

SL=P078 - Urethane Bonding Kit

Material number SL=P078

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1. Product and company identification**Product identifier**

Trade name: SL=P078 - Urethane Bonding Kit

Relevant identified uses of the substance or mixture and uses advised againstGeneral use: Adhesive, for orthopedic procedures.
For use in industrial installations and professional treatment only.**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
Telephone: +1 (801) 956-2400
Telefax: +1 (801) 956-2401
Dept. responsible for information:
Quality Department,
Telephone: +1 (801) 954-2304 (7 AM – 3 PM, Mountain Time),
Email: USRegulatory@ottobock.comAdditional 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: liquid
Odor: nearly odorless
Classification: Acute Toxicity - oral - Category 4; Acute Toxicity - inhalative - Category 4;
Skin Irritation - Category 2; Eye Irritation - Category 2A; Respiratory Sensitizer -
Category 1; Sensitization - skin - Category 1; Aquatic toxicity - chronic - Category 2;

Hazard symbols:

Signal word: **Danger**

Hazard statements: Harmful if swallowed.
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.
Toxic to aquatic life with long lasting effects.

Precautionary statements: Avoid breathing vapors/spray.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
In case of inadequate ventilation wear respiratory protection.
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF ON SKIN: Wash with plenty of water/soap.
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.
Specific treatment (see ' First aid ' on this label).
Rinse mouth.
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.
Collect spillage.
Dispose of contents/container to hazardous or special waste collection point.

Regulatory status

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

Hazards not otherwise classified

Chronic hazard warning (risk depends on duration and level of exposure):
Contains material which caused cancer in laboratory animal tests.
Contains material which caused chronic liver, kidney, and reproductive organ damage in laboratory animal tests.

see section 11: Toxicological information

3. Composition / Information on ingredients

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 25322-69-4	polypropylene-glycol	< 30 %	Acute Toxicity - oral - Category 4.
CAS 68479-98-1	Diethylmethylbenzenediamine	< 10 %	Acute Toxicity - oral - Category 4. Acute Toxicity - dermal - Category 4. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Repeated Exposure) - Category 2. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 78-93-3	Butanone	< 10 %	Flammable Liquid - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 5124-30-1	Dicyclohexylmethan-4,4' diisocyanate	< 10 %	Acute Toxicity - inhalative - Category 2. Skin Irritation - Category 2. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 25973-55-1	2-(2'-Hydroxy-3',5'-di-tert-amylphenyl)-benzotriazole	< 1 %	Acute Toxicity - oral - Category 4. Skin Irritation - Category 2. Eye Irritation - Category 2A. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	< 1 %	Sensitization - skin - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.
CAS 82919-37-7	Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	< 1 %	Sensitization - skin - Category 1. Aquatic toxicity - acute - Category 1. Aquatic toxicity - chronic - Category 1.

4. First aid measures

General information:	Contaminated/fouled clothing and shoes must be removed immediately.
In case of inhalation:	Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Immediately get medical attention.
Following skin contact:	After contact with skin, wash immediately with soap and plenty of water. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. In case of skin irritation, consult a physician.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
After swallowing:	Consult physician immediately. Do not induce vomiting without medical assistance. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature: No data available

Suitable extinguishing media:

Carbon dioxide, dry chemical powder, alcohol resistant foam

Extinguishing media which must not be used for safety reasons:

full water jet

Specific hazards arising from the chemical

In case of fire may be liberated: carbon dioxide, carbon monoxide, nitrogen oxides (NOx) and HMDI.

Protective equipment and precautions for firefighters:

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

Additional information:

Cool exposed containers with water spray, but avoid contact of the substance with water. Reacts with water, forming carbon monoxide, producing bursting hazard in closed containers due to build-up of pressure. Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water.

6. Accidental release measures

Personal precautions:

Avoid contact with skin, eyes, and clothing. Do not breathe vapor or spray. Wear appropriate protective equipment.

Provide for sufficient ventilation, particularly in closed rooms.

If necessary: Wear a self-contained breathing apparatus and chemical protective clothing.

Keep unprotected people away.

Environmental precautions:

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

Methods for clean-up:

Plug leak if safely possible. Soak up with absorbent materials such as sand, siliceous earth, acid- or universal binder. Store in special closed containers and dispose of according to ordinance. Thoroughly clean surrounding area. Dispose of waste according to applicable legislation.

