

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

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1. Identification

Product identifier

Trade name: 636K18 - Sealing Resin Adhesive Gel

Relevant identified uses of the substance or mixture and uses advised against

General use: Adhesive, for orthopedic procedures
Reserved for industrial and professional use.

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
Transport:
CONSULTANK Lutz Harder GmbH (Contract QUALI003)
Telephone: +49 (0)178-4337434 (from USA: 01149 178 4337434)

2. Hazard identification

Classification of the substance or mixture

Flammable Liquid - Category 2	Highly flammable liquid and vapor.
Skin Irritation - Category 2	Causes skin irritation.
Sensitization - skin - Category 1	May cause an allergic skin reaction.
Specific Target Organ Toxicity (Single Exposure) - Category 3	May cause respiratory irritation.

Label elements

Symbols:



Signal word:

Danger

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Hazard statements: Highly flammable liquid and vapor.
Causes skin irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.

Precautionary statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing vapors.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Store in a well-ventilated place. Keep cool.

Other hazards

Vapors form potentially explosive mixtures with air, which are heavier than air. Air-Vapor mixture may travel great distances at floor level and lead to backflash when exposed to an ignition source.

3. Composition/information on ingredients

Mixtures

Chemical characterization: Acrylic resin, contains Methyl methacrylate (MMA)

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 80-62-6	Methyl methacrylate	50 - 100 %	Flammable Liquid - Category 2. Skin Irritation - Category 2. Sensitization - skin - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 38668-48-3	1,1'-(p-Tolylimino) dipropan-2-ol	< 1 %	Acute Toxicity - oral - Category 3. Eye Damage - Category 1. Aquatic toxicity - chronic - Category 3.

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

4. First aid measures

General information: Take off immediately all contaminated clothing.
Call a doctor if you feel unwell.
Never give anything by mouth to an unconscious person.
If unconscious place in recovery position and seek medical advice.

In case of inhalation: Move victim to fresh air, provide oxygen as needed. Seek medical attention.

Following skin contact: Immediately clean with water and soap and, if available, apply a generous amount of polyethylene glycol 400.
Seek medical attention if irritation persists.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Do not induce vomiting.
Immediately get medical attention.

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Most important symptoms/effects, acute and delayed

May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. The following symptoms may occur: headache, shortage of breath, drowsiness, cough, dizziness, asthma, Sweating.

After resorption of toxic quantities: cardiovascular disorders, modification of hemogram, Blood pressure drop, Gastric and intestinal problems.

Information to physician

Treat symptomatically.

Monitor breathing. On irritation of the respiratory system use an aerosol dispenser and treat with 5 doses of dexamethasone aerosol (e.g. Auxiloson, Thomae) every 10 minutes until symptoms cease.

In case of swallowing, gastric irrigation with activated carbon as an additive.

Estimated lethal dose: 30g

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:

strong water jet

Specific hazards arising from the chemical

Highly flammable liquid and vapor. Heating will lead to pressure increase: danger of bursting and explosion. Potentially explosive vapor/air mixtures may form.

Polymerization along with heat production.

In case of fire may be liberated: nitrogen oxides (NOx), acetic acid, carbon monoxide and carbon dioxide. Toxic gases may form.

Protective equipment and precautions for firefighters

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

Additional information:

Cool endangered containers with water spray and, if possible, remove from danger zone. You have to dispose of contaminated extinguishing water according to the regulations of the authorities.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so.

Avoid contact with the substance. Provide adequate ventilation.

Avoid breathing vapors.

Keep unprotected people away. Wear appropriate protective equipment.

Cordon off downwind area at risk and warn inhabitants.

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Environmental precautions:

Do not allow to enter into ground-water, surface water or drains.
Danger of explosion!
In case of release, notify competent authorities.

Methods and material for containment and cleaning up

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

Additional information: Use only non-sparking tools. Take precautionary measures against static discharges.

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.
Do not breathe vapor/aerosol. Avoid contact with skin and eyes.
Avoid the formation of aerosol. Wear appropriate protective equipment.

Precautions against fire and explosion:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Ground/bond container and receiving equipment.
Use explosion-proof equipment and non-sparking tools/utensils.
Avoid shock and friction.
Potentially explosive vapor/air mixtures may form.
Vapors are heavier than air and will travel at floor level.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep in a cool, well-ventilated place. Keep container dry.
Container should not be closed gas-tight. Keep only in the original container.
Protect against heat /sun rays.
Protect from light.
Provide room air exhaust at ground level.
Store containers in upright position. Explosion protection required.

Hints on joint storage:

Do not store together with combustible materials or highly flammable solids.
Do not store together with organic peroxides, ammonia or persulphates.
keep away from acids.
Keep away from food, drink and animal feedingstuffs.

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8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
80-62-6	Methyl methacrylate	USA: ACGIH: STEL	410 mg/m ³ ; 100 ppm
		USA: ACGIH: TWA	205 mg/m ³ ; 50 ppm
		USA: IDLH: TWA	1,000 ppm
		USA: NIOSH: TWA	410 mg/m ³ ; 100 ppm
		USA: OSHA: TWA	410 mg/m ³ ; 100 ppm

Appropriate engineering controls

Make sure there is sufficient air exchange and / or that working rooms are air suctioned.

