

# SAFETY DATA SHEET

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Date: 14/11/2016

Hazardous according to criteria of worksafe Australia  
**MAXBOND SLS**

**Revision: 0**

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## 1. Substance/preparation and company identification

### 1.1 Product Identifier

Max Bond SLS

### 1.2 Product use and description

One-component polyurethane adhesive for general purpose bonding

### 1.3 Details of the supplier of the safety data sheet

Nexus Adhesives Pty Ltd  
42 Healey Road, Dandenong South.  
Victoria 3175 Australia  
Telephone: +61 3 9706 4022  
Telefax number: +61 3 9706 4122

### 1.4 Emergency telephone number

0417 489 877 [within Australia]

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## 2. Hazard identification

### 2.1 GHS Hazard Classification:

Hazardous according to criteria of Safe Work Australia classification and labelling for workplace hazardous chemicals

### 2.2 Hazard Statements

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer

### 2.3 Hazard Pictogram



**Exclamation  
Mark**

**Health Hazard**

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Cat 2. Skin Corrosion/Irritation  
Cat 2A Eye Irritation  
Cat 1 Respiratory Sensitizer  
Cat 3 Specific Target Organ Toxicity  
Cat 1 Skin Sensitizer  
Cat 2 Carcinogenicity  
Cat 2 Specific Target Organ Toxicity – repeated exposure

## 2.3 Signal Word

**Danger**

## 2.4 Precautionary Statements - Prevention

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P260	Do not breathe dust/fumes/gas/mist/vapours/spray.
P284	[In case of inadequate ventilation] wear respiratory protection.

## 2.5 Precautionary Statements – Response

P362	Take off contaminated clothing.
P363	Wash contaminated clothing before reuse.
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+313	IF exposed: Call a POISON CENTER or doctor/physician.
P342+311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor

## 2.6 Precautionary Statements – Storage

P403+233	Store in a well ventilated place. Keep container tightly closed.
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## 2.7 Other hazards

P501	Dispose of contents/container in accordance with local regulations.
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## 3. Composition/information on ingredients

### Chemical nature

Liquid

Chemical Name	CAS No.	Conc (%w/w)	Classification
4,4'-diphenylmethane diisocyanate (MDI)	101-68-8	6 - 7	H351 Suspected of causing cancer H332 Harmful if inhaled

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			<p>H373 May cause damage to organs through prolonged or repeated exposure</p> <p>H319 Causes serious eye irritation</p> <p>H315 Causes skin irritation</p> <p>H335 May cause respiratory irritation</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled</p> <p>H317 May cause an allergic skin reaction</p>
2,4'-Methylenebis(phenyl isocyanate)	5873-54-1	5 - 6	<p>H351 Suspected of causing cancer</p> <p>H332 Harmful if inhaled</p> <p>H373 May cause damage to organs through prolonged or repeated exposure</p> <p>H319 Causes serious eye irritation</p> <p>H315 Causes skin irritation</p> <p>H335 May cause respiratory irritation</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled</p> <p>H317 May cause an allergic skin reaction</p>
2,2 – Dimorpholinodiethylether	6425-39-4	2 - 2.5	<p>H319 Causes serious eye irritation</p>
Diphenylmethane diisocyanate	9016-87-9	1.5 - 2	<p>H351 Suspected of causing cancer</p> <p>H332 Harmful if inhaled</p> <p>H373 May cause damage to organs through prolonged or repeated exposure</p> <p>H319 Causes serious eye irritation</p> <p>H315 Causes skin irritation</p> <p>H335 May cause respiratory irritation</p> <p>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled</p> <p>H317 May cause an allergic skin reaction</p>
1,6-hexanediylbis-, bis2-2-(1-ethylpentyl)-3-oxazolidinylethyl ester	140921-24-0	0.89 - 1	<p>H317 May cause an allergic skin reaction</p>
Phosphoric acid	7664-38-2	0 – 0.05	<p>H314: Causes severe skin burns and eye damage</p>

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Non-hazardous ingredients	-	To 100	
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## 4. First-aid measures

### 4.1 Description of first aid measures:

#### General advice:

Remove contaminated clothing.

#### If inhaled:

Keep patient calm, remove to fresh air and seek medical attention if breathing becomes difficult. Apply artificial respiration if not breathing, perform CPR if necessary.

