



SAFETY DATA SHEET

ResinBound PRO Part B

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	A09578 PART B
Product number	A09578 PART B,FP-001034,FP-001338,FP-001602,FP-001728,FP-001769,FP-001779,FP-002022,FP-002135
Synonyms; trade names	P-MDI,MDI
CAS number	101-68-8
EU index number	615-005-00-9
EC number	202-966-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Adhesive.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier	The Resin Mill St Pegs Mill Thornhills Beck Lane Brighouse West Yorkshire HD6 4AH t: 01484 400 855 e: info@theresinmill.co.uk www.theresinmill.co.uk
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1.4. Emergency telephone number

Emergency telephone	+44 01827 69662 (NOT 24HRS)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) Xn;R20,R48/20. Carc. Cat. 3;R40. R42/43. Xi;R36/37/38.

Human health Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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2.2. Label elements

EC number 202-966-0

Pictogram



Signal word Danger

Hazard statements

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 statements

EUH204 Contains isocyanates. May produce an allergic reaction.
 P260 Do not breathe vapour/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P281 Use personal protective equipment as required.
 P284 [In case of inadequate ventilation] wear respiratory protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P313 Get medical advice/attention.
 P501 Dispose of contents/container in accordance with national regulations.
 RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
 RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
 RCH004c This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Contains 4'-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS		60-100%
CAS number: 25686-28-6	REACH registration number: 01-2119457014-47	
Classification	Classification (67/548/EEC or 1999/45/EC)	
Skin Irrit. 2 - H315	Xn;R20,R48/20. Carc. Cat. 3;R40. Xi;R36/37/38. R42/43.	
Eye Irrit. 2 - H319		
Resp. Sens. 1 - H334		
Skin Sens. 1 - H317		
Carc. 2 - H351		
Acute Tox. 4 - H332		
STOT SE 3 - H335		
STOT RE 2 - H373		
STOT SE 3 - H335		
STOT SE 3 - H335		
STOT SE 3 - H335		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	Severe irritation, burning and tearing.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

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5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is non-combustible. Irritating gases or vapours. Not known.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.
Special protective equipment for firefighters	Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Absorb spillage with non-combustible, absorbent material. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses.
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6.4. Reference to other sections

Reference to other sections	Wear protective clothing as described in Section 8 of this safety data sheet.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in closed original container at temperatures between 5°C and 25°C.
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Storage class	Chemical storage.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS

Short-term exposure limit (15-minute): WEL 0.07 mg/m³

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³

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WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS (CAS: 25686-28-6)

DNEL	<p>Workers - Inhalation; Short term systemic effects: 0.1 mg/m³</p> <p>Workers - Dermal; Short term local effects: 28.7 mg/cm²</p> <p>Workers - Inhalation; Short term local effects: 0.1 mg/m³</p> <p>Workers - Inhalation; Long term systemic effects: 0.05 mg/m³</p> <p>Workers - Inhalation; Long term local effects: 0.05 mg/m³</p> <p>Consumer - Dermal; Short term systemic effects: 25 mg/kg bw/day</p> <p>Workers - Dermal; Short term systemic effects: 50 mg/kg bw/day</p> <p>Consumer - Oral; Short term systemic effects: 20 mg/kg bw/day</p> <p>Consumer - Dermal; Short term local effects: 17.2 mg/cm²</p> <p>Consumer - Inhalation; Short term local effects: 0.05 mg/m³</p> <p>Consumer - Inhalation; Long term systemic effects: 0.025 mg/m³</p> <p>Consumer - Inhalation; Long term local effects: 0.025 mg/m³</p> <p>Consumer - Inhalation; Short term systemic effects: 0.05 mg/m³</p>
PNEC	<p>- Marine water; 0.1 mg/l</p> <p>- STP; 1 mg/l</p> <p>- Fresh water; 1 mg/l</p> <p>- Soil; 1 mg/kg</p>

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear chemical splash goggles.

Hand protection

It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber.

Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P3. Wear a respirator fitted with the following cartridge: Organic vapour filter.

Environmental exposure controls

Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance Coloured liquid.