Personal protection equipment (PPE)

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. Use combination filter type A/P 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: Butyl caoutchouc (butyl rubber).
Breakthrough time: >480 min.
Unsuitable materials: natural rubber (Caoutchouc), latex.
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: Use solvent-resistant protective clothing.
In case of handling larger quantities: Flame-resistant antistatic protective clothing

General hygiene considerations:
Do not breathe vapor/aerosol. Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
Keep away from food, drink and animal feedingstuffs.
Take off immediately all contaminated clothing.
Separate storage of work clothes.
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

Physical state at 68 °F and 101.3 kPa: liquid
Form: viscous
Color: colorless
Odor: ester-like
Odor threshold: No data available

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Melting point/freezing point:	No data available
Initial boiling point and boiling range:	213.8 °F
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	LEL (Lower Explosion Limit): 2.10 Vol-% UEL (Upper Explosive Limit): (Methyl methacrylate) 12.50 Vol-%
Flash point/flash point range:	50 °F
Evaporation rate:	No data available
Auto-ignition temperature:	not self-igniting
Decomposition temperature:	No data available
pH:	No data available
Viscosity:	No data available
Solubility:	alcohol
Water solubility:	at 68 °F: 16 g/L
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	at 68 °F: 47 hPa
Density:	at 68 °F: 1.06 g/cm ³
Vapor density:	No data available
Particle characteristics:	Not applicable

Additional information

Explosive properties:	Product is not explosive. Potentially explosive vapor/air mixtures may form.
Ignition temperature:	806 °F
Solid content:	27.1 %

10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapor.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Vapors are heavier than air and will travel at floor level. In case of fire, explosive mixtures may form with air. Heating will lead to pressure increase: danger of bursting and explosion. Polymerization along with heat production.
Conditions to avoid:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from light.
Incompatible materials:	Watch for exothermic reactions with peroxides. Reacts with acids, Radical formers. Do not store together with organic peroxides, ammonia or persulphates.
Hazardous decomposition products:	In case of fire may be liberated: nitrogen oxides (NO _x), acetic acid, carbon monoxide and carbon dioxide. Toxic gases may form.

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11. Toxicological information

Information on toxicological effects

<p>Toxicological effects:</p>	<p>Acute toxicity (oral): Lack of data.</p> <p>Acute toxicity (dermal): Lack of data.</p> <p>Acute toxicity (inhalative): Lack of data.</p> <p>Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.</p> <p>Serious eye damage/irritation: Lack of data.</p> <p>Sensitisation to the respiratory tract: Lack of data.</p> <p>Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction.</p> <p>Germ cell mutagenicity/Genotoxicity: Lack of data.</p> <p>Carcinogenicity: Lack of data.</p> <p>Reproductive toxicity: Lack of data.</p> <p>Effects on or via lactation: Lack of data.</p> <p>Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause respiratory irritation.</p> <p>Specific target organ toxicity (repeated exposure): Lack of data.</p> <p>Aspiration hazard: Lack of data.</p>
<p>Other information:</p>	<p>Following information applies to the component Methyl methacrylate:</p> <p>LD50 Rat, oral: 7872 mg/kg (OECD 401)</p> <p>LC50 Rat, inhalative: 7093 ppm/4h = 29,8 mg/L/4h</p> <p>LD50 Rabbit, dermal: >5000 mg/kg</p> <p>Irritant effect on the eye: Rabbit: Not an irritant (Draize)</p> <p>Varying incidences of allergic reactions have been observed in humans. (Symptoms: Headache, eye irritations, skin problems)</p> <p>In-vitro Mutagenicity:</p> <p>Gene-mutations mammalian cells: inconclusive (OECD 476).</p> <p>Chromosomal aberrations mammalian cells: inconclusive.</p> <p>Bacterial mutagenicity: negative (Ames test, OECD 471) .</p> <p>In-vivo Mutagenicity:</p> <p>Chromosomal aberrations mammalian cells, rat: negative.</p> <p>Micronucleus test:, Mouse: negative (OECD 474).</p> <p>Teratogenicity:</p> <p>Rat, inhalative: 2028 ppm, 6 - 15 d</p> <p>Product did not show any carcinogenous, mutagenous or teratogenic effects in animal experiments.</p> <p>Chronic toxicity:</p> <p>NOAEL (oral), rat: 124.1 mg/kg bw/d.</p> <p>NOAEC (inhalative), rat: 2,028 mg/m³.</p> <p>Target organ: nose</p> <p>Symptoms: Damage of the mucous membranes in nose, throat and lungs. Degeneration of olfactory epithelia.</p> <p>Estimated lethal dose: 30g</p>

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Symptoms

Can damage your health.

The following symptoms may occur: Headache, Drowsiness, dizziness, Nausea, Asthma, Loss of appetite, Modification of hemogram, Blood pressure drop, Gastric and intestinal problems, dizziness, Sweating, Danger of respiratory disorders.

After resorption of toxic quantities: cardiovascular disorders, modification of hemogram, Blood pressure drop, Gastric and intestinal problems.

