

1. Identification

Product identifier

Trade name: 636W17 - Plastic Adhesive

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

General use: Synthetic 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.

Eye Irritation - Category 2A

Causes serious eye irritation.

Specific Target Organ Toxicity (Single Exposure) - Category 3

May cause drowsiness or dizziness.

Label elements

Symbols:



Signal word:

Danger

Hazard statements:

Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.

Store in a well-ventilated place. Keep cool.

Other hazards

Higher doses may lead to a narcotic effect.
Potentially explosive mixtures may form if adequate ventilation is not provided.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.

3. Composition/information on ingredients

Mixtures

Chemical characterization: Adhesive on the basis of Solution of polyurethane.

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 67-64-1	Acetone	>= 50 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 141-78-6	Ethyl acetate	25 - 50 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.

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

4. First aid measures

General information:	IF exposed or concerned: Get medical advice/attention. First aider: Pay attention to self-protection!
In case of inhalation:	Provide fresh air. Seek medical treatment in case of troubles. Monitor breathing. In case of irregular breathing or respiratory arrest provide artificial respiration. 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. In case of skin reactions, consult a physician.
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 seek the immediate attention of an ophthalmologist.
After swallowing:	Do NOT induce vomiting. Immediately get medical attention.

Most important symptoms/effects, acute and delayed

Causes serious eye irritation. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking.

Information to physician

Treat symptomatically.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, dry chemical powder, carbon dioxide, Sand.
Co-ordinate fire-fighting measures to the fire surroundings.

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Highly flammable liquid and vapor. 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.

On heating or in case of fire toxic gases may form.

In case of fire: NO_x and decomposition products containing HCN may develop. carbon monoxide and carbon dioxide

Protective equipment and precautions for firefighters

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

Additional information:

Heating will lead to pressure increase: danger of bursting and explosion. Use fine water spray to cool endangered containers.

You have to dispose of contaminated extinguishing water according to the regulations of the authorities.

Do not inhale explosion and combustion gases.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. Provide adequate ventilation.

If necessary: Use appropriate respiratory protection. Avoid breathing mist/vapors/spray.

Avoid contact with skin and eyes. Keep unprotected people away.

Wear protective equipment. Take off contaminated clothing and wash it before reuse.

Environmental precautions:

Do not allow to enter drains, basements or pits.

Do not allow to penetrate into soil, waterbodies or drains.

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.

Do not remove residual product with water and detergent.

Additional information: Use only explosion-protected equipment/instruments.
Vapors spread at floor level. Cover drainage holes and evacuate basement.
Beware of reignition.
Liquid evaporates very quickly.
Mixtures with 4% acetone mixed with 96% water still have a flash point of 129.2 °F. In case of important spills, risk of ignition of the acetone-water mixture. Potentially explosive mixtures with air may form above water surface.

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed.
Avoid contact with skin and eyes. Avoid breathing mist/vapors/spray.
Wear protective equipment. Take off contaminated clothing and wash it before reuse.
Use local exhaust in the field of the processing equipment.
Have eye wash bottle or eye rinse ready at work place.
When handling large quantities, supply emergency spray.

Precautions against fire and explosion:
Vapors may form explosive mixtures with air.
Exposure to temperatures exceeding 122 °F will increase pressure: resulting in danger of bursting or explosion.
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharges.
Use only explosion-protected equipment/instruments.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Keep container dry. Keep container tightly closed in a cool, well-ventilated place.
Protect against heat /sun rays. Protect from light.
Steel, stainless steel, and aluminium are stable container materials. Copper may be attacked.
In partially filled containers explosive mixtures may form.
storage temperature: 50 - 77 °F

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.
Keep away from: strong oxidizing agents, alkalis, amines

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
67-64-1	Acetone	USA: ACGIH: STEL	500 ppm
		USA: ACGIH: TWA	250 ppm
		USA: IDLH: TWA	2,500 ppm
		USA: NIOSH: TWA	590 mg/m ³ ; 250 ppm
		USA: OSHA: TWA	2,400 mg/m ³ ; 1,000 ppm
141-78-6	Ethyl acetate	USA: ACGIH: TWA	1,440 mg/m ³ ; 400 ppm
		USA: IDLH: TWA	2,000 ppm [10% LEL]
		USA: NIOSH: TWA	1,400 mg/m ³ ; 400 ppm
		USA: OSHA: TWA	1,400 mg/m ³ ; 400 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
67-64-1	Acetone	USA: ACGIH-BEI, urine	25 mg/L	acetone	end of exposure or end of shift

Appropriate engineering controls

Explosion protection required. Work only with resistant materials.

