

1. Identification

Product identifier

Trade name: 636W161 - AXIL 3137

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

General use: Adhesive

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.

Respiratory Sensitizer - Category 1

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

Sensitization - skin - Category 1

May cause an allergic skin reaction.

Carcinogenicity - Category 2

Suspected of causing cancer.

Reproductive toxicant - Category 1B

May damage fertility. May damage the unborn child.

Specific Target Organ Toxicity (Single Exposure)

May cause drowsiness or dizziness.

- Category 3

Label elements

Symbols:



Signal word:

Danger

Hazard statements:

Highly flammable liquid and vapor.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May damage fertility. May damage the unborn child.

Precautionary statements:

Obtain special instructions before use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves/protective clothing/eye protection/face protection.
[In case of inadequate ventilation] wear respiratory protection.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Other hazards

Potentially explosive mixtures may form if adequate ventilation is not provided.
Inhaling can lead to irritations of the respiratory tract and mucous membrane.
Higher doses may have a narcotic effect.
Repeated exposure may cause skin dryness or cracking.
Special danger of slipping by leaking/spilling product.

3. Composition/information on ingredients

Mixtures

Chemical characterization: Solvent mixture

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 141-78-6	Ethyl acetate	20 - 30 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 78-93-3	Butanone	20 - 30 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 9016-87-9	Diphenylmethane-diisocyanate-Polymer	< 10 %	Acute Toxicity - inhalative - Category 4. Skin Irritation - Category 2. Eye Irritation - Category 2. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Carcinogenicity - Category 2. Specific Target Organ Toxicity (Single Exposure) - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 2.
CAS 77-58-7	Dibutyltin dilaurate	< 0.25 %	Germ cell mutagenicity - Category 2. Reproductive toxicant - Category 1A. Specific Target Organ Toxicity (Repeated Exposure) - Category 1.
CAS 98-88-4	Benzoyl chloride	< 0.25 %	Acute Toxicity - oral - Category 4. Acute Toxicity - dermal - Category 4. Acute Toxicity - inhalative - Category 4. Skin Corrosion - Category 1B. Sensitization - skin - Category 1.

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

4. First aid measures

General information:	If medical advice is needed, have product container or label at hand.
In case of inhalation:	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately get medical attention.
Following skin contact:	Immediately clean with water and soap followed by thorough rinsing. Take off immediately all 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:	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.

Most important symptoms/effects, acute and delayed

May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause drowsiness or dizziness.
May cause an allergic skin reaction. Causes serious eye irritation.

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.

Extinguishing media which must not be used for safety reasons:

Full water jet

Specific hazards arising from the chemical

Highly flammable liquid and vapor.

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

May form dangerous gases and vapors in case of fire.

Furthermore, there may develop: Hydrogen chloride, 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. 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 breathing mist/vapors/spray. Avoid exposure. Avoid contact with the substance.

Eliminate all ignition sources if safe to do so. If possible, eliminate leakage. Provide adequate ventilation.

Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse. Keep unprotected people away.

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

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).

Beware of reignition. Thoroughly clean surrounding area.

In case of greater quantities: Collect mechanically (use only explosion-proof equipment when pumping out). Use explosion-proof equipment and non-sparking tools/utensils.

7. Handling and storage

Precautions for safe handling

Advices on safe handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Obtain special instructions before use. Provide adequate ventilation, and local exhaust as needed. Avoid breathing mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Wear appropriate protective equipment.
Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Take off immediately all contaminated clothing and wash it before reuse.
Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation.
When handling large quantities, supply emergency spray.

Precautions against fire and explosion:

Keep away from sources of ignition - No smoking.
In partially filled containers explosive mixtures may form.

Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:

Keep container tightly closed and in a well-ventilated place.
Keep container dry. Keep only in the original container.
Protect from heat and direct sunlight. Protect from frost.
Store containers in upright position.

