

# Safety Data Sheet

according to WHS Regulations

Printing date 11.10.2018

Revision: 11.10.2018

## 1 Identification

**Product Name: TITEBOND POLYURETHANE GLUE****Other Means of Identification:** Mixture**Recommended Use of the Chemical and Restriction on Use:** Adhesive**Details of Manufacturer or Importer:**Woodbond Adhesives  
6-8 Mt Barker Rd,  
Totness SA 5250**Phone Number:** 1300 133 439**Emergency telephone number:** 1300 133 439

## 2 Hazard(s) Identification

**Hazardous Nature:**

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



skull and crossbones

Acute Toxicity (Inhalation) 2      H330 Fatal if inhaled.



health hazard

Respiratory Sensitisation 1      H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carcinogenicity 2      H351 Suspected of causing cancer.

STOT RE 1      H372 Causes damage to organs through prolonged or repeated exposure.



Skin Corrosion/Irritation 2      H315 Causes skin irritation.

Serious Eye Damage/Irritation 2A      H319 Causes serious eye irritation.

Skin Sensitisation 1      H317 May cause an allergic skin reaction.

STOT SE 3      H335 May cause respiratory irritation.

**Signal Word** Danger**Hazard Statements**

H330 Fatal if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

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**Precautionary Statements**

- 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.
- P270 Do not eat, drink or smoke when using this product.
- 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/protective clothing/eye protection/face protection.
- P284 [In case of inadequate ventilation] wear respiratory protection.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P320 Specific treatment is urgent (see on this label).
- P314 Get medical advice/attention if you feel unwell. P362+P364 Take off contaminated clothing and wash it before reuse.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national regulations.

**3 Composition and Information on Ingredients**

**Chemical Characterization: Mixtures**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Hazardous Components:**

CAS: 101-68-8	4,4'-methylenediphenyl diisocyanate ⚠ Acute Toxicity (Inhalation) 2, H330; ⚠ Respiratory Sensitisation 1, H334; Carcinogenicity 2, H351; STOT RE 1, H372; ⚠ Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2A, H319; Skin Sensitisation 1, H317; STOT SE 3, H335	5 - 10%
CAS: 9016-87-9	Isocyanic acid, polymethylenepolyphenylene ester ⚠ Acute Toxicity (Inhalation) 2, H330; ⚠ Respiratory Sensitisation 1, H334; Carcinogenicity 2, H351; STOT RE 1, H372; ⚠ Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2A, H319; Skin Sensitisation 1, H317; STOT SE 3, H335	5 - 10%
CAS: 26447-40-5	Methylenediphenyl diisocyanate ⚠ Acute Toxicity (Inhalation) 2, H330; ⚠ Respiratory Sensitisation 1, H334; Carcinogenicity 2, H351; STOT RE 1, H372; ⚠ Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2A, H319; Skin Sensitisation 1, H317; STOT SE 3, H335	0.5 - 1%

**4 First Aid Measures**

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. It may be dangerous for the person providing aid to give mouth-to-mouth resuscitation. Seek immediate medical attention.

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### **Skin Contact:**

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

### **Eye Contact:**

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention if symptoms occur.

### **Ingestion:**

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Seek immediate medical attention.

### **Symptoms Caused by Exposure:**

Inhalation: Fatal if inhaled. May cause respiratory irritation, coughing, wheezing and breathing difficulties. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin Contact: Causes skin irritation and redness. May cause an allergic skin reaction.

Eye Contact: Causes serious eye irritation, redness and watering.

Ingestion: May cause irritation to the mouth, throat and stomach.

## **5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use fire extinguishing methods suitable to surrounding conditions.

### **Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon and nitrogen.

Combustible liquid.

Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

### **Special Protective Equipment and Precautions for Fire Fighters:**

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

## **6 Accidental Release Measures**

### **Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots.

Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

### **Environmental Precautions:**

In the event of a major spill, prevent spillage from entering drains or water courses.

### **Methods and Materials for Containment and Cleaning Up:**

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material.

Small spills can be diluted with water and mopped up. Collect the spilled material and place into a suitable container for disposal.

## **7 Handling and Storage**

### **Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area. Take precautionary measures against static discharge.

Empty containers may retain product residue. Do not reuse container.

Food, beverages and tobacco products should not be stored or consumed where this material is in use.

Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Contaminated work clothing must not be allowed out of the workplace. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

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### Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep in original container. Opened containers must be carefully resealed and stored upright to prevent leakage. Protect from extreme temperatures and direct sunlight. Store at 23 - 40 °C.

## 8 Exposure Controls and Personal Protection

### Exposure Standards:

#### CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate

WES STEL: 0.07 mg/m<sup>3</sup>  
TWA: 0.02 mg/m<sup>3</sup>  
Sen; as -NCO

#### CAS: 9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester

WES STEL: 0.07 mg/m<sup>3</sup>  
TWA: 0.02 mg/m<sup>3</sup>  
Sen, as -NCO

#### CAS: 26447-40-5 Methylenediphenyl diisocyanate

WES STEL: 0.07 mg/m<sup>3</sup>  
TWA: 0.02 mg/m<sup>3</sup>  
Sen, as -NCO

### Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below occupational exposure standards.

