

## 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

### 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  
Postal Code, city: Salt Lake City, UT 84120  
USA

WWW: [www.ottobockus.com](http://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](mailto:USRegulatory@ottobock.com)

Additional information: Corporate headquarters:  
Ottobock SE & Co. KGaA  
Max-Näder-Straße 15  
Duderstadt  
Germany

### Emergency phone 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. Hazards identification

### Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: liquid

Form: Pasty

Color: Beige

Odor: Amine odor

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

## 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 characterization: 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 - Category 2. Eye Damage - Category 1. Sensitization - skin - Category 1A. Aquatic toxicity - chronic - Category 2.
CAS 68154-62-1	Fatty acids, C18-unsatd., dimers, polymers with oleic acid and triethylenetetramine	< 20 %	Skin Irritation - Category 2. Eye Damage - Category 1. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	< 10 %	Acute Toxicity - oral - Category 4. Acute Toxicity - dermal - Category 4. Skin Corrosion - Category 1B. Eye Damage - Category 1. Sensitization - skin - Category 1. Aquatic toxicity - chronic - Category 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/effects, 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:

212 °F (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

Protective equipment and precautions for firefighters:

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	USA: ACGIH: TWA	10 mg/m <sup>3</sup> (Dust limit value, inhalable fraction)
		USA: ACGIH: TWA	3 mg/m <sup>3</sup> (Dust limit value, respirable fraction)
		USA: OSHA: TWA	15 mg/m <sup>3</sup> (Dust limit value, total dust)
		USA: OSHA: TWA	5 mg/m <sup>3</sup> (Dust limit value, respirable fraction)
90640-67-8	Amines, polyethylenepoly-, triethylenetetramin e fraction	USA: ACGIH: TWA	4.2 mg/m <sup>3</sup> ; 1 ppm (may be absorbed through the skin)
		USA: NIOSH: TWA	4 mg/m <sup>3</sup> ; 1 ppm (may be absorbed through the skin)
112945-52-5	Silicon dioxide	USA: IDLH: TWA	3,000 mg/m <sup>3</sup>
		USA: NIOSH: TWA	6 mg/m <sup>3</sup>
		USA: OSHA: TWA	20 mppcf
		USA: OSHA: TWA	80 mg/m <sup>3</sup> (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 68 °F 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:	212 °F (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 68 °F: 0.88 g/mL
Water solubility:	at 68 °F: Insoluble
Partition coefficient: n-octanol/water:	at 68 °F: 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".
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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: &gt; 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 - Category 2 = Causes skin irritation. Not corrosive (OECD 404)</p> <p>Serious eye damage/irritation: Eye Damage - Category 1 = Causes serious eye damage.</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: 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: OECD 471 (Ames test) = negative OECD 476 = negative 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 Triethylenetetramine: 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



### 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 - 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 - 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 - Great Britain

Hazchem-Code: •3Z

## 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  
 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

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

Date of first version: 10/30/1994

### 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.