Provide for good ventilation or exhaust system or work with completely self-contained equipment.

Use local exhaust in the field of the processing equipment.

Personal protection equipment (PPE)

Respiratory protection:

Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded.

The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Have a breathing apparatus that is not dependent on the circulating air ready for emergencies.

In case of prolonged or repeated exposures: use self-contained breathing apparatus.

Use combination filter type A/P2 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)-Layer thickness >= 0,5 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.

In case of handling larger quantities: flame-retardant protective clothing, solvent-resistant protective clothing

General hygiene considerations:

Avoid breathing mist/vapors/spray. Avoid contact with skin and eyes.
Take off contaminated clothing and wash it before reuse. Wash hands before breaks and after work.
Keep away from sources of ignition - No smoking.
Have eye wash bottle or eye rinse ready at work place. When handling large quantities, supply emergency spray.

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
Color:	colorless
Odor:	Characteristic
Odor threshold:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	132.8 °F (DIN 53171)
Flammability:	No data available
Explosion limits:	LEL (Lower Explosion Limit): 2.20 Vol-% (EN 1839) UEL (Upper Explosive Limit): 13.00 Vol-% (EN 1839)
Flash point/flash point range:	-2.2 °F (DIN 53213)
Evaporation rate:	No data available
Auto-ignition temperature:	Not self-igniting
Decomposition temperature:	No data available
pH:	Not determined
Dynamic viscosity:	at 68 °F: 3,600 mPa*s (Brookfield (ISO 2555))
Solubility:	at 68 °F: various organic solvents
Water solubility:	Slightly miscible
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	at 68 °F: 233 hPa (DIN 51640) at 122 °F: (Acetone) 800 hPa (DIN 51757)
Density:	at 68 °F: 0.88 g/mL
Vapor density:	No data available
Particle characteristics:	Not applicable

Additional information

Explosive properties:	Product is not explosive. Vapors may form explosive mixtures with air.
Solvent content:	78.9 %
Solid content:	21.1 % (ISO 3251)

10. Stability and reactivity

Reactivity:	Highly flammable liquid and vapor. Vapors may form explosive mixtures with air.
-------------	--

Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Heating will lead to pressure increase: danger of bursting and explosion.
Conditions to avoid:	Keep away from heat sources, sparks and open flames. Protect from direct sunlight.
Incompatible materials:	Attacks many plastics and rubbers. On contact with barium hydroxide, sodium hydroxide and many other alkaline materials condensation may occur. Keep away from: strong oxidizing agents, alkalis, amines
Hazardous decomposition products:	No hazardous decomposition products when regulations for storage and handling are observed.

11. Toxicological information

Information on toxicological effects

Toxicological effects:	<p>The statements are derived from the properties of the single components. No toxicological data is available for the product as such.</p> <p>Acute toxicity (oral): Based on available data, the classification criteria are not met. ATEmix calculated: > 2,000 mg/kg</p> <p>Acute toxicity (dermal): Based on available data, the classification criteria are not met. ATEmix calculated: > 2,000 mg/kg</p> <p>Acute toxicity (inhalative): Based on available data, the classification criteria are not met. ATEmix calculated: > 20 mg/L</p> <p>Skin corrosion/irritation: Based on available data, the classification criteria are not met.</p> <p>Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.</p> <p>Sensitisation to the respiratory tract: Based on available data, the classification criteria are not met.</p> <p>Skin sensitisation: Based on available data, the classification criteria are not met.</p> <p>Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.</p> <p>Carcinogenicity: Based on available data, the classification criteria are not met.</p> <p>Reproductive toxicity: Based on available data, the classification criteria are not met.</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 drowsiness or dizziness.</p> <p>Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.</p> <p>Aspiration hazard: Based on available data, the classification criteria are not met.</p>
Other information:	<p>Information about acetone:</p> <p>LD50 Rat, oral: 5,800</p> <p>LD50 Rabbit, dermal: > 7,400 mg/kg</p> <p>LC50 Rat, inhalative (vapor): 76 mg/L/4h</p> <p>Information about ethyl acetate:</p> <p>LD50 Rat, oral: 5,800 mg/kg</p> <p>LD50 Rabbit, dermal: > 20,000 mg/kg</p> <p>LD50 Rat, inhalative (vapor): > 22.5 mg/L/6h</p>

Symptoms

Burning eyes and skin.

In case of inhalation:

fatigue, nausea, Headache, dizziness, drowsiness, vomiting, breathing paralysis, unconsciousness.