### Respiratory Protection:

Use an approved air-purifying or air-fed respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

### Skin Protection:

Chemical resistant impervious gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered. Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

### Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

## 9 Physical and Chemical Properties

### Appearance:

<b>Form:</b>	Liquid
<b>Colour:</b>	Brown
<b>Odour:</b>	Faint
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	No information available
<b>Melting point/freezing point:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	No information available

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<b>Flash Point:</b>	>93.3 °C (Setaflash)
<b>Flammability:</b>	Combustible
<b>Auto-ignition Temperature:</b>	No information available
<b>Decomposition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Lower:</b>	No information available
<b>Upper:</b>	No information available
<b>Vapour Pressure:</b>	No information available
<b>Relative Density:</b>	1.139
<b>Vapour Density:</b>	No information available
<b>Evaporation Rate:</b>	No information available
<b>Solubility in Water:</b>	Insoluble
<b>Partition Coefficient (n-octanol/water):</b>	No information available
<b>Viscosity:</b>	No information available
<b>VOC:</b>	0 g/L

### 10 Stability and Reactivity

- Possibility of Hazardous Reactions:** Hazardous polymerisation will not occur.
- Chemical Stability:** Stable at ambient temperature and under normal conditions of use.
- Conditions to Avoid:** Extreme temperatures and direct sunlight.
- Incompatible Materials:** No further relevant information available.
- Hazardous Decomposition Products:** Oxides of carbon and nitrogen.

### 11 Toxicological Information

**Toxicity:**

<b>LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:</b>		
<b>CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate</b>		
Oral	LD <sub>50</sub>	2,200 mg/kg (mouse) 9,200 mg/kg (rat)
<b>CAS: 9016-87-9 Isocyanic acid, polymethylenepolyphenylene ester</b>		
Oral	LD <sub>50</sub>	49 mg/kg (rat)
Dermal	LD <sub>50</sub>	>9,400 mg/kg (rabbit)
Inhalation	LC <sub>50</sub> /4 h	490 mg/m <sup>3</sup> (rat)

**Acute Health Effects**

**Inhalation:**

Fatal if inhaled. May cause respiratory irritation, coughing, wheezing and breathing difficulties. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin:** Causes skin irritation and redness. May cause an allergic skin reaction.

**Eye:** Causes serious eye irritation, redness and watering.

**Ingestion:** May cause irritation to the mouth, throat and stomach.

**Skin Corrosion / Irritation:** Causes skin irritation.

**Serious Eye Damage / Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitisation:**

May cause an allergic skin reaction.

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

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**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.

**Carcinogenicity:**

Suspected of causing cancer.

4,4'-Methylenediphenyl diisocyanate and polymethylene polyphenyl isocyanate are classified by IARC as Group 3 - Not classifiable as to its carcinogenicity to humans.

**Reproductive Toxicity:** Based on classification principles, the classification criteria are not met.

**Specific Target Organ Toxicity (STOT) - Single Exposure:** May cause respiratory irritation.

**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

Causes damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:** Based on classification principles, the classification criteria are not met.

**Chronic Health Effects:** No information available

**Existing Conditions Aggravated by Exposure:** No information available

**Additional toxicological information:** No information available

### 12 Ecological Information

**Ecotoxicity:**

**Aquatic toxicity:**

**CAS: 101-68-8 4,4'-methylenediphenyl diisocyanate**

EC<sub>50</sub>/24 h >1,000 mg/l (daphnia)

EC<sub>50</sub>/3 h >100 mg/l (activated sludge inhibition)

LC<sub>50</sub>/96 h >1,000 mg/l (brachydanio rerio)

**Persistence and Degradability:** No further relevant information available.

**Bioaccumulative Potential:** No further relevant information available.

**Mobility in Soil:** No further relevant information available.

**Other adverse effects:** No further relevant information available.

### 13 Disposal Considerations

**Disposal Methods and Containers:** Dispose according to applicable local and state government regulations.

**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

### 14 Transport Information

**UN Number**

ADG, IMDG, IATA

UN2206

**Proper Shipping Name**

ADG, IMDG, IATA

ISOCYANATE SOLUTION, TOXIC, N.O.S. (4,4'-methylenediphenyl diisocyanate, Isocyanic acid, polymethylenepolyphenylene ester)

**Dangerous Goods Class**

ADG Class:

6.1 Toxic substances.

**Packing Group:**

ADG, IMDG, IATA

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<b>EMS Number:</b>	F-A,S-A
<b>Hazchem Code:</b>	2X
<b>Special Provisions:</b>	274
<b>Limited Quantities:</b>	100 ml
<b>Packagings &amp; IBCs - Packing Instruction:</b>	P001, IBC02
<b>Portable Tanks &amp; Bulk Containers - Instructions:</b>	T11
<b>Portable Tanks &amp; Bulk Containers - Special Provisions:</b>	TP2, TP13, TP27

### 15 Regulatory Information

#### Australian Inventory of Chemical Substances:

CAS: 101-68-8	4,4'-methylenediphenyl diisocyanate
CAS: 9016-87-9	Isocyanic acid, polymethylenepolyphenylene ester
CAS: 26447-40-5	Methylenediphenyl diisocyanate

**Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:**  
Poisons Schedule: 6

### 16 Other Information

**Date of Preparation or Last Revision:** 11.10.2018

**Prepared by:**

#### Abbreviations and acronyms:

ADG: Australian Dangerous Goods  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds  
LC<sub>50</sub>: Lethal concentration, 50 percent  
LD<sub>50</sub>: Lethal dose, 50 percent  
IARC: International Agency for Research on Cancer  
STEL: Short Term Exposure Limit  
TWA: Time Weighted Average  
NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)  
Acute Toxicity (Inhalation) 2: Acute toxicity – Category 2  
Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2  
Serious Eye Damage/Irritation 2A: Serious eye damage/eye irritation – Category 2A  
Respiratory Sensitisation 1: Respiratory sensitisation, Hazard Category 1  
Skin Sensitisation 1: Skin sensitisation, Hazard Category 1  
Carcinogenicity 2: Carcinogenicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

#### Disclaimer

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - February 2016"

The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Woodbond Adhesives makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. Woodbond Adhesives is not in a position to warrant the accuracy of the data herein. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.