rate: 45 mg/L/72h (OECD 201)

NOEC Selenastrum capricornutum (green algae), growth rate: 8.2 mg/L/72h (OECD 201)

Effects in sewage plants: Bacterial toxicity:

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

EC10: 70 mg/L/30 min

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

EC10 Pseudomonas putida: 100 mg/L/17h (DIN 38412, part 8)

Mobility in soil

No data available

Persistence and degradability

Further details: Product is not biodegradable.
 Information about Cumene hydroperoxide (CAS 80-15-9): 3 %/28 d (OECD 301 B), not easily degradable
 Information about N,N-diethyl-p-toluidine (CAS 613-48-9): 1 %/28 d (OECD 301 C), not easily degradable
 Information about N,N-Dimethyl-o-toluidine (CAS 609-72-3): 1 %/14 d, not easily degradable
 Information about Methacrylic acid (CAS 79-41-4): 86 %/28 d (OECD 301 D), readily biodegradable

Additional ecological information

Volatile organic compounds (VOC):

3 % by weight

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

13. Disposal considerations

Product

Recommendation: Dispose of waste according to applicable legislation. 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.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

not applicable

UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

Not restricted

Transport hazard class(es)

ADR/RID, IMDG, IATA-DGR:

not applicable

Packing group

ADR/RID, IMDG, IATA-DGR:

not applicable

Environmental hazards

Marine pollutant: no

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

No data available

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

Cumene hydroperoxide: DSL: listed

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

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

Methacrylic acid: DSL: listed

16. Other information

Text for labeling: Contains < 3 % Cumene hydroperoxide, < 3 % N,N-diethyl-p-toluidine, < 1 % N,N-Dimethyl-o-toluidine, < 1 % Methacrylic acid.

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 1 (Slight)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate) - Chronic effects

Flammability: 1 (Slight)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

Classification procedure: Physical hazards: on basis of test data
Health hazards, environmental hazards: calculation method

HEALTH	*	2
FLAMMABILITY		1
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
 ATE: Acute toxicity estimate
 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
 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
 RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
 Skin Corrosion: Skin corrosion
 Skin Irritation: Skin irritation
 STOT RE: Specific target organ toxicity - repeated exposure
 STOT SE: Specific target organ toxicity - single exposure
 TLV: Threshold Limit Value
 TRGS: Technical Rules for Hazardous Substances
 vPvB: Very persistent and very bioaccumulative
 WEL: Workplace Exposure Limit
 WHMIS: Workplace Hazardous Materials Information System

Reason of change: Changes in section 2: Classification, labeling
 Changes in section 3: Composition/information on ingredients
 Changes in section 9: Physical and chemical properties
 Changes in section 11: Toxicological information
 Changes in section 12: Ecological information
 General revision

Date of first version: 25/5/2003

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.