

1. Product and company identification

Product identifier

Trade name: 636W28=B - Special Glue Part B

This safety data sheet pertains to the following products:

636W28 = O.B. Spezial Klebstoff Kartusche A und B

636W28=0.050 = O.B. Spezial Klebstoff A und B 50ml

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

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

Form: Pasty

Color: Beige

Odor: Amine odor

Classification: Skin Irritation 2. Eye Damage 1. Sensitization - skin 1. Aquatic toxicity - chronic 2.

Hazard symbols:



Signal word:

Danger

Hazard statements:

- Causes skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- Toxic to aquatic life with long lasting effects.

Precautionary statements:

- Avoid release to the environment.
- Wear protective gloves and eye protection.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a POISON CENTER/doctor.
- Collect spillage.

Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS in Canada.

Hazards not otherwise classified

Damages of health may occur with delay.
Special danger of slipping by leaking/spilling product.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterisation: Mixture of the substances listed below with non-hazardous additions:

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 68154-62-1	Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction	< 50 %	Skin Irritation 2. Eye Damage 1. Sensitization - skin 1. Aquatic toxicity - chronic 2.
CAS 68154-62-1	Fatty acids, C18-unsatd., dimers, polymers with oleic acid and triethylenetetramine	< 20 %	Skin Irritation 2. Eye Damage 1. Sensitization - skin 1. Aquatic toxicity - chronic 2.
CAS 90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	< 10 %	Acute Toxicity 4 (oral). Acute Toxicity 4 (dermal). Skin Corrosion 1B. Eye Damage 1. Sensitization - skin 1. Aquatic toxicity - chronic 3.

Additional information: Contains silicon dioxide. The maximum workplace exposure limits are, where necessary, listed in section 8.

4. 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; if necessary, provide artificial respiration or oxygen. Consult doctor afterwards.
Following skin contact:	Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with soap and plenty of water. Immediately get medical attention.
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:	Rinse mouth with water. Have victim drink large quantities of water, with active charcoal if possible. Do not induce vomiting. In case of vomiting, position victim on their side. Never give anything by mouth to an unconscious person. Immediately get medical attention.

Most important symptoms and effects, both acute and delayed

Causes skin irritation.
May cause an allergic skin reaction. Causes severe skin burns and eye damage.
In case of inhalation: Mucous membrane irritation, cough, shortage of breath.
Other symptoms: Reddening, causes tears.
Damages of health may occur with delay.

Information to physician

Treat symptomatically.
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

Flash point/flash point range:	100 °C (Pensky-Martens, c.c.)
Auto-ignition temperature:	No data available
Suitable extinguishing media:	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

May form dangerous gases and vapors in case of fire.
Furthermore, there may develop: Ammonia, nitrous fumes, aldehydes, ketone, nitrogen oxides (NOx), carbon monoxide and carbon dioxide

Special protective equipment and precautions for fire-fighters:	Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.
Additional information:	Do not allow fire water to penetrate into surface or ground water. Use fine water spray to cool endangered containers. 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:	Eliminate all ignition sources if safe to do so. Provide adequate ventilation. Avoid contact with the substance. Do not breathe mist/vapors/spray. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse. Keep unprotected people away.
Environmental precautions:	Do not allow to enter drains, surface waters, basements or pits. If necessary, notify appropriate authorities.
Methods for clean-up:	Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Place in appropriate containers for disposal.
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 the formation of aerosol. Avoid contact with skin, eyes, and clothing. Do not breathe mist/vapors/spray. 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.

Storage

Requirements for storerooms and containers:	Keep container dry, tightly closed and store at cool and aired place. Keep only in the original container.
Hints on joint storage:	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
	636W28=B - Special Glue Part B	Canada: OEL 8 hour	10 mg/m ³ (Dust limit value, inhalable fraction)
		Canada: OEL 8 hour	3 mg/m ³ (Dust limit value, respirable fraction)
		Canada: OEL TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
		Canada: OEL TWA	3 mg/m ³ (Dust limit value, respirable fraction)
		Canada: VEMP	10 mg/m ³ (total dust)
		Canada: VEMP	3 mg/m ³ (total dust, respirable fraction)
		USA: ACGIH: TWA	10 mg/m ³ (Dust limit value, inhalable fraction)
		USA: ACGIH: TWA	3 mg/m ³ (Dust limit value, respirable fraction)
		USA: OSHA: TWA	15 mg/m ³ (Dust limit value, total dust)
		USA: OSHA: TWA	5 mg/m ³ (Dust limit value, respirable fraction)
90640-67-8	Amines, polyethylenepoly -, triethylenetetram ine fraction	Canada: OEL 8 hour	4.2 mg/m ³ ; 1 ppm (may be absorbed through the skin)
		Canada: OEL TWA	1 ppm (may be absorbed through the skin)
		Canada: OEL TWA	3 mg/m ³ ; 0.5 ppm (may be absorbed through the skin)
		Canada: VEMP	4.2 mg/m ³ ; 1 ppm (may be absorbed through the skin)
		USA: ACGIH: TWA	4.2 mg/m ³ ; 1 ppm (may be absorbed through the skin)
		USA: NIOSH: TWA	4 mg/m ³ ; 1 ppm (may be absorbed through the skin)
112945-52-5	Silicon dioxide	USA: IDLH: TWA	3,000 mg/m ³
		USA: NIOSH: TWA	6 mg/m ³
		USA: OSHA: TWA	20 mppcf
		USA: OSHA: TWA	80 mg/m ³ (total dust)