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 contact with skin, eyes, and clothing. Do not breathe vapor or spray.
 Wear appropriate protective equipment. Wash hands before breaks and after work.
 When using do not eat, drink or smoke.

Precautions against fire and explosion:
 Reacts with water, forming carbon monoxide, producing bursting hazard in closed containers due to build-up of pressure.

Storage

Requirements for storerooms and containers:
 Store container tightly closed in a dry area. Avoid temperatures exceeding 86 °F.
 Protect from heat and direct sunlight. Protect from moisture contamination.

Hints on joint storage: Keep away from strong acids, strong bases and oxidizing agents. Reacts with isocyanates to form high-molecular-weight polymers.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
78-93-3	Butanone	USA: ACGIH: STEL	885 mg/m ³ ; 300 ppm
		USA: ACGIH: TWA	590 mg/m ³ ; 200 ppm
		USA: NIOSH: STEL	885 mg/m ³ ; 300 ppm
		USA: NIOSH: TWA	590 mg/m ³ ; 200 ppm
		USA: OSHA: TWA	590 mg/m ³ ; 200 ppm
5124-30-1	Dicyclohexylmethan-4,4' diisocyanate	NIOSH: Ceiling	0.11 mg/m ³ ; 0.01 ppm
		USA: ACGIH: TWA	0.054 mg/m ³ ; 0.005 ppm

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
78-93-3	Butanone	USA: ACGIH-BE1, urine	2 mg/L	MEK	end of exposure or end of shift

Engineering controls

Provide adequate ventilation. Use local exhaust.
 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.
 Glove material: Nitrile rubber
 Breakthrough time: 480 min.
 Layer thickness: 0.35 mm.
 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. When splashes or fine mist form, a permitted breathing apparatus suitable for these purposes must be used.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations:
Avoid contact with skin, eyes, and clothing. Do not breathe vapor or spray. Take off immediately all contaminated clothing. Safety shower and eye wash station should be easily accessible to the work area.
Street clothing should be stored separately from work clothing. Wash hands before breaks and after work. When using do not eat, drink or smoke.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state at 68 °F and 101.3 kPa: liquid Form: liquid
Odor:	nearly odorless
Odor threshold:	No data available
pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
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:	No data available
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	>38°C°
Additional information:	No data available

10. Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	Danger of polymerisation
Conditions to avoid:	Avoid temperatures exceeding 86 °F. Protect from heat and direct sunlight. Protect from moisture contamination.

Incompatible materials: Keep away from strong acids, strong bases and oxidizing agents. Reacts with isocyanates to form high-molecular-weight polymers.

Hazardous decomposition products:

In case of fire may be liberated: Carbon dioxide, carbon monoxide, nitrogen oxides (NO_x)

Thermal decomposition: >38°C°

11. Toxicological information

Toxicological tests

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): Acute Toxicity - oral - Category 4 = Harmful if swallowed.

Acute toxicity (dermal): Lack of data.

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

Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.

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: Lack of data.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Lack of data.

Aspiration hazard: Lack of data.

Other information: Substance shown to be clearly carcinogenic in animal studies.

Specific symptoms in animal studies, repeated exposure: liver damage May cause sensitization by inhalation and skin contact.

Dicyclohexylmethan-4,4' diisocyanate:

LD50 Rat, oral: > 18 g/kg;

LD50 Rabbit, dermal: > 7900 mg/kg;

LC50 Rat, inhalative 0.33 mg/L/4h.

Diethylmethylbenzenediamine:

LD50 Rat, oral: > 500 mg/kg;

Rabbit, dermal: 700 mg/kg.

Danger of cutaneous absorption.

12. Ecological information

Ecotoxicity

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

The product has not been tested. The statement is derived from the properties of the single components.

Mobility in soil

No data available

Persistence and degradability

Further details: No data available

Additional ecological information

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

13. Disposal considerations

Product

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

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.