Hints on joint storage:

Do not store together with: strong acids, strong oxidizing agents.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
141-78-6	Ethyl acetate	USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	1,440 mg/m ³ ; 400 ppm 2,000 ppm [10% LEL] 1,400 mg/m ³ ; 400 ppm 1,400 mg/m ³ ; 400 ppm
78-93-3	Butanone	USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: STEL USA: NIOSH: TWA USA: OSHA: TWA	150 ppm (may be absorbed through the skin) 75 ppm (may be absorbed through the skin) 3,000 ppm 885 mg/m ³ ; 300 ppm 590 mg/m ³ ; 200 ppm 590 mg/m ³ ; 200 ppm
9016-87-9	Diphenylmethane-diisocyanate-Polymer	USA: NIOSH: Ceiling	0.2 mg/m ³ ; 0.02 ppm
77-58-7	Dibutyltin dilaurate	USA: NIOSH: TWA USA: ACGIH: STEL USA: ACGIH: TWA USA: IDLH: TWA USA: NIOSH: TWA USA: OSHA: TWA	0.05 mg/m ³ ; 0.005 ppm 0.2 mg/m ³ (may be absorbed through the skin) 0.1 mg/m ³ (may be absorbed through the skin) 25 Sn/m ³ 0.1 mg/m ³ (may be absorbed through the skin) 0.1 mg/m ³
98-88-4	Benzoyl chloride	USA: ACGIH: Ceiling	2.8 mg/m ³ ; 0.5 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
78-93-3	Butanone	USA: ACGIH-BEI, urine	2 mg/L	MEK	end of exposure or end of shift

Appropriate engineering controls

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

Hand protection: Protective gloves according to OSHA Standard - 29 CFR: 1910.138. Glove material: Nitrile rubber. 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.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Wear appropriate protective equipment.

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Take off immediately all contaminated clothing and wash it before reuse.

Guarantee sufficient ventilation during and after use, in order to prevent vapor accumulation.

When handling large quantities, supply emergency spray.

Environmental exposure controls

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

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state at 68 °F and 101.3 kPa	liquid
Color:	amber
Odor:	irritant
Odor threshold:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flammability:	Highly flammable liquid and vapor.
Explosion limits:	No data available
Flash point/flash point range:	21.2 °F
Evaporation rate:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Dynamic viscosity:	at 68 °F: 300 - 500 mPa*s
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Vapor pressure:	No data available
Density:	at 68 °F: 0.95 - 1.05 g/mL
Vapor density:	No data available
Particle characteristics:	Not applicable

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:

Strong oxidizing agents, strong acid.

Hazardous decomposition products:

No hazardous decomposition products when regulations for storage and handling are observed.

11. Toxicological information

Information on toxicological effects

Toxicological effects:

The statements are derived from the properties of the single components. No toxicological data is available for the product as such.

Acute toxicity (oral): Based on available data, the classification criteria are not met.

ATEmix (calculated): 2000 mg/kg < ATE ≤ 5000 mg/kg.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

ATEmix (calculated): 2000 mg/kg < ATE ≤ 5000 mg/kg.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

ATEmix (calculated): ATE >20 mg/kg.

Skin corrosion/irritation: Lack of data.

Serious eye damage/irritation: Eye Irritation - Category 2A = Causes serious eye irritation.

Sensitisation to the respiratory tract: Respiratory Sensitizer -

Category 1 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Carcinogenicity - Category 2 = Suspected of causing cancer.

Reproductive toxicity: Reproductive toxicant -

Category 1B = May damage fertility. May damage the unborn child.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Specific Target Organ Toxicity (Single Exposure) - Category 3 = May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.

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

Other information:

Information about Ethyl acetate:

LD50 Rat, oral: 5,620 mg/kg

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

Information about 4,4'-Diphenylmethane disocyanate (isomers, homologues):

LD50 Rat, oral: >2000 mg/kg

LC50 Rat, inhalative, vapor: 490 mg/L/4h

Chronic toxicity - Carcinogenic effect:

ACGIH, EPA, IARC, OSHA, and NTP carcinogen lists have been checked for selected similar materials or those components.

4,4'-Diphenylmethane disocyanate:

IARC Rating: Group 3

OSHA Carcinogen: not listed

NTP Rating: not listed

Dibutyltin dilaurate

IARC Rating: Group 2B

OSHA Carcinogen: not listed

NTP Rating: not listed

Benzoyl chloride

IARC Rating: Group 2A

OSHA Carcinogen: not listed

NTP Rating: not listed

Symptoms

Inhaling can lead to irritations of the respiratory tract and mucous membrane.

Higher doses may lead to a narcotic effect.

After contact with skin: Repeated exposure may cause skin dryness or cracking.

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

12. Ecological information

Ecotoxicity

Further details: No data available

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.

13. Disposal considerations

Waste treatment methods

Product

Recommendation: Dispose of waste according to applicable legislation.