In case of inhalation: Mucous membrane irritation, Cough and shortage of breath.

In case of ingestion: Methyl methacrylate:

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

After eye contact: causes tears

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Following information applies to the component Methyl methacrylate:

Algae toxicity:

EC3 Scenedesmus quadricauda: 37mg/L/8d (DIN 38412 T.9)

EC50 Selenastrum capricornutum: >100mg/L/48h

Bacterial toxicity:

EC0 Pseudomonas putida: 100 mg/L

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 69 mg/L, 48h (OECD 202)

NOEC Daphnia magna (Big water flea): 37 mg/L/21d (OECD 202)

Fish toxicity:

LC50 Oncorhynchus mykiss >79 mg/L/96h (OECD 203)

NOEC Oncorhynchus mykiss >40 mg/L/96h (OECD 203)

NOEC Danio rerio (zebrafish): 9,4 mg/kg (OECD 210)

Persistence and degradability

Further details:

Biodegradation: 94 %/14 d (MMA, OECD 301C)

Product is readily biodegradable.

Bioaccumulative potential

Bioconcentration factor (BCF):

6,6 Following information applies to the component Methyl methacrylate

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: 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: UN1133
IMDG, IATA-DGR: UN 1133

UN proper shipping name

DOT, IMDG, IATA-DGR: UN 1133, ADHESIVES

Transport hazard class(es)

DOT: 3
IMDG: Class 3, Subrisk -
IATA-DGR: Class 3



Packing group

DOT, IMDG, IATA-DGR: II

Environmental hazards

Marine pollutant: no

Transport in bulk according to IMO instruments

No data available

Special precautions for user

USA: Department of Transportation (DOT)

Labels: 3
Special Provisions: 149, B52, IB2, T4, TP1, TP8
Packaging – Exceptions: 150
Packaging – Non-bulk: 173
Packaging – Bulk: 242
Quantity limitations – Passenger aircraft / rail: 5 L
Quantity limitations – Cargo only: 60 L
Vessel stowage – Location: B
Vessel stowage – Other:

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Sea transport (IMDG)

EmS: F-E, S-D
Special Provisions: -
Limited quantities: 5 L
Excepted quantities: E2
Package - Instructions: P001
Package - Provisions: PP1
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP1, TP8
Stowage and handling: Category B.
Properties and observations: Adhesives are solutions of gums, resins, etc., usually volatile due to the solvents. Miscibility with water depends upon their composition.
Marine pollutant: no
Segregation group: none

Air transport (IATA)

Proper shipping name: UN 1133, ADHESIVES
Hazard label: Flamm. liquid
Excepted Quantity Code: E2
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y341 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft: Pack.Instr. 353 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only: Pack.Instr. 364 - Max. Net Qty/Pkg. 60 L
Special Provisions: A3
Emergency Response Guide-Code (ERG): 3L

15. Regulatory information

National regulations - U.S. Federal Regulations

Methyl methacrylate: TSCA Inventory: listed
Carcinogen Status: IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed
Clean Air Act:
CAA Hazardous Air Pollutants: yes
CAA SOCM Chemical: yes
Clean Water Act:
CWA Hazardous Substances: Category C; RQ 1000.0 lbs
Other Environmental Laws:
CERCLA: RQ 1000 lbs.
RCRA Hazardous Wastes: Waste Code U162
RCRA Groundwater Monitoring: listed
SARA Title III, Section 313, Toxic Release: NPFAS; De Minimis <=1.0 %;
Thresholds 25000/10000 lbs
NIOSH Recommendations:
Occupational Health Guideline: 0426
1,1'-(p-Tolylimino)dipropen-2-ol: TSCA Inventory: listed

National regulations - U.S. State Regulations

Methyl methacrylate: New York Right-To-Know: listed

Further regulations, limitations and legal requirements

No data available

16. Other information

Text for labeling: Contains 50 - 100 % Methyl methacrylate, < 1 % 1,1'-(p-Tolylimino)dipropan-2-ol.
Contains Methyl methacrylate.

Revision date: 12/17/2025

Date of first version: 10/27/1994

Reason of change: General revision: Safety Data Sheet according to Hazardous Products Regulations (HPR) 2022
General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)

Hazard rating systems:



NFPA Hazard Rating:
Health: 2 (Moderate)
Fire: 3 (Serious)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 2 (Moderate)
Flammability: 3 (Serious)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

HEALTH	2
FLAMMABILITY	3
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
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
Eye Damage: Eye damage
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
LD50: Lethal dose 50%
LEL: Lower Explosion Limit
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OEL: Occupational Exposure Limit Value
OSHA: Occupational Safety and Health Administration
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
Sensitization - skin: Skin sensitisation
Skin Irritation: Skin irritation
STOT SE: Specific target organ toxicity - single exposure
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances



SAFETY DATA SHEET

according to HCS 2024 (29 CFR 1910.1200)

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Material number 636K18

Revision date: 12/17/2025
Version: 12.3
Replaces version: 12.2
Language: en-US
Date of print: 5/29/2026

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UN: United Nations
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.