Engineering controls

Provide adequate ventilation.

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.
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.
Use combination filter type K-P according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

General hygiene considerations:
Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product.
Wash hands before breaks and after work.
Do not breathe mist/vapors/spray.
Keep away from food, drink and animal feedingstuffs.
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

Appearance:	Physical state at 20 °C and 101.3 kPa: liquid Form: Pasty Color: Beige
Odor:	Amine odor
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	100 °C (Pensky-Martens, c.c.)
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	at 20 °C: 0.88 g/mL
Water solubility:	at 20 °C: Insoluble
Partition coefficient: n-octanol/water:	at 20 °C: Amines, polyethylenepoly-, triethylenetetramine fraction -2.65 log P(o/w) (OECD 117) Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	dynamic viscosity: Thixotropic

10. Stability and reactivity

Reactivity: Refer to subsection "Possibility of hazardous reactions".

Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No hazardous reaction when handled and stored according to provisions.
Conditions to avoid:	No data available
Incompatible materials:	No data available
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

<p>Toxicological effects:</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.</p> <p>Acute toxicity (inhalative): Lack of data.</p> <p>Skin corrosion/irritation: Skin Irritation 2 = Causes skin irritation. Not corrosive (OECD 404)</p> <p>Serious eye damage/irritation: Eye Damage 1 = Causes serious eye damage.</p> <p>Sensitisation to the respiratory tract: Lack of data.</p> <p>Skin sensitisation: Sensitization - skin 1 = May cause an allergic skin reaction.</p> <p>Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.</p> <p>Information about Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction:</p> <p>OECD 471 (Ames test) = negative</p> <p>OECD 476 = negative</p> <p>OECD 487 = negative</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): Lack of data.</p> <p>Specific target organ toxicity (repeated exposure): Lack of data.</p> <p>Aspiration hazard: Lack of data.</p>	
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Symptoms

In case of inhalation:
Information about Triethylentetramine: Mucous membrane irritation, cough, shortage of breath.

In case of ingestion: Risk of perforation in the oesophagus and stomach.

After contact with skin: Reddening. Danger of cutaneous absorption.

After eye contact: Reddening, causes tears.

12. Ecological information

Ecotoxicity

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

Information about Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction:

Fish toxicity:
LC50 Danio rerio (zebrafish): 7.07 mg/L/96h (OECD 203)

Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 5.18 mg/L/48h (OECD 202)

Algae toxicity:
ErC50 Selenastrum capricornutum: 2.43 mg/L/72h (OECD 201)

Bacterial toxicity:
EC50 activated sludge: 421 mg/L/3h (OECD 209)

Information about Amines, polyethylenepoly-, triethylenetetramine fraction:

Fish toxicity: LC50 Pimephales promelas (fathead minnow): 330 mg/L/96 h.

Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 31.1 mg/L/48h (EG, C.2)

Daphnia toxicity: Chronic toxicity:
EC10 1.9 mg/L/21d (OECD 202)

Algae toxicity:
ErC50 Selenastrum capricornutum: 20 mg/L/72h (OECD 201)

Bacterial toxicity:
EC50 activated sludge: 800 mg/L/0.5 h (OECD 209)

Mobility in soil

Information about Amines, polyethylenepoly-, triethylenetetramine fraction:
Koc 1589.4 - 5,012 (OECD 106)

Persistence and degradability

Further details: Information about Amines, polyethylenepoly-, triethylenetetramine fraction:
Biodegradation: 0 % / 162d (OECD 301D) Product is not readily biodegradable.
Chemical oxygen demand (COD): 1,940 mg/g

Additional ecological information

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

13. Disposal considerations

Product

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

Package

Recommendation: Dispose of waste according to applicable legislation. Do not re-use the empty container.

