

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 1 of 12

1 Identification

Product identifier

Trade name: 636K18 - Sealing Resin Adhesive Gel

Recommended use and restrictions on use

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

2 Hazard identification

Classification

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

Information elements

Symbols:



Signal word:

Danger

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 2 of 12

Hazard statements:

- Highly flammable liquid and vapour.
- 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 vapours.
- 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 known to the supplier with respect to the product

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

3 Composition/Information on ingredients

Mixture

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

Hazardous ingredients:

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

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

In case of 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.

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 3 of 12

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

Most important symptoms and effects, whether acute or 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.

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

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, extinguishing powder, carbon dioxide

Unsuitable extinguishing media:

strong water jet

Specific hazards arising from the product

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

Polymerization along with heat production.

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

Special protective equipment and precautions for fire-fighters

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.

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 4 of 12

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 vapours.
Keep unprotected people away. Wear appropriate protective equipment.
Cordon off downwind area at risk and warn inhabitants.

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

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 vapour/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 vapour/air mixtures may form.
vapours 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.

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 5 of 12

8 Exposure controls/Personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
80-62-6	Methyl methacrylate	Canada: Alberta, OEL 15 min	410 mg/m ³ ; 100 ppm
		Canada: Alberta, OEL 8 hour	205 mg/m ³ ; 50 ppm
		Canada: BC, OEL STEL	100 ppm
		Canada: BC, OEL TWA	50 ppm
		Canada: Québec, VECD	100 ppm
		Canada: Québec, VEMP	50 ppm

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

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 vapour/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 20 °C and 101.3 kPa: liquid
Form: viscous
Colour: colourless

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 6 of 12

Odour:	ester-like
Odour threshold:	No data available
Melting point and freezing point:	No data available
Boiling point or initial boiling point and boiling range:	101 °C
Flammability:	Highly flammable liquid and vapour.
Lower and upper explosion limit or lower and upper flammability limit:	LEL (Lower Explosion Limit): 2.10 Vol-% UEL (Upper Explosive Limit): (Methyl methacrylate) 12.50 Vol-%
Flash point/flash point range:	10 °C
Evaporation rate:	No data available
Auto-ignition temperature:	not self-igniting
Decomposition temperature:	No data available
pH:	No data available
Solubility:	alcohol
Water solubility:	at 20 °C: 16 g/L
Partition coefficient — n-octanol/water:	No data available
Vapour pressure:	at 20 °C: 47 hPa
Density and/or relative density	at 20 °C: 1.06 g/cm ³
Vapour density:	No data available
Particle characteristics:	Not applicable

Additional information

Explosive properties:	Product is not explosive. Potentially explosive vapour/air mixtures may form.
Ignition temperature:	430 °C
Solid content:	27.1 %

10 Stability and reactivity

Reactivity:	Highly flammable liquid and vapour.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	vapours 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.

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 7 of 12

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.

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: Lack of data.

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: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) 3 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 8 of 12

Other information:

Following information applies to the component Methyl methacrylate:
LD50 Rat, oral: 7872 mg/kg (OECD 401)
LC50 Rat, inhalative: 7093 ppm/4h = 29,8 mg/L/4h
LD50 Rabbit, dermal: >5000 mg/kg
Irritant effect on the eye: Rabbit: Not an irritant (Draize)
Varying incidences of allergic reactions have been observed in humans. (Symptoms: Headache, eye irritations, skin problems)
In-vitro Mutagenicity:
Gene-mutations mammalian cells: inconclusive (OECD 476).
Chromosomal aberrations mammalian cells: inconclusive.
Bacterial mutagenicity: negative (Ames test, OECD 471) .
In-vivo Mutagenicity:
Chromosomal aberrations mammalian cells, rat: negative.
Micronucleus test:, Mouse: negative (OECD 474).
Teratogenicity:
Rat, inhalative: 2028 ppm, 6 - 15 d
Product did not show any carcinogenous, mutagenous or teratogenic effects in animal experiments.
Chronic toxicity:
NOAEL (oral), rat: 124.1 mg/kg bw/d.
NOAEC (inhalative), rat: 2,028 mg/m³.
Target organ: nose
Symptoms: Damage of the mucous membranes in nose, throat and lungs. Degeneration of olfactory epithelia.
Estimated lethal dose: 30g

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

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 9 of 12

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.

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 10 of 12

14 Transport information

UN number

TDG: UN1133
IMDG, IATA-DGR: UN 1133

UN proper shipping name

TDG: UN 1133, adhesives
IMDG, IATA-DGR: UN 1133, ADHESIVES

Transport hazard class

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



Packing group

TDG, IMDG, IATA-DGR: II

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)

Explosive limit and limited quantity index: 5L
Passenger carrying road or rail index: 5L

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

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 11 of 12

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 - Canada

Methyl methacrylate: DSL: listed
Priority Substances List: listed (PSL 1)
1,1'-(p-Tolylimino)dipropen-2-ol: DSL: listed

Further regulations, limitations and legal requirements

No data available

16 Other information

Text for labelling: Contains Methyl methacrylate.
Revision date: 17/12/2025
Date of first version: 27/10/1994
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)

636K18 - Sealing Resin Adhesive Gel

Material number 636K18

Page: 12 of 12

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
DSL: Domestic Substances List
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
PSL: Priority Substances List
Sensitization - skin: Skin sensitisation
Skin Irritation: Skin irritation
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
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.