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Colour	Various colours.
Odour	Musty (mouldy).
Odour threshold	Not available.
pH	Not available.
Melting point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	>200°C CC (Closed cup).
Evaporation rate	slow
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Other flammability	Not available.
Vapour pressure	0.01 Pa @ °C
Vapour density	8.5
Relative density	1.12 @ 20°C
Bulk density	Not relevant.
Solubility(ies)	Insoluble in water. Hardens in contact with water.
Partition coefficient	Not available.
Auto-ignition temperature	>600°C
Decomposition Temperature	Not available.
Viscosity	Kinematic viscosity > 20.5 mm ² /s.
Explosive properties	Not available.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not available.
Comments	Information given is applicable to the product as supplied.

9.2. Other information

Other information	No information required.
Refractive index	Not available.
Particle size	Not available.
Molecular weight	Not available.
Volatility	Not available.
Saturation concentration	Not available.
Critical temperature	Not available.
Volatile organic compound	Not relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity

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Reactivity	The product will harden into a solid mass in contact with water and moisture.
<u>10.2. Chemical stability</u>	
Stability	Stable at normal ambient temperatures and when used as recommended.
<u>10.3. Possibility of hazardous reactions</u>	
Possibility of hazardous reactions	Not applicable. May polymerise.
<u>10.4. Conditions to avoid</u>	
Conditions to avoid	Avoid contact with water.
<u>10.5. Incompatible materials</u>	
Materials to avoid	Strong acids. Strong alkalis.
<u>10.6. Hazardous decomposition products</u>	
Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.
SECTION 11: Toxicological information	
<u>11.1. Information on toxicological effects</u>	
<u>Acute toxicity - inhalation</u>	
ATE inhalation (gases ppm)	4,545.45
ATE inhalation (vapours mg/l)	11.11
ATE inhalation (dusts/mists mg/l)	1.52
<u>Skin corrosion/irritation</u>	
Animal data	Irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Moderately irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Sensitising.
<u>Carcinogenicity</u>	
Carcinogenicity	Suspected carcinogen based on limited evidence.
Target organ for carcinogenicity	No specific target organs known.
<u>Reproductive toxicity</u>	
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.
<u>Aspiration hazard</u>	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.
Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.

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Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
Route of entry	Inhalation Skin and/or eye contact
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.

Toxicological information on ingredients.

4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 9,400.0

Species Rabbit

ATE dermal (mg/kg) 9,400.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 0.49

Species Rat

ATE inhalation (dusts/mists mg/l) 0.49

SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Acute toxicity - fish LC₅₀, 96 hours, 96 hours: > 1000 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >500 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients.

4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS

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Acute toxicity - fish	LC ₅₀ , 96 hours: 1000 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 24 hours: 1000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 1640 mg/l, Algae
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: 100 mg/l, Bacteria
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 10 mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Stability (hydrolysis) Reacts with water.

Biological oxygen demand < 10 g O₂/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not available.

Ecological information on ingredients.

4'4-METHYLENEDIPHENYL DIISOCYANATE, OLIGOMERS

Bioaccumulative potential BCF: 200,

Partition coefficient log Pow: 856

12.4. Mobility in soil

Mobility The product is non-volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class 070208

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

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Not applicable.

UN No. (IMDG)

UN No. (ICAO)

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

ADR/RID class

ADR/RID subsidiary risk

ADR/RID label

IMDG class

IMDG subsidiary risk

ICAO class/division

ICAO subsidiary risk

Transport labels

14.4. Packing group

Not applicable.

ADR/RID packing group

IMDG packing group

ICAO packing group

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

EmS

Emergency Action Code

Hazard Identification Number
(ADR/RID)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
Health and Safety at Work etc. Act 1974 (as amended).
Control of Substances Hazardous to Health Regulations 2002 (as amended).

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EU legislation	Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Guidance	Isocyanates: Health hazards and precautionary measures EH16. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	Only trained personnel should use this material.
Issued by	Compliance
Revision date	01/06/2015
Revision	20
SDS status	Approved.
Risk phrases in full	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 sensitisation by inhalation and skin contact. R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Hazard statements in full	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.
Store Between	Store Between 5'c - 25'c
Contains SVHC	NO

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.