

1 Identification

Product identifier

Trade name: 636W26 - Promoter for 636W25

Recommended use and restrictions on use

General use: Cross linking 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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Telephone: (800) 665-3327

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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

Acute Toxicity 4 (inhalative)

Skin Irritation 2

Eye Irritation 2A

Respiratory Sensitizer 1

Sensitization - skin 1

Carcinogenicity 2

Specific Target Organ Toxicity (Single Exposure) 3

Specific Target Organ Toxicity (Repeated Exposure) 2

Highly flammable liquid and vapour.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation. May cause drowsiness or dizziness.

May cause damage to organs through prolonged or repeated exposure.

Information elements

Symbols:



Signal word:

Danger

Hazard statements:

Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

Obtain special instructions before use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe mist/vapours/spray.
Wash hands and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection.
[In case of inadequate ventilation] wear respiratory protection.

IF ON SKIN: Wash with plenty of water/soap.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/or shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Call a POISON CENTER/doctor if you feel unwell.
Specific treatment (see 'First aid' on this label).
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use sand, extinguishing powder or alcohol resistant foam to extinguish.

Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

Dispose of contents/container to hazardous or special waste collection point.

Other hazards known to the supplier with respect to the product

Potentially explosive mixtures may form if adequate ventilation is not provided.

3 Composition/Information on ingredients

Mixture

Hazardous ingredients:

CAS No.	Designation	Content	Classification
CAS 141-78-6	Ethyl acetate	70 - 90 %	Flammable Liquid 2. Eye Irritation 2A. Specific Target Organ Toxicity (Single Exposure) 3.
CAS 9016-87-9	Diphenylmethane diisocyanate (polymer)	10 - 20 %	Acute Toxicity 4 (inhalative). Skin Irritation 2. Eye Irritation 2A. Respiratory Sensitizer 1. Sensitization - skin 1. Carcinogenicity 2. Specific Target Organ Toxicity (Single Exposure) 3. Specific Target Organ Toxicity (Repeated Exposure) 2.
CAS 108-90-7	Chlorobenzene	< 1 %	Flammable Liquid 3. Acute Toxicity 4 (oral). Acute Toxicity 4 (inhalative). Skin Irritation 2. Aquatic toxicity - acute 1. Aquatic toxicity - chronic 2.
CAS 4083-64-1	p-Toluenesulphonyl isocyanate	< 1 %	Skin Irritation 2. Eye Irritation 2A. Respiratory Sensitizer 1. Specific Target Organ Toxicity (Single Exposure) 3.
CAS 26447-40-5	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl) phenyl isocyanate	< 1 %	Acute Toxicity 4 (inhalative). Skin Irritation 2. Eye Irritation 2A. Respiratory Sensitizer 1. Sensitization - skin 1. Carcinogenicity 2. Specific Target Organ Toxicity (Single Exposure) 3. Specific Target Organ Toxicity (Repeated Exposure) 2.

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

4 First-aid measures

Description of necessary first-aid measures

General information:	If medical advice is needed, have product container or label at hand. First aider: Pay attention to self-protection!
In case of inhalation:	Move victim to fresh air, put at rest and loosen restrictive clothing. Do not allow victim to become chilled. Keep victim warm. Position and transport victim on their side. In case of respiratory distress, bring into semi-upright, seated position. If breathing becomes irregular or ceases, apply rescue breathing or artificial respiration immediately, where required supply oxygen. Seek medical attention.
In case of swallowing:	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Immediately get medical attention.
In case of skin contact:	Immediately clean with water and soap followed by thorough rinsing. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

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. Subsequently consult an ophthalmologist.

Most important symptoms and effects, whether acute or delayed

Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.

Small quantities: May cause allergic reactions in already sensitized persons.

Other symptoms: irritation to respiratory tract, eye irritations, chest congestion, respiratory complaints.

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

Treat symptomatically.

Shortage of breath after inhalation: Medical surveillance necessary for at least 48 hours.

Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure.

5 Fire-fighting measures

Suitable and unsuitable extinguishing media

Suitable extinguishing media:

Water spray jet, alcohol resistant foam, extinguishing powder, carbon dioxide

Unsuitable extinguishing media:

Full water jet

Specific hazards arising from the product

Highly flammable liquid and vapour.

Air combined with vapours may form potentially explosive mixtures that are heavier than air. vapours may proceed on the ground over great distances and cause fire and backflashes.

Furthermore, there may develop: Nitrous fumes, isocyanates, hydrogen cyanide, 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:

Heating will lead to pressure increase: danger of bursting and explosion. Keep containers cool with water spray.

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

Do not allow fire water to penetrate into surface or ground water.

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

Avoid exposure. Provide adequate ventilation. Eliminate all ignition sources if safe to do so.
Remove persons not involved upwind.
If possible, eliminate leakage.
Do not breathe mist/vapours/spray. Avoid contact with the substance. Wear appropriate protective equipment. Keep unprotected people away. Take off contaminated clothing and wash it before reuse.

