

**Safety Data Sheet
according to 1907/2006/EC**

Ref: HSD/P6

Issue No: 3

Date of Issue: 2nd November, 2010

1. Product and Company Identification

Product Name: PU ADHESIVE

Intended Uses: Two component polyurethane adhesive.

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2. Hazard Identification

Possible Hazards:

Base:

Not classified as hazardous.

Hardener:

R40: Limited evidence of a carcinogenic effect.

R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R20: Harmful by inhalation.

R36/37/38: Irritating to eyes, respiratory system and skin.

R42/43: May cause sensitisation by inhalation and skin contact.

3. Composition / Information on Ingredients

Name	CAS No	EINECS	Conc. (w/w)	Classification	R. Phrases
BASE COMPONENT					
Polyol Resin	N/A	N/A	50-60%	None	None
Rubber Crumb	N/A	N/A	40-50%	None	None
HARDENER COMPONENT					
4,4' Diphenylmethane di-isocyanate (mixture)					
	9016-87-9	618-498-9	100%	Xn (Carc. Cat. 3)	40,48/20,20, 36/37/38 42/43

4. First Aid Measures

Inhalation: In case of drowsiness or sickness remove to fresh air, keep patient warm and at rest. If unconscious, turn to the recovery position. Seek medical assistance.

Skin Contact: NOTE: Effects may be delayed. Promptly remove contaminated clothing and wash the affected area with plenty of soap and water to ensure all traces of product are removed, then rinse thoroughly. Any contaminated clothing must be thoroughly cleaned before re-using. Seek medical advice if irritation persists.

Eye Contact: Flush with copious amounts of clean water for at least 15 minutes, with the eye lids held open. Seek medical attention.

Ingestion: Wash out mouth with water. Keep patient at rest and obtain medical attention. DO NOT INDUCE VOMITING.

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5. Fire Fighting Measures

- Suitable Extinguisher Media:** Alcohol-resistant foam, dry powder, carbon dioxide or sand.
- Unsuitable Extinguishing Media:** Water.
- Exposure Hazards:** May give off toxic fumes if heated or involved in a fire, including carbon dioxide, carbon monoxide and hydrogen cyanide.
- Special Protective Equipment:** In the event of fire wear self-contained breathing apparatus.

6. Accidental Release Measures

- Personal Precautions:** Wear protective equipment as specified in Section 8. Do not eat, drink or smoke. Avoid contact with skin and eyes. Eliminate all ignition sources.
- Environmental Precautions:** Keep people and animals away. Prevent entry into drains, sewers and watercourses. If spillage enters drains leading to sewerage works inform the local water company. If spillage enters rivers or watercourses inform the Environment Agency.
- Spillages:** Cordon off area. Absorb/contain spillage using inert absorbent granules, sand or earth. Transfer collected material to heavy-duty plastic/steel drums and keep in a well-ventilated place for subsequent safe disposal. See Section 13.

7. Handling and Storage

- Handling:** No specific precautions required when handling unopened containers; follow any relevant manual handling guidance. Avoid contact with water, alcohols, amines and other materials that may react with isocyanates. Refer to Sections 6 and 8 if exposure to product is possible. Wash thoroughly with soap and water before eating, drinking or smoking, and after work.
- Storage:** Store in original containers in a well-ventilated area away from heat, ignition sources or open flame. Do not store near acids. Isocyanates react with water to liberate carbon dioxide. Any ingress of moisture into an isocyanate container, whether full or empty, can lead to a pressure build-up and subsequent explosion.

8. Exposure Controls / Personal Protection

- Occupational Exposure Standards:** Isocyanates (as -NCO):
8 Hour TWA 0.02mg/m³, 15 min STEL 0.07mg/m³
WEL (Sens).
These exposure limits must not be exceeded at any time during the exposure period.

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General Dusts: 8 Hour TWA 10mg/m³ (total inhalable), 4mg/m³ (respirable) WEL.
While this product contains general dusts, which have Workplace Exposure Limits assigned to them, they are not present in powder form and therefore do not present an inhalation hazard.

- Engineering Control Measures:** Refer to any applicable COSHH assessments. Engineering controls should be used where practicable in preference to personal protection and may include physical containment and good ventilation.
- Respiratory Protection:** If levels of isocyanate exceed the above limits use an approved respirator fitted with an appropriate gas cartridge (organic substance). All items must conform to EN149 and should be suitable for the levels of contamination present in the workplace.
- Hand Protection:** Wear Neoprene or Nitrile gloves or gauntlets. These must be manufactured to EN374. The material breakthrough time should be stated by the glove manufacturer, and must be observed at all times.
- Eye Protection:** If eye contact is likely chemical resistant goggles should be worn.
- Body Protection:** Wear suitable impervious, chemical resistant overalls.
- Foot Protection:** Wear chemical resistant safety footwear.
- Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Appearance: (Base) Coloured paste (Hardener) Brown liquid	Boiling Point:	N/D
Odour: (Base) Mild (Hardener) Musty	Vapour Pressure @ 20°C: (Base) (Hardener) <0.00001mbar	N/D
pH: N/A	Evaporation Rate (Butyl Acetate = 1):	N/A
Flash Point: (Base) >190°C (Hardener) >200°C	Flammable Limits in Air: Upper: Lower:	N/D N/D
Solubility: (Base) Immiscible in water (Hardener) Immiscible in water (reacts)	Auto-ignition Temperature: (Base) (Hardener)	>300°C >400°C
Flammability: Not flammable		
Specific Gravity: 1.13 (Mixed)		