#### On skin contact:

Immediately remove contaminated clothing, Wash thoroughly with soap and water. Seek medical attention in event of irritation.

#### On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist without delay.

Removal of contact lenses after an eye injury should be undertaken by skilled personnel.

#### On ingestion:

Rinse mouth immediately and then drink plenty of water, DO NOT induce vomiting unless directed to do so by a physician. Seek medical attention immediately.

#### Advice to doctor:

Treat symptomatically

### 4.2 Most important symptoms and effects, both acute and delayed:

#### If inhaled:

May cause nausea and vomiting

#### On skin contact:

Cause burns. May cause sensitisation by skin contact.

#### On contact with eyes:

Cause burns. Cause severe inflammation and may damage the cornea.

#### On ingestion:

May cause nausea and vomiting.

### 4.3 Indication of any immediate medical attention and special treatment needed

Seek medical attention

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## 5. Fire-fighting measures

### 5.1 Suitable extinguishing media:

Water fog, dry extinguishing media, foam, carbon dioxide.

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## **5.2 Special hazards arising from the substance and mixture**

Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may results.

## **5.3 Advice for fire fighters:**

### **Fire Fighting:**

Alert Fire Brigade and tell them location and nature of hazard.  
Full protective clothing and self-contained breathing apparatus when necessary.  
Prevent, by any means available, spillage from entering drains or water course.  
Use water delivered as a fine spray to control fire and cool adjacent area.  
Avoid spraying water onto liquid pools.

### **Fire/Explosion Hazard:**

Combustible.  
Moderate fire hazard when exposed to heat or flame.  
When heated to high temperatures decomposes rapidly generating vapour which pressures and may then rupture containers with release of flammable and highly toxic isocyanate vapour.  
Burns with acrid black smoke and poisonous fumes.  
Combustion yields traces of highly toxic hydrogen cyanide HCN, plus toxic nitrogen oxides NOx and carbon monoxide.

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## **6. Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid accidents, clean up immediately. Slippery when spilt. Personnel involved in the cleanup should wear full protective clothing.

Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area.

### **6.2 Environmental precautions**

Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment.

### **6.3 Methods and materials for containment and cleaning up**

Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labeled container and dispose of promptly. Recycle if possible.

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## **7. Handling and storage**

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## 7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Avoid all personal contact, including inhalation.

Wear protective clothing when risk of exposure occurs.

Use in well-ventilated area.

DO NOT enter confined spaces until atmosphere has been checked.

DO NOT allow clothing wet with material to stay in contact with skin.

### For commercial quantities of isocyanates:

Isocyanates should be stored in adequately bunded areas. Nothing else should be kept within the same bunding. Pre-polymers need not be segregated.

Drums of isocyanates should be stored under cover, out of direct sunlight, protected from rain, protected from physical damage and well away from moisture, acids and alkalis.

Where isocyanates are stored at elevated temperatures to prevent solidifying, adequate controls should be installed to prevent the high temperatures and precautions against fire should be taken.

Store in original containers.

Keep containers securely sealed.

No smoking, naked lights or ignition sources.

Store away from incompatible materials and foodstuff containers.

## 7.2 Conditions for safe storage, including any incompatibilities

### Suitable container:

Metal can or drum

Packaging as recommended by manufacturer.

Check all containers are clearly labelled and free from leaks.

### Storage Incompatibility:

Avoid reaction with water, alcohols and detergent solutions.

Isocyanates and thiocyanates are incompatible with many classes of compounds, reacting exothermally to release toxic gasses.

A range of exothermic decomposition energies for isocyanates is given as 20-30 kJ/mol.

## 7.3 Specific end use

See section 1.2 for further information

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## 8. Exposure controls and personal protection

### 8.1 Control parameters

#### Australian Exposure Standards:

Chemical Name	CAS No.	TWA	STEL
Phosphoric acid	7664-38-2	1 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>
Isocyanates, all (as-NCO)	various	0.02 mg/m <sup>3</sup>	0.07 mg/m <sup>3</sup>

### 8.2 Exposure controls

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## **Appropriate engineering controls**

Ensure adequate ventilation of the working area.

## **Hand protection:**

Suitable chemical resistant safety gloves (PVC)

## **Eye protection:**

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

## **Respiration apparatus:**

Self-contained breathing apparatus. Suitable half mask respirator with filter P2 (e.g. EN 143)

## **Environmental exposure control:**

See section 6 for further information.

## **General safety and hygiene measures:**

Hands and/or face should be washed before breaks and at the end of the shift. Avoid contact with skin and eyes.

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## **9. Physical and chemical properties**

<b>Appearance:</b>	Paste
<b>Colour:</b>	Beige
<b>Odour:</b>	No data available
<b>Odour threshold:</b>	No data available
<b>pH value:</b>	No data available
<b>Melting/freezing point:</b>	No data available
<b>Initial boiling point:</b>	No data available
<b>Flash point:</b>	Not Applicable
<b>Evaporation rate:</b>	No data available
<b>Flammability:</b>	Not Applicable
<b>Vapour pressure:</b>	No data available
<b>Vapour density:</b>	No data available
<b>Relative density:</b>	Approx. 1.45 kg/L
<b>Solubility:</b>	Reacts in water
<b>Partition coefficient:</b>	No data available
<b>Auto ignition temperature:</b>	Not applicable
<b>Viscosity:</b>	40000 – 70000 cps
<b>Specific heat value:</b>	No data available
<b>VOC content:</b>	29 g/L
<b>% volatile:</b>	No data available
<b>Saturated vapour concentration:</b>	No data available

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## **10. Stability and reactivity**

### **10.1 Reactivity**

No particular risks of reaction with other substances in normal conditions of use.

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Phosphoric acid: decomposes at temperatures over 200 °C

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reaction

See Section 7.

Phosphoric acid: risk of explosion on contact with nitromethane, may react dangerously with alkalis and sodium borohydride.

### 10.4 Conditions to Avoid

None in particular. However, the usual precautions used for chemical products should be respected.

### 10.5 Incompatible materials and possible hazardous reactions

See Section 10.1 and Section 7.

PHOSPHORIC ACID: Metals, strong alkalis, aldehydes, sulphides and peroxides.

### 10.6 Hazardous decomposition products

PHOSPHORIC ACID: phosphorus oxide.

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## 11. Toxicological information

### 11.1 Information on route of exposure and symptoms

#### If inhaled:

May cause nausea and vomiting, can cause respiratory irritation in some person. The body's response to such irritation can cause further lung damage.

#### On skin contact:

May cause sensitisation and inflammation by skin contact. The material can accentuate any pre-existing dermatitis condition. Open cuts, abraded or irritated skin should not be exposed to this material.

Entry into blood-stream through cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

#### On contact with eyes:

May cause severe inflammation and may damage the cornea.

#### On ingestion:

May cause nausea and vomiting.

### 11.2 Numerical measure of toxicity

#### 1,6-HEXANEDIYL-BIS-(2-(2-(1-ETHYLPENTYL)-3-OXAZOLIDINYL)ETHYL)CARBAMATE

LD50 (Oral): > 2000 mg/kg (rat)

LD50 (Dermal): > 2000 mg/kg (rat)



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### **2,2 - DIMORPHOLINODIETHYL ETHER**

LD50 (Oral): 2025 mg/kg (rat)

LD50 (Dermal): 3038 mg/kg (rabbit)

### **DIPHENYLMETHANE DIISOCYANATE, ISOMERS AND HOMOLOGUES.**

LD50 (Oral): > 10000 mg/kg (rabbit)

LD50 (Dermal): > 9400 mg/kg (rabbit)

LC50 (Inhalation): 0,31 mg/l/4h (rat)

### **DIPHENYLMETHANE-2,4'-DIISOCYANATE**

LD50 (Oral): > 2000 mg/kg (rat)

LD50 (Dermal): > 9400 mg/kg (rabbit)

LC50 (Inhalation): 1.5 mg/l (rat)

### **DIPHENYLMETHANE-4,4'-DIISOCYANATE**

LD50 (Oral): > 2000 mg/kg (rat)

LD50 (Dermal): > 9400 mg/kg (rabbit)

LC50 (Inhalation): 2.24 mg/l (rat)

### **PHOSPHORIC ACID**

LD50 (Oral): 1530 mg/kg (rat)

LD50 (Dermal): 2740 mg/kg (rabbit)

LC50 (Inhalation): > 0,85 mg/l/1h (rat)

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## **12. Ecological information**

### **12.1 Ecotoxicity**

#### **1,6-HEXANEDIYL-BIS-(2-(2-(1-ETHYLPENTYL)-3-OXAZOLIDINYL)ETHYL)CARBAMATE**

LC50 - for Fish. 316 mg/l/96h Danio rerio

EC50 - for Crustacea. 193 mg/l/48h Daphnia magna

#### **2,2 - DIMORPHOLINODIETHYL ETHER**

LC50 - for Fish. > 2150 mg/l/96h

EC50 - for Crustacea. > 100 mg/l/48h Daphnia sp.