Environmental precautions:

Do not allow to enter drains, basements or pits.
If necessary, notify appropriate authorities.

Methods and material for containment and cleaning up

Seal off. Remove all sources of ignition. Plug leak if safely possible. In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Absorb leftover product with non-flammable liquid-binding material (e.g. earth, sand, vermiculite or ground sand stone) and place in closed containers for disposal. Seal all low level rooms.

7 Handling and storage

Precautions for safe handling

Advices on safe handling: Obtain special instructions before use. Make sure there is sufficient air exchange and / or that working rooms are air suctioned.
Avoid contact with skin and eyes. Do not breathe mist/vapours/spray. Do not allow containers to stand open. Store product in a quantity adequate for 1 work-shift only.
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. When handling large quantities, supply emergency spray.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharge.
Use only explosion-protected equipment/instruments. Do not weld.
In partially filled containers explosive mixtures may form.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Store container tightly closed in a dry and cool place.
Steel and stainless steel are stable container materials.
Protect from heat and direct sunlight. Store containers in upright position.
Shelf life: approx. 12 months

Hints on joint storage:

Keep away from food, drink and animal feedingstuffs.
Do not store together with: Alcohols, amines, acids, alkalis, water

Further details:

Use caution when opening containers under pressure.

8 Exposure controls/Personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
141-78-6	Ethyl acetate	Canada: Alberta, OEL 8 hour	1,440 mg/m ³ ; 400 ppm
		Canada: BC, OEL TWA	150 ppm
		Canada: Québec, VEMP	1,440 mg/m ³ ; 400 ppm
9016-87-9	Diphenylmethane diisocyanate (polymer)	Canada: Alberta, OEL 8 hour	0.07 mg/m ³ ; 0.005 ppm
		Canada: BC, OEL Ceiling	0.01 ppm
		Canada: BC, OEL TWA	0.005 ppm
108-90-7	Chlorobenzene	Canada: Alberta, OEL 8 hour	46 mg/m ³ ; 10 ppm
		Canada: BC, OEL TWA	10 ppm
		Canada: Québec, VEMP	10 ppm
26447-40-5	Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	Canada: BC, OEL Ceiling	0.01 ppm
		Canada: BC, OEL TWA	0.005 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
108-90-7	Chlorobenzene	USA: ACGIH-BEI, urine	100 mg/g creatinine	4-Chlorocatechol in urine	end of shift at end of work week
		USA: ACGIH-BEI, urine	20 mg/g creatinine	p-Chlorophenol in urine	end of shift at end of work week

Appropriate engineering controls

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

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-P2 according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. In case of prolonged or repeated exposures: use self-contained breathing apparatus.

Hand protection:	Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Permanent contact, max. 15 minutes: Glove material: butyl caoutchouc (butyl rubber), ≥ 0.7 mm Breakthrough time: ≥ 15 minutes Splash guard: Glove material: nitrile rubber (gloves with long cuffs), ≥ 0.12 mm After contamination with product change the gloves immediately and dispose them off according to relevant national and local regulations. 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:	Flame retardant, antistatic and chemical resistant protective clothing.
General hygiene considerations:	Obtain special instructions before use. Wash hands before breaks and after work. Do not breathe mist/vapours/spray. Avoid contact with skin and eyes. Keep away from food and drinks. Take off contaminated clothing and wash it before reuse. 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 20 °C and 101.3 kPa	liquid
Colour:	brown
Odour:	Characteristic
Odour threshold:	Not determined
Melting point and freezing point:	Not determined
Boiling point or initial boiling point and boiling range:	76 °C
Flammability:	Highly flammable liquid and vapour.
Lower and upper explosion limit or lower and upper flammability limit:	No data available
Flash point/flash point range:	-4 °C
Evaporation rate:	No data available
Auto-ignition temperature:	not self-igniting
Decomposition temperature:	No data available
pH:	Not determined
Water solubility:	Partially soluble, reacts with water
Partition coefficient — n-octanol/water:	No data available
Vapour pressure:	at 20 °C: 100 hPa
Density and/or relative density	at 20 °C: approx. 0.97 g/mL
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: Not determined

10 Stability and reactivity

Reactivity: Highly flammable liquid and vapour.
vapours may form explosive mixtures with air.
When mixed with water, forms byproducts that are hazardous to health. Especially in closed containers potentially explosive mixtures may form above water surface.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:
Heating will lead to pressure increase: danger of bursting and explosion.
Reactions with alcohols, amines, liquid acids and bases.
Reacts with water, forming carbon dioxide, producing bursting hazard in closed containers due to build-up of pressure.

Conditions to avoid: Keep away from heat sources, sparks and open flames.
Protect from direct sunlight. Protect from moisture contamination.

Incompatible materials: Alcohols, amines, acids, alkalis
Various plastics are incompatible work materials.

11 Toxicological information

Information on the likely routes of exposure

No data available

Health hazard information

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): Acute Toxicity 4 (inhalative) = Harmful if inhaled.