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10. Stability and Reactivity

- Stability:** Stable under normal conditions (see Section 7).
- Materials to Avoid:** Alcohols, glycols, acids (organic and inorganic), oxidising agents, amines, water, steam, inorganic alkalis.
- Hazardous Decomposition Products:** Toxic gases/vapours/fumes of: Carbon dioxide(CO₂). Carbon monoxide (CO). Oxides of: Nitrogen. Hydrogen cyanide (HCN). Nitrous gases (NO_x).

11. Toxicological Information

There is no data available on the product itself.
Contains isocyanates which may cause allergic reaction and irritation of the respiratory system and skin, however the low volatility of the product makes this unlikely during normal conditions of use. Once the base and hardener have been mixed together, the isocyanate in the hardener component will react with the base and be progressively consumed.

The following data refers to the isocyanate in the hardener component.

- Inhalation:** Harmful by inhalation. May cause sensitisation by inhalation.
- Eye Contact:** May cause Irritation.
- Skin Contact:** Irritant for skin and mucous membranes. May cause sensitisation.
- Ingestion:** May result in irritation to the gastro intestinal tract.
- Health Warnings:** Can be hazardous when inhaled and/or following skin contact. May cause allergic reaction and irritation of the respiratory system and skin. Prolonged inhalation of high concentrations may damage the respiratory system. Pulmonary sensitizer and severe pulmonary irritant. Recognised allergen. May also cause sensitisation by skin contact.

12. Ecological Information

There is no data available on the product itself.
Hazardous for water. Do not allow the product to reach ground water, water bodies or sewage systems. Must not reach sewage water or drainage ditch undiluted or un-neutralised. The liquid product may be neutralised with a mixture of ammonia solution (190g/ltr), water and ethanol.

13. Disposal Considerations

Dispose of used containers and un-cured product as hazardous waste, in accordance with all applicable local and national regulations, and in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

14. Transport Information

The Base and Hardener components are not classified as hazardous for transport.

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15. Regulatory Information

EU Classification and Labelling Particulars:

Base:

Designated Name: PU ADHESIVE - BASE

Classification: Not classified as hazardous

Indication(s) of Danger: None

Risk and Safety Phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39: Wear suitable gloves and eye/face protection.

Hardener:

Designated Name: PU ADHESIVE - HARDENER

Classification: Harmful (Carc. Cat. 3) - Contains Isocyanates, see information supplied by the manufacturer.

Indication(s) of Danger: Xn

Risk and Safety Phrases:

R40: Limited evidence of a carcinogenic effect.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R20: Harmful by inhalation.
R36/37/38: Irritating to eyes, respiratory system and skin.
R42/43: May cause sensitisation by inhalation and skin contact.
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 soap and water.
S36/37: Wear suitable protective clothing and gloves.
S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

UK Guidance Publications: EH40; Occupational Exposure Limits, HSE. Revised annually.
EH44; Dust in the Workplace: General Principles of Protection, HSE.
EH26; Occupational Skin Diseases - Health and Safety Precautions, HSE.
COSHH Essentials, HSE

UK Legislation: Health and Safety at Work, etc. Act, 1974, and relevant Statutory Provisions.
Control of Substances Hazardous to Health Regulations, 1999.
The Manual Handling Operations Regulations, 1992.
The Personal Protective Equipment at Work Regulations, 1992.
Chemicals (Hazard Information and Packaging for Supply) Regulations, 2002 - CHIP 3.

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16. Other Information

Full Text of R-Phrases Referred to above:

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

Training Advice: Do not use unless trained to do so. Refer to the Technical Data Sheet for the product.

Recommended Uses: For professional use only. This product is designed for use as an adhesive for bonding cast polyurethane tiles.

Further Information: This Safety Data Sheet was compiled in accordance with EU Directives 67/548/EEC and 1999/45/EC. The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark. ESES (The European Chemical Substances Information System), provided by the European Commission Joint Research Centre in Ispra, Italy. Reference was also made to the above legislation and guidance publications.

MSDS First Issued: 15th November, 2005.

MSDS Revised: 2nd November, 2010.

Changes in this Version: Sections 2,3,15 & 16 revised to reflect REACH regulations and EU Directive 1907/2006/EC.

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Disclaimer: The information in this document is offered for general health and safety guidance only and is not intended to be a definitive source of advice, nor does it constitute a risk assessment, for which the user is responsible. All information provided in this document is believed to be accurate to the best of our knowledge. Users of the products referred to should observe the recommendations, conditions and instructions relating to any relevant product label, usage information, consent or approval in force at the time. Further and more specific information may be obtained from the supplier on request.