In case of ingestion:

The absorption of even very small amounts of this product through the stomach may lead to health problems.

symptoms: Drowsiness, vomiting. Gastric and intestinal problems.

After contact with skin:

Repeated exposure may cause skin dryness or cracking, due to defatting properties.

After eye contact: Corneal damage

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

12. Ecological information

Ecotoxicity

Aquatic toxicity:

Information about acetone:

Fish toxicity:

LC50 *Lepomis macrochirus* (Bluegill): 8,300 mg/L/96h

Daphnia toxicity:

EC50 *Daphnia magna* (Big water flea): 12,600 - 12,700 mg/L/48h

Information about ethyl acetate:

Fish toxicity:

LC50 *Pimephales promelas* (fathead minnow): 230 mg/L/96h

Daphnia toxicity:

EC50 *Daphnia magna* (Big water flea): 717 mg/L/48h

Algae toxicity:

IC50 *Desmodesmus subspicatus* (green algae): 3,300 mg/L/48h

Persistence and degradability

Further details:

Information about Acetone:

Biodegradability: 91 %/28 d.

Information about Ethyl acetate:

Biodegradability: 100 %/28 d.

Bioaccumulative potential

Partition coefficient: n-octanol/water:

No data available

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: Incinerate as hazardous waste according to applicable local, state, and federal regulations.
Do not dispose of with household waste.
Do not empty into drains.

Package

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.
Cans not thoroughly emptied are to be sent to the problem waste disposal.

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: III

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: B1, B52, IB3, T2, TP1

Packaging – Exceptions: 150

Packaging – Non-bulk: 173

Packaging – Bulk: 242

Quantity limitations – Passenger aircraft / rail: 60 L

Quantity limitations – Cargo only: 220 L

Vessel stowage – Location: A

Vessel stowage – Other:

Sea transport (IMDG)

EmS: F-E, S-D
 Special Provisions: 223 955
 Limited quantities: 5 L
 Excepted quantities: E1
 Package - Instructions: P001, LP01
 Package - Provisions: PP1
 IBC - Instructions: IBC03
 IBC - Provisions: -
 Tank instructions - IMO: -
 Tank instructions - UN: T2
 Tank instructions - Provisions: TP1
 Stowage and handling: Category A.
 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
 Remarks: Viscous according to 2.3.2.2 of the IMDG code

Air transport (IATA)

Proper shipping name: UN 1133, ADHESIVES
 Hazard label: Flamm. liquid
 Excepted Quantity Code: E1
 Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y344 - Max. Net Qty/Pkg. 10 L
 Passenger and Cargo Aircraft: Pack.Instr. 355 - Max. Net Qty/Pkg. 60 L
 Cargo Aircraft only: Pack.Instr. 366 - Max. Net Qty/Pkg. 220 L
 Special Provisions: A3
 Emergency Response Guide-Code (ERG): 3L
 Remarks: Viscous according to IATA § 3.3.3.1

15. Regulatory information

National regulations - U.S. Federal Regulations

Acetone: TSCA Inventory: listed
 Clean Air Act:
 CAA SOCM Chemical: yes
 Other Environmental Laws:
 CERCLA: RQ 5000 lbs.
 RCRA Groundwater Monitoring: listed
 NIOSH Recommendations:
 Occupational Health Guideline: 0004*
 Ethyl acetate: TSCA Inventory: listed
 Other Environmental Laws:
 CERCLA: RQ 5000 lbs.
 NIOSH Recommendations:
 Occupational Health Guideline: 0260

National regulations - U.S. State Regulations

Acetone: New York Right-To-Know: listed
 Ethyl acetate: New York Right-To-Know: listed

Further regulations, limitations and legal requirements

No data available

16. Other information

Text for labeling: Contains ≥ 50 % Acetone, 25 - 50 % Ethyl acetate.
Revision date: 11/28/2025
Date of first version: 10/30/1994
Reason of change: General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)
Hazard rating systems:



NFPA Hazard Rating:
Health: 1 (Slight)
Fire: 3 (Serious)
Reactivity: 0 (Minimal)
HMIS Version III Rating:
Health: 1 (Slight)
Flammability: 3 (Serious)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	3
PHYSICAL HAZARD	0
	X

Abbreviations and acronyms:

AS/NZS: Australian Standards/New Zealand Standards
ATEmix: Acute Toxicity Estimate of mixture
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
EC50: Effective Concentration 50%
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
EN: European Standard
EQ: Excepted quantities
Eye Irritation: Eye irritation
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
IC50: Inhibition Concentration 50%
IMDG Code: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
LC50: Median lethal concentration
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
STOT SE: Specific target organ toxicity - single exposure
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.