ATEmix (calculated, dust/mist): 3.22 mg/L/4h

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: Respiratory Sensitizer 1 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Carcinogenicity 2 = Suspected of causing cancer.

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. May cause drowsiness or dizziness.

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

Other information:

Information about ethyl acetate (CAS 141-78-6):

LD50 Rat, oral: 5,620 mg/kg

LD50 Rabbit, dermal: > 20,000 mg/kg

LC50 Rat, inhalative: 22.5 mg/L/4h

Information about Diphenylmethane diisocyanate (polymer, CAS 9016-87-9):

LC50 Rat, inhalative (dust/mist): 0.49 mg/L/4h

ATE inhalative (dust/mist, calculated): 1.5 mg/L

Information about Chlorobenzene (CAS 108-90-7):

LD50 Rat, oral: 1,100 mg/kg

Information about 4-Isocyanatosulphonyltoluene (CAS 4083-64-1):

LC50 Rat, inhalative (vapour): > 640 ppm/1h

Information about Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate (CAS 26447-40-5):

LC50 Rat, inhalative (dust/mist): 0.368 mg/L/4h

ATE inhalative (dust/mist): 1.5 mg/L

Symptoms

Small quantities: May cause allergic reactions in already sensitized persons.

Other symptoms: irritation to respiratory tract, eye irritations, chest congestion, respiratory complaints.

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

12 Ecological information

Ecotoxicity

Aquatic toxicity: Forms carbon dioxide and turns into a hard and insoluble by-product (poly urea) on the water's edge.

Information about ethyl acetate (CAS 141-78-6):

Fish toxicity:

LC50 Pimephales promelas (fathead minnow): 220 - 250 mg/L/96h

Information about Chlorobenzene (CAS 108-90-7):

Fish toxicity:

LC50 Lepomis macrochirus (Bluegill): 4.1 - 4.9 mg/L/96h

Daphnia toxicity:

EC50 Daphnia magna (Big water flea): 0.59 mg/L/48h

Algae toxicity:

EC50 Pseudokirchneriella subcapitata (green algae): 2.55 - 420 mg/L/96h

Persistence and degradability

Further details: No data available

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.
Very toxic to aquatic life. Toxic effect on fish.
Avoid spills and leaks. Very small amounts contaminates drinking water.

13 Disposal considerations

Waste treatment methods

Product

Recommendation: Incinerate according to applicable local, state and federal regulations.

Package

Recommendation: Handle empty containers with care. Incineration may cause explosion.
Dispose of waste according to applicable legislation.

14 Transport information

UN number

TDG: UN1173

IMDG, IATA-DGR: UN 1173

UN proper shipping name

TDG: UN 1173, ethyl acetate mixture
IMDG, IATA-DGR: UN 1173, ETHYL ACETATE mixture

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: 1L
Passenger carrying road or rail index: 5L

Sea transport (IMDG)

EmS: F-E, S-D
Special Provisions: -
Limited quantities: 1 L
Excepted quantities: E2
Package - Instructions: P001
Package - Provisions: -
IBC - Instructions: IBC02
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP1
Stowage and handling: Category B.
Properties and observations: Colourless liquid with a fragrant odour. Flashpoint: - 4°C c.c. Explosive limits: 2,18% to 11,5%. Immiscible with water.
Marine pollutant: no
Segregation group: none

Air transport (IATA)

Proper shipping name: UN 1173, ETHYL ACETATE mixture
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
Emergency Response Guide-Code (ERG): 3L

15 Regulatory information

National regulations - Canada

Ethyl acetate:	DSL: listed
Diphenylmethane diisocyanate (polymer):	DSL: listed CEPA Schedule 1: listed
Chlorobenzene:	DSL: listed Priority Substances List: listed (PSL 1)
p-Toluenesulphonyl isocyanate:	DSL: listed
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate:	DSL: listed

Further regulations, limitations and legal requirements

No data available

16 Other information

Text for labelling:	Contains: Ethyl acetate Diphenylmethane diisocyanate (polymer) 4-Isocyanatosulphonyltoluene Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate As from 24 August 2023 adequate training is required before industrial or professional use.
Revision date:	2/3/2026
Date of first version:	30/10/1994
Reason of change:	Changes in section 8: Occupational exposure limit values
Classification procedure:	Physical hazards: on basis of test data Health hazards, environmental hazards: calculation method

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity
 Aquatic toxicity - acute: Hazardous to the aquatic environment - acute
 Aquatic toxicity - chronic: Hazardous to the aquatic environment - chronic
 AS/NZS: Australian Standards/New Zealand Standards
 ATE: Acute toxicity estimate
 ATEmix: Acute Toxicity Estimate of mixture
 Carcinogenicity: Carcinogenicity
 CAS: Chemical Abstracts Service
 CEPA: Canadian Environmental Protection Act
 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 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
 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
 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
 Respiratory Sensitizer: Sensitisation to the respiratory tract
 Sensitization - skin: Skin sensitisation
 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
 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.