

SAFETY DATA SHEET
according to 1907/2006/EC, Article 31

Page 1/5

Resin 410 B

Revision 0

Revision date 2011-12-01

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

1.1. Product identifier

Product name	Resin 410 B
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1.3. Details of the supplier of the safety data sheet


Company	Renishaw plc
Address	Whitebridge Way, Whitebridge Park, Stone, Staffordshire ST15 8LQ United Kingdom
Web	www.renishaw.com
Telephone	+44 (0)1785 815651
Fax	+44 (0)1785 812115
Email	msds@renishaw.com
Email address of the competent person	msds@renishaw.com

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - 1999/45/EC	Xn; R20-42/43 Xi; R36/37/38 Symbols: Xn: Harmful.
Main hazards	Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

2.2. Label elements

Symbols	Xn: Harmful. 
Risk phrases	R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R42/43 - May cause sensitisation by inhalation and skin contact.
Safety phrases	S22 - Do not breathe dust. S23 - Do not breathe gas/fumes/vapour/spray. S24 - Avoid contact with skin. S37 - Wear suitable gloves. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S63 - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

SECTION 3: Composition/information on ingredients

Resin 410 B

Revision 0

Revision date 2011-12-01

3.2. Mixtures

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Diphenylmethanediisocyanate					70 - 80%	Xn; R20-42/43 Xi; R36/37/38

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air.
Eye contact	Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
Skin contact	Wash off immediately with plenty of soap and water.
Ingestion	DO NOT INDUCE VOMITING. Rinse mouth thoroughly. Seek medical attention if irritation or symptoms persist.

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

Inhalation	Harmful by inhalation.
Eