



Safety Data Sheet

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LOCTITE HB S029 known as PURBOND HB S029

MSDS-No. : 350790

V001.2

Date of issue: 16.04.2015

Section 1. Identification of the substance/preparation and of the company/undertaking

Product name: LOCTITE HB S029 known as PURBOND HB S029

Intended use: Polyurethane adhesive

Supplier:

Henkel Australia Pty Ltd
135-141 Canterbury Road
Kilsyth, Victoria, 3137
Australia

Phone: +61 (3) 9724 6444

Emergency information: 24 HOUR EMERGENCY CONTACT NUMBER 03 9724 6556

Section 2. Hazards identification

Classification of the substance or mixture

Hazardous according to the criteria of Safe Work Australia.

GHS Classification:

<u>Hazard Class</u>	<u>Hazard Category</u>	<u>Route of Exposure</u>	<u>Target organ</u>
Acute toxicity	Category 4	Inhalation	
Skin irritation	Category 2		
Serious eye irritation	Category 2A		
Respiratory sensitizer	Category 1		
Skin sensitizer	Category 1		
Carcinogenicity	Category 2		
Target Organ Systemic Toxicant - Single exposure	Category 3		respiratory tract irritation
Target Organ Systemic Toxicant - Repeated exposure	Category 2		

Hazard pictogram:



Signal word:

Danger

Hazard statement(s):	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
Precautionary Statement(s):	
Prevention:	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, clothing, eye and face protection. P285 In case of inadequate ventilation wear respiratory protection.
Response:	P302+P352 IF ON SKIN: Wash with plenty of soap and water. P304+P340+P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. P308+P313 IF exposed or concerned: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P362 Take off contaminated clothing.
Storage:	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
Disposal:	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Classification of material Xn - Harmful Xi - Irritant

Risk phrases:

R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R42/43 May cause sensitization by inhalation and skin contact.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases:

S23 Do not breathe vapour.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water and soap.
S37/39 Wear suitable gloves and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Dangerous Goods information:

Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

Signal word:

HAZARDOUS

Section 3. Composition / information on ingredients

General chemical description: Mixture

Identity of ingredients:

Chemical ingredients	CAS-No.	Proportion
Isocyanic acid, polymethylenepolyphenylene ester, polymer with 1,3-diisocyanatomethylbenzene, hydrazine and methyloxirane polymer wi	915152-15-7	60- <= 100 %
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	10- < 30 %
o-(p-Isocyanatobenzyl)phenyl isocyanate	5873-54-1	< 10 %
4,4'- methylenediphenyl diisocyanate	101-68-8	< 10 %
Hexane, 1,6-diisocyanato-, homopolymer	28182-81-2	< 5 %
non hazardous ingredients~		< 10 %

Section 4. First aid measures

Ingestion:	Rinse mouth, do not induce vomiting, consult a doctor.
Skin:	Immediately remove soiled or soaked clothing. Immediately wash skin thoroughly with soap and water. Seek medical advice.
Eyes:	Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.
Inhalation:	Move to fresh air. Seek medical advice.
First Aid facilities:	Eye wash and safety shower
Medical attention and special treatment:	Treat symptomatically. Exposed persons should be kept under medical observation for at least 48 hours because delayed effects may occur.

Section 5. Fire fighting measures

Suitable extinguishing media:	Foam, dry chemical or carbon dioxide.
Improper extinguishing media:	High pressure waterjet
Decomposition products in case of fire::	In case of fire toxic gases can be released. Isocyanates. Oxides of nitrogen. carbon monoxide Carbon dioxide
Special protective equipment for fire-fighters:	Wear self-contained breathing apparatus. Wear protective equipment.

Section 6. Accidental release measures

Personal precautions:	Use personal protective equipment as described in Section 8. Avoid contact with skin and eyes.
Environmental precautions:	Do not empty into drains / surface water / ground water.
Clean-up methods:	Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of contaminated material as waste according to Section 13.

Section 7. Handling and storage

Precautions for safe handling:	Do not inhale vapors and fumes. Avoid skin and eye contact. Use only in well-ventilated areas. Wear suitable protective clothing, safety glasses and gloves. See advice in section 8
Conditions for safe storage:	Ensure good ventilation/extraction. Store in a cool, dry place. Store at room temperature. Keep away from heat and direct sunlight. Keep container tightly sealed.

Section 8. Exposure controls / personal protection

National exposure standards:

Ingredient [Regulated substance]	form of exposure	TWA (ppm)	TWA (mg/m3)	Peak Limit. (ppm)	Peak Limit. (mg/m3)	STEL (ppm)	STEL (mg/m3)
ISOCYANATES, ALL (AS NCO) 9016-87-9			0.02	-	-	-	-
ISOCYANATES, ALL (AS NCO) 9016-87-9		-	-	-	-	-	0.07
METHYLENE BISPHENYL ISOCYANATE (MDI) 9016-87-9			0.02	-	-	-	-
METHYLENE BISPHENYL ISOCYANATE (MDI) 9016-87-9		-	-	-	-	-	0.07
ISOCYANATES, ALL (AS NCO) 5873-54-1			0.02	-	-	-	-
ISOCYANATES, ALL (AS NCO) 5873-54-1		-	-	-	-	-	0.07
METHYLENE BISPHENYL ISOCYANATE (MDI) 101-68-8			0.02	-	-	-	-
METHYLENE BISPHENYL ISOCYANATE (MDI) 101-68-8		-	-	-	-	-	0.07

Engineering controls:	Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/dust generated from the handling of this product.
Eye protection:	Wear chemical goggles.
Skin protection:	Use of protective coveralls and long sleeves is recommended. Use impervious gloves. Nitrile rubber gloves should be worn.
Respiratory protection:	If inhalation risk exists, wear a respirator or air supplied mask complying with the requirements of AS/NZS 1715 and AS/NZS 1716.