14. Transport information

UN number

ADR/RID, IMDG, IATA-DGR:

UN 3082

UN proper shipping name

ADR/RID, IMDG, IATA-DGR:

UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction)

Transport hazard class(es)

ADR/RID:

Class 9, Code: M6

IMDG:

Class 9, Subrisk -

IATA-DGR:

Class 9

Packing group

ADR/RID, IMDG, IATA-DGR:

III

Environmental hazards

Marine pollutant:

yes

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

No data available

USA: Department of Transportation (DOT)

Identification number:

UN3082

Proper shipping name:

UN 3082,
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Reaction products of fatty acid dimers and trimers, C18
(unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl
with amines, polyethylenepoly-, triethylenetetramine fraction)

Hazard class or Division:

9

Packing Group:

III

Labels:

9

Symbols:

G

Special Provisions:

8, 146, 173, 335, 441, IB3, T4, TP1, TP29

Packaging – Exceptions:

155

Packaging – Non-bulk:

203

Packaging – Bulk:

241

Quantity limitations – Passenger aircraft / rail:

No limit

Quantity limitations – Cargo only:

No limit

Vessel stowage – Location:

A



Canada: Transportation of Dangerous Goods (TDG)

UN Number: UN3082
 Shipping name: UN 3082,
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl
 and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-,
 triethylenetetramine fraction)
 TDG class: 9
 Packing group: III
 Special provisions: 16, 99
 Explosive limit and limited quantity index: 5 L
 Marine pollutant: P

Sea transport (IMDG)

UN number: UN 3082
 Proper shipping name: UN 3082,
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl
 and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-,
 triethylenetetramine fraction)
 Class or division, Subsidiary risk: Class 9, Subrisk -
 Packing Group: III
 EmS: F-A, S-F
 Special Provisions: 274 335 375 969
 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: T4
 Tank instructions - Provisions: TP1, TP29
 Stowage and handling: Category A.
 Properties and observations: -
 Marine pollutant: yes
 Segregation group: none

Air transport (IATA)

UN/ID number: UN 3082
 Proper shipping name: UN 3082,
 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl
 and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-,
 triethylenetetramine fraction)
 Class or division, Subsidiary risk: Class 9
 Packing Group: III
 Hazard label: Miscellaneous & Environmentally hazardous
 Excepted Quantity Code: E1
 Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y964 - Max. Net Qty/Pkg. 30 kg G
 Passenger and Cargo Aircraft: Pack.Instr. 964 - Max. Net Qty/Pkg. 450 L
 Cargo Aircraft only: Pack.Instr. 964 - Max. Net Qty/Pkg. 450 L
 Special Provisions: A97 A158 A197 A215
 Emergency Response Guide-Code (ERG): 9L

15. Regulatory information

National regulations - Canada

Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction: DSL: listed

Fatty acids, C18-unsatd., dimers, polymers with oleic acid and triethylenetetramine: DSL: listed

Silicon dioxide: DSL: listed

Polyethylene: DSL: listed

National regulations - U.S. Federal Regulations

Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction: TSCA Inventory: listed; UVCB

Fatty acids, C18-unsatd., dimers, polymers with oleic acid and triethylenetetramine: TSCA Inventory: listed; UVCB

Polyethylene: TSCA Inventory: listed

Carcinogen Status:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed

National regulations - U.S. State Regulations

No data available

National regulations - EC member states

Further regulations, limitations and legal requirements:

Use restriction according to REACH annex XVII, no.: 3, 40

16. Other information

Text for labeling:

Contains < 50 % Reaction products of fatty acid dimers and trimers, C18 (unsaturated) alkyl and fatty acids, C18 (unsaturated) alkyl with amines, polyethylenepoly-, triethylenetetramine fraction, < 20 % Fatty acids, C18-unsatd., dimers, polymers with oleic acid and triethylenetetramine, < 10 % Amines, polyethylenepoly-, triethylenetetramine fraction.

Hazard rating systems:



NFPA Hazard Rating:

Health: 3 (Serious)

Fire: 1 (Slight)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 3 (Serious) - Chronic effects

Flammability: 1 (Slight)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	*	3
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
 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
 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
 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
 log P(o/w): Partition coefficient: octanol/water
 MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
 OECD: Organisation for Economic Co-operation and Development
 OEL: Occupational Exposure Limit Value
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, bioaccumulative and toxic
 PNEC: Predicted no-effect concentration
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
 RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail
 Sensitization - skin: Skin sensitisation
 Skin Corrosion: Skin corrosion
 Skin Irritation: Skin irritation
 TLV: Threshold Limit Value
 TRGS: Technical Rules for Hazardous Substances
 UN: United Nations
 vPvB: Very persistent and very bioaccumulative
 WEL: Workplace Exposure Limit
 WHMIS: Workplace Hazardous Materials Information System

Reason of change: Changes in section 8: Occupational exposure limit values
Changes in section 14: IMDG 2025

Date of first version: 30/10/1994

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.