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.
Handle empty containers with care. Incineration may cause explosion.

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: II

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: 149, B52, IB2, T4, TP1, TP8

Packaging – Exceptions: 150

Packaging – Non-bulk: 173

Packaging – Bulk: 242

Quantity limitations – Passenger aircraft / rail:

5 L

Quantity limitations – Cargo only: 60 L

Vessel stowage – Location: B

Vessel stowage – Other:

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

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 - U.S. Federal Regulations

Ethyl acetate:	<p>TSCA Inventory: listed</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0260</p>
Butanone:	<p>TSCA Inventory: listed</p> <p>Clean Air Act:</p> <p>CAA Hazardous Air Pollutants: yes</p> <p>CAA SOCM Chemical: yes</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 5000 lbs.</p> <p>RCRA Hazardous Wastes: Waste Code U159, D035; Reg. Level 200.0 mg/L</p> <p>RCRA Groundwater Monitoring: listed</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0069*</p>
Diphenylmethane-diisocyanate-Polymer:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status: IARC Rating: Group 3</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>Other Environmental Laws:</p> <p>SARA Title III, Section 313, Toxic Release: NPFAS; De Minimis <=1.0 %; Thresholds 25000/10000 lbs</p>
Dibutyltin dilaurate:	<p>TSCA Inventory: listed</p> <p>Carcinogen Status: IARC Rating: Group 2B</p> <p>OSHA Carcinogen: not listed</p> <p>NTP Rating: not listed</p> <p>Clean Air Act:</p> <p>CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = g</p> <p>Other Environmental Laws:</p> <p>CERCLA: RQ 100 lbs.</p> <p>Marine Pollutant: listed as pollutant.</p> <p>NIOSH Recommendations:</p> <p>Occupational Health Guideline: 0017</p> <p>OSHA Process Safety Management: Threshold 2500 lbs.</p>

Benzoyl chloride:

TSCA Inventory: listed

Carcinogen Status: IARC Rating: Group 2A

OSHA Carcinogen: not listed

NTP Rating: not listed

Clean Air Act:

CAA Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = g

CAA SOCM I Chemical: yes

Clean Water Act:

CWA Hazardous Substances: Category C; RQ 1000.0 lbs

Other Environmental Laws:

CERCLA: RQ 1000 lbs.

Marine Pollutant: listed as pollutant.

SARA Title III, Section 313, Toxic Release: NPFAS; De Minimis <=1.0 %; Thresholds 25000/10000 lbs

NIOSH Recommendations:

Occupational Health Guideline: 0017

OSHA Process Safety Management: Threshold 2500 lbs.

National regulations - U.S. State Regulations

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

Butanone: New York Right-To-Know: listed

Benzoyl chloride: New York Right-To-Know: listed

Further regulations, limitations and legal requirements

No data available

16. Other information

Text for labeling:

Contains 20 - 30 % Ethyl acetate, 20 - 30 % Butanone, < 10 % Diphenylmethane-diisocyanate-Polymer, < 0.25 % Dibutyltin dilaurate, < 0.25 % Benzoyl chloride.

Contains Ethyl acetate, Butanone, 4,4'-Diphenylmethane disocyanate (isomers, homologues), Dibutyltin dilaurate, Benzoyl chloride

Revision date:

11/28/2025

Date of first version:

2/28/2019

Reason of change:

General revision: Safety Data Sheet according to HCS 2024 (29 CFR 1910.1200)

Hazard rating systems:

NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 3 (Serious)

Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 2 (Moderate) - Chronic effects

Flammability: 3 (Serious)

Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor



HEALTH	*	2
FLAMMABILITY		3
PHYSICAL HAZARD		0
X		

Abbreviations and acronyms:

Acute Toxicity: Acute toxicity
 AS/NZS: Australian Standards/New Zealand Standards
 Carcinogenicity: Carcinogenicity
 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
 EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods
 EN: European Standard
 EQ: Excepted quantities
 Eye Irritation: Eye irritation
 Flammable Liquid: Flammable liquid
 Germ cell mutagenicity: Mutagenicity
 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
 Reproductive toxicant: Reproductive toxicity
 Respiratory Sensitizer: Sensitisation to the respiratory tract
 Sensitization - skin: Skin sensitisation
 Skin Corrosion: Skin corrosion
 Skin Irritation: Skin irritation
 STOT RE: Specific target organ toxicity - repeated exposure
 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.