EC50 - for Algae / Aquatic Plants. > 100 mg/l/72h

Chronic NOEC for Algae / Aquatic Plants. 100 mg/l

#### **DIPHENYLMETHANE DIISOCYANATE, ISOMERS AND HOMOLOGUES.**

LC50 - for Fish. > 1000 mg/l/96h Danio rerio

EC50 - for Algae / Aquatic Plants. > 1640 mg/l/72h Scenedesmus subspicatus

Chronic NOEC for Crustacea. > 10 mg/l Daphnia magna

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### **DIPHENYLMETHANE-2,4'-DIISOCYANATE**

LC50 - for Fish. > 1000 mg/l/96h Danio rerio

EC50 - for Algae / Aquatic Plants. > 1640 mg/l/72h Scenedesmus subspicatus

Chronic NOEC for Crustacea. > 10 mg/l Daphnia magna

### **DIPHENYLMETHANE-4,4'-DIISOCYANATE**

LC50 - for Fish. > 1000 mg/l/96h Danio rerio

Chronic NOEC for Algae / Aquatic Plants. 1640 mg/l Desmodesmus subspicatus

#### **Sources:**

Europe ECHA Registered Substances – Ecotoxicological Information – Aquatic Toxicity  
NITI (Japan) – Bioconcentration Data.

#### **12.2 Persistence and degradability**

##### **1,6-HEXANEDIYL-BIS-(2-(2-(1-ETHYLPENTYL)-3-OXAZOLIDINYL)ETHYL)CARBAMATE**

NOT rapidly biodegradable.

##### **2,2 - DIMORPHOLINODIETHYL ETHER**

NOT rapidly biodegradable.

##### **DIPHENYLMETHANE DIISOCYANATE, ISOMERS AND HOMOLOGUES.**

NOT rapidly biodegradable.

#### **PHOSPHORIC ACID**

Solubility in water. > 850000 mg/l

#### **12.3 Bioaccumulative potential**

##### **DIPHENYLMETHANE-4,4'-DIISOCYANATE**

LOW (BCF = 15)

##### **DIPHENYLMETHANE-2,4'-DIISOCYANATE**

BCF = 200

#### **12.4 Mobility in soil**

##### **DIPHENYLMETHANE-4,4'-DIISOCYANATE**

LOW (KOC = 376200)

#### **12.5 Other adverse effects**

No data available.

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### **13. Disposal considerations**

#### **13.1 Safe handling and disposal methods**

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Dispose of this material and its container, sending them to local company authorised for collection of hazardous waste.

## **13.2 Disposal of any contaminated packaging**

Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

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## **14. Transport information**

### **14.1 UN Number**

Not available

### **14.2 UN proper shipping name**

Not applicable

### **14.3 Transport hazard class(es)**

Not applicable

### **14.4 Packaging group**

Not applicable

### **14.5 Environmental hazards**

Environmental hazards            No

Marine pollutant                    No

### **14.6 Special precautions for users**

Transport in secure and safe packaging. Keep all containers upright. Transporter should be aware of emergency procedures in place in case of any accident or leakage. See Section 4-8 for further information.

### **14.7 Hazchem Code**

Not Applicable

### **14.8 Other codes**

#### **ARD/RID**

Not Regulated

#### **IMDG**

Not Regulated

#### **IATA**

Not regulated

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## **15. Regulatory information**

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## **15.1 Safety, health and environmental regulations specific for the product ISOCYANATES, ALL (AS –NCO)**

Found on the following regulatory lists:

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System – Consolidated Lists

International Agency for Research on Cancer (IARC) – Agents Classified by the IARC Monographs

## **15.2 Poisons schedule number**

S6

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## **16. Other information**

Any other intended applications should be discussed with the manufacturer.

<b>Revisions:</b>	<b>Date</b>	<b>Sections Reviewed</b>
0	14/11/2016	-

### **Contact**

**Technical**  
0417489877

**Sales**  
0448395091

Asterisk \* in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agree property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.