

## SL=P070-A - Urethane Bonding Kit Part A

Material number SL=P070-A

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### 1. Product and company identification

#### Product identifier

Trade name: SL=P070-A - Urethane Bonding Kit Part A

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

General use: Adhesive, Component A, 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](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  
Color: colorless  
Odor: No data available  
Classification: Acute Toxicity - inhalative - Category 3. Skin Irritation - Category 2. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3.

Hazard symbols:



Signal word:

**Danger**

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Hazard statements: Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Toxic if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.

Precautionary statements: Avoid breathing mist/vapors/spray.  
Wear protective gloves/protective clothing/eye protection.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
Store in a well-ventilated place. Keep container tightly closed.  
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).

**Hazards not otherwise classified**

Heating causes rise in pressure with risk of bursting.  
Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.  
see section 11: Toxicological information

**3. Composition / Information on ingredients**

Chemical characterization: Modified polyol

Relevant ingredients:

CAS No.	Designation	Concentration	Classification
CAS 5124-30-1	Dicyclohexylmethan-4,4' diisocyanate	22 - 23 %	Acute Toxicity - inhalative - Category 3. Skin Irritation - Category 2. Eye Irritation - Category 2A. Respiratory Sensitizer - Category 1. Sensitization - skin - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3.

**4. First aid measures**

General information: If medical advice is needed, have product container or label at hand.  
Take off contaminated clothing and wash it before reuse.

In case of inhalation: Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Immediately get medical attention.

Following skin contact: Immediately clean with water and soap followed by thorough rinsing. In case of skin reactions, consult a physician.

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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 consult 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.  
Do not give milk or alcoholic beverages. Seek medical attention.

### Most important symptoms/effects, acute and delayed

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

### Information to physician

Treat symptomatically.  
It can take hours before symptoms of poisoning show up following exposure.  
Do not leave affected person unattended.

## 5. Fire fighting measures

Flash point/flash point range:

> 201.2 °F

Auto-ignition temperature: No data available

Suitable extinguishing media:

Full water jet

### Specific hazards arising from the chemical

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), isocyanates, carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

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

Additional information:

Use fine water spray to cool endangered containers. Reacts with water, forming carbon monoxide, producing bursting hazard in closed containers due to build-up of pressure. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
Do not allow water used to extinguish fire to enter drains, ground or waterways.  
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:

Do not breathe mist/vapors/spray. Avoid contact with the substance.  
If possible, eliminate leakage. Provide adequate ventilation.  
Wear appropriate protective equipment. Keep unprotected people away.  
Take off contaminated clothing and wash it before reuse.

Environmental precautions:

Do not allow to enter into ground-water, surface water or drains.  
If necessary, notify appropriate authorities.

Methods for clean-up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal.

Additional information:

Special danger of slipping by leaking/spilling product.

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### 7. Handling and storage

#### Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe 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 contaminated clothing and wash it before reuse.  
Have eye wash bottle or eye rinse ready at work place.  
Persons already sensitised to diisocyanates may develop allergic reactions when using this product.  
Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.

Precautions against fire and explosion:

Keep away from heat.  
When handling larger quantities, take precautionary measures against electrostatic charging.

#### Storage

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.  
Store containers in upright position.

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
5124-30-1	Dicyclohexylmethan-4,4'-diisocyanate	USA: ACGIH: TWA	0.054 mg/m <sup>3</sup> ; 0.005 ppm
		USA: NIOSH: Ceiling	0.11 mg/m <sup>3</sup> ; 0.01 ppm

#### Engineering controls

Provide good ventilation and/or an exhaust system in the work area.  
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. Recommended Use filter type A (= against vapors of organic substances) according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2. 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.

**General hygiene considerations:**

Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Have eye wash bottle or eye rinse ready at work place. Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.

### 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 Color: colorless
Odor:	No data available
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:	> 201.2 °F
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	negligible
Vapor density:	No data available
Density:	at 77 °F: 1.04 g/mL
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Viscosity, kinematic:	at 104 °F: > 21 mm²/s

## 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:	Reacts with water, forming carbon monoxide, producing bursting hazard in closed containers due to build-up of pressure.
Conditions to avoid:	Protect from heat and direct sunlight. Protect from moisture contamination.
Incompatible materials:	Keep away from water.
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

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): Lack of data.
	Acute toxicity (dermal): Lack of data.
	Acute toxicity (inhalative): Acute Toxicity - inhalative - Category 3 = Toxic if inhaled.
	ATEmix (calculated): 2.25 mg/L/4h (vapor)
	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: Based on available data, the classification criteria are not met.
	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) - Category 3 = May cause respiratory irritation.
	Specific target organ toxicity (repeated exposure): Lack of data.
	Aspiration hazard: Lack of data.

### Symptoms

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

## 12. Ecological information

### Ecotoxicity

Further details:	No data available
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### 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.

### Package

Recommendation: Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself.

## 14. Transport information

### UN number

ADR/RID, IMDG, IATA-DGR:  
UN 2206

### UN proper shipping name

ADR/RID, IMDG, IATA-DGR:  
UN 2206, ISOCYANATES, TOXIC, N.O.S. (Dicyclohexylmethan-4,4' diisocyanate)

### Transport hazard class(es)

ADR/RID: Class 6.1, Code: T1  
IMDG: Class 6.1, Subrisk -  
IATA-DGR: Class 6.1



### Packing group

ADR/RID, IMDG, IATA-DGR:  
III

### Environmental hazards

Marine pollutant: no

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

No data available

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according to 29 CFR 1910.1200 and ANSI standard Z400.1-2010

Revision date: 3/11/2024  
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### USA: Department of Transportation (DOT)

Identification number: UN2206  
Proper shipping name: UN 2206, ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTIONS, TOXIC, N.O.S. (Dicyclohexylmethan-4,4' diisocyanate)  
Hazard class or Division: 6.1  
Packing Group: III  
Labels: 6.1  
Symbols: G  
Special Provisions: IB3, T7, TP1, TP13, TP28  
Packaging – Exceptions: 153  
Packaging – Non-bulk: 203  
Packaging – Bulk: 241  
Quantity limitations – Passenger aircraft / rail: 60 L  
Quantity limitations – Cargo only: 220 L  
Vessel stowage – Location: E  
Vessel stowage – Other: 25, 40



### Sea transport (IMDG)

UN number: UN 2206  
Proper shipping name: UN 2206, ISOCYANATES, TOXIC, N.O.S. (Dicyclohexylmethan-4,4' diisocyanate)  
Class or division, Subsidiary risk: Class 6.1, Subrisk -  
Packing Group: III  
EmS: F-A, S-A  
Special Provisions: 223 274  
Limited quantities: 5 L  
Excepted quantities: E1  
Package - Instructions: P001, LP01  
Package - Provisions: -  
IBC - Instructions: IBC03  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T7  
Tank instructions - Provisions: TP1, TP13, TP28  
Stowage and handling: Category E. SW1 SW2  
Properties and observations: Liquids with a pungent odour. Immiscible with water but reacts with it to form carbon dioxide. Toxic if swallowed, by skin contact or by inhalation. If under deck, with mechanical ventilation, six air charges per hour, except when carried in closed containers, when two air changes per hour are required. Irritating to skin, eyes and mucous membranes.  
Marine pollutant: no  
Segregation group: none



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### Air transport (IATA)

UN/ID number: UN 2206  
Proper shipping name:: UN 2206, ISOCYANATES, TOXIC, N.O.S.  
(Dicyclohexylmethan-4,4' diisocyanate)  
Class or division, Subsidiary risk: Class 6.1  
Packing Group: III  
Hazard label: Toxic  
Excepted Quantity Code: E1  
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y642 - Max. Net Qty/Pkg. 2 L  
Passenger and Cargo Aircraft: Pack.Instr. 655 - Max. Net Qty/Pkg. 60 L  
Cargo Aircraft only: Pack.Instr. 663 - Max. Net Qty/Pkg. 220 L  
Special Provisions: A3  
Emergency Response Guide-Code (ERG): 6L

## 15. Regulatory information

### National regulations - U.S. Federal Regulations

Product: TSCA: This product is manufactured in compliance with all provisions of the Toxic Substances Control Act. 15 U.S.C. All ingredients are listed or exempt from listing.

Dicyclohexylmethan-4,4' diisocyanate: NIOSH Recommendations:  
Occupational Health Guideline: 0412

### National regulations - U.S. State Regulations

No data available

## 16. Other information

Text for labeling: Contains 22 - 23 % Dicyclohexylmethan-4,4' diisocyanate.  
As from 24 August 2023 adequate training is required before industrial or professional use.

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 1 (Slight)

Reactivity: 1 (Slight)

HMIS Version III Rating:

Health: 3 (Serious)

Flammability: 1 (Slight)

Physical Hazard: 1 (Slight)

Personal Protection: X = Consult your supervisor

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1
	X



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according to 29 CFR 1910.1200 and ANSI standard Z400.1-2010

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### 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  
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  
EmS: Emergency Response Procedures for Ships Carrying Dangerous Goods  
EN: European Standard  
EQ: Excepted quantities  
Eye Irritation: Eye irritation  
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  
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships  
MFSU: Manufacture, formulation, supply and use  
OEL: Occupational Exposure Limit Value  
OSHA: Occupational Safety and Health Administration  
PBT: Persistent, bioaccumulative and toxic  
PNEC: Predicted no-effect concentration  
Respiratory Sensitizer: Sensitisation to the respiratory tract  
RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail  
Sensitization - skin: Skin sensitisation  
Skin Irritation: Skin irritation  
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

Reason of change: Changes in section 14: transport information  
Changes in section 2: Labeling

Date of first version: 1/15/2015

### 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.