Section 9. Physical and chemical properties

Appearance:	beige liquid
Odor:	characteristic
Specific gravity:	1.1
Boiling point:	> 300 °C (> 572 °F)
Flash point:	No flash point up to 200 °C
Vapor pressure:	20 hPa (; 55 °C (131 °F))
Density:	1.1 g/cm3
Auto ignition:	480 °C
Decomposition temperature:	
VOC content:	< 1 g/l

Section 10. Stability and reactivity

Stability:	Stable under normal conditions of temperature and pressure.
Conditions to avoid:	Avoid moisture. Container can be pressurised by carbon dioxide due to reaction with humid air and/or water. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible materials:	Reaction with water, formation of CO ₂ Alcohols. Alkalis. Amines. Oxidizing agents.
Hazardous decomposition products:	In case of fire toxic gases can be released. Isocyanates. Oxides of nitrogen. carbon monoxide carbon dioxide

Section 11. Toxicological information

Health Effects:	
Ingestion:	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Skin:	Irritating to skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause skin sensitization.
Eyes:	Causes eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Inhalation:	Harmful if inhaled; may cause delayed lung damage. This product is irritating to the respiratory system. May cause sensitization by inhalation and skin contact.
Aggravated med. condition:	Pre-existing skin or lung allergies may increase the chance of developing exaggerated allergic symptoms from exposure to this product.
Carcinogenicity:	Suspected of causing cancer.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Isocyanic acid, polymethylenepolyphenyl ene ester 9016-87-9	LD50	> 10,000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
	LD50	> 9,400 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
o-(p- Isocyanatobenzyl)phenyl isocyanate 5873-54-1	LD50	> 2,000 mg/kg	oral		rat	EU Method B.1 (Acute Toxicity (Oral))
	LD50	> 9,400 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
4,4'-methylenediphenyl diisocyanate 101-68-8	LD50	> 2,000 mg/kg	oral		rat	OECD Guideline 403 (Acute Inhalation Toxicity)
	LC50	> 2.24 mg/l	inhalation		rat	
	LD50	> 9,400 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	LD50	> 5,000 mg/kg	oral		rat	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
4,4'-methylenediphenyl diisocyanate 101-68-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
4,4'-methylenediphenyl diisocyanate 101-68-8	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
4,4'-methylenediphenyl diisocyanate 101-68-8	sensitising	in vivo	guinea pig	

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
4,4'-methylenediphenyl diisocyanate 101-68-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)

Repeated dose toxicity:

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Isocyanic acid, polymethylenepolyphenyl ene ester 9016-87-9	NOAEL=0,2 mg/m ³	inhalation: aerosol	2 y 6 h per d, 5 d per week	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
o-(p- Isocyanatobenzyl)phenyl isocyanate 5873-54-1		inhalation: aerosol	main: 2 y; satellite: 1 y 6 h/d; 5 d/w	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
4,4'-methylenediphenyl diisocyanate 101-68-8		inhalation: aerosol	main: 2 y; satellite: 1 y 6 h/d; 5 d/w	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Section 12. Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Isocyanic acid, polymethylenepolyphenylene ester 9016-87-9	LC50	> 1,000 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	LC50	> 1,000 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'-methylenediphenyl diisocyanate 101-68-8	LC0	> 3,000 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'-methylenediphenyl diisocyanate 101-68-8	EC50	129.7 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'-methylenediphenyl diisocyanate 101-68-8	EC50	> 1,640 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	LC50	> 100 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	EC50	> 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2	EC50	> 1,000 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
4,4'-methylenediphenyl diisocyanate 101-68-8		aerobic	0 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2		aerobic	0 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	5.22					
4,4'-methylenediphenyl diisocyanate 101-68-8		92 - 200	28 d	Cyprinus carpio		OECD Guideline 305 E (Bioaccumulation: Flow- through Fish Test)
4,4'-methylenediphenyl diisocyanate 101-68-8	5.22					
Hexane, 1,6-diisocyanato-, homopolymer 28182-81-2		3.2		calculation		OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)

Section 13. Disposal considerations

- Waste disposal of product:** Collection and delivery to recycling enterprise or other registered elimination institution.
- Recommended cleanser:** Suitable organic solvents
- Disposal for uncleaned package:** Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Section 14. Transport information

Road and Rail Transport:

Dangerous Goods information: Not classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

General information:

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

Section 15. Regulatory information

SUSMP Poisons Schedule None

Section 16. Other information

Abbreviations/acronyms: ADGC - Australian Dangerous Goods Code
IMDG: International Maritime Dangerous Goods code
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
STEL - Short term exposure limit
TWA - Time weighted average

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Disclaimer:

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