14. Transport information

USA: Department of Transportation (DOT)

Identification number:	UN3082
Proper shipping name:	UN 3082, UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Contains Diethylmethylbenzenediamine, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
Hazard class or Division:	9
Packing Group:	III
Labels:	9
Symbols:	G
Special provisions:	8, 146, 173, 335, 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



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Sea transport (IMDG)

UN number: UN 3082
Proper shipping name: UN 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Contains Diethylmethylbenzenediamine, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

Class or division, Subsidiary risk: Class 9, Subrisk -
Packing Group: III
EmS: F-A, S-F
Special provisions: 274, 335, 969
Limited quantities: 5 L
Excepted quantities: E1
Contaminated packaging - Instructions: P001, LP01
Contaminated packaging - Provisions: PP1
IBC - Instructions: IBC03
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T4
Tank instructions - Provisions: TP2, 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.
Contains Diethylmethylbenzenediamine, Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

Class or division, Subsidiary risk: Class 9
Packing Group: III
Hazard label: Miscellaneous
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
Emergency Response Guide-Code (ERG): 9L

15. Regulatory information

National regulations - U.S. Federal Regulations

polypropylene-glycol:	TSCA Inventory: listed; EPA flags XU TSCA HPVC: not listed
Diethylmethylenediamine:	TSCA Inventory: listed TSCA HPVC: not listed
Butanone:	TSCA Inventory: listed TSCA HPVC: not listed Other Environmental Laws: CERCLA: RQ 5000 lbs. RCRA Hazardous Wastes: Code U159 RCRA Groundwater Monitoring: Methods 8015, 8240 / PQL 10, 100 NIOSH Recommendations: Occupational Health Guideline: 0069*
Dicyclohexylmethan-4,4' diisocyanate:	TSCA Inventory: listed TSCA HPVC: not listed Other Environmental Laws: SARA Title III Section 313, Toxic Release: Conc. 1.0% NIOSH Recommendations: Occupational Health Guideline: 0412
2-(2'-Hydroxy-3',5'-di-tert-amylphenyl)-benzotriazole:	TSCA Inventory: listed TSCA HPVC: not listed TSCA: listed
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate:	TSCA Inventory: listed TSCA HPVC: not listed
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate:	TSCA Inventory: listed TSCA HPVC: not listed

National regulations - U.S. State Regulations

Butanone:	<p>Delaware Air Quality Management List: DRQ: 5000 - RQ State: Federal Regulations Apply Idaho Air Pollutant List: Title 585/Title 586: - Massachusetts Haz. Substance codes: 2,4,5,6 F8 F9 Minnesota Haz. Substance: Codes: ANO - Ratings: 9.7 - Status: Air Pollutant Title III. TRI. New Jersey RTK Hazardous Substance: DOT: 1193 - Sub No.: 1258 - TPQ: - New York List of Hazardous Substances: RQ-Air: 5000 - RQ-Land: 1 - Note: No Note Associated with this chemical. Pennsylvania Haz. Substance code: E Washington Air Contaminant: TWA: 200 ppm - 590 mg - STEL: 300 ppm - 885 mg</p>
Dicyclohexylmethan-4,4' diisocyanate:	<p>California Proposition 65 code: not listed Delaware Air Quality Management List: DRQ: 100 - RQ State: State requirement differs from Federal Idaho Air Pollutant List: Title 585: AAC: 0.0055 - EL: 0.007 - OEL: 0.11 - Title 586: - Massachusetts Haz. Substance codes: 2,4 F8 F9 Minnesota Haz. Substance: Codes: N - Ratings: -- - Status: Title III. Pennsylvania Haz. Substance code: - Washington Air Contaminant: Ceiling: 0.01 ppm - 0.11 mg</p>

National regulations - Great Britain

Hazchem-Code: •3Z

16. Other information

Text for labeling: Contains < 30 % polypropylene-glycol, < 10 % Diethylmethylbenzenediamine, < 10 % Butanone, < 10 % Dicyclohexylmethan-4,4' diisocyanate, < 1 % 2-(2'-Hydroxy-3',5'-di-tert-amylphenyl)-benzotriazole, < 1 % Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, < 1 % Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:
Health: 2 (Moderate)
Fire: 1 (Slight)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 2 (Moderate)
Flammability: 1 (Slight)
Physical Hazard: 0 (Minimal)
Personal Protection: ?

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0
X	

Reason of change: Changes in section 1.3: Corporate headquarters

Date of first version: 6/30/2015

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information



SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

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Material number SL=P078

Revision date: 3/22/2018

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Date of print: 5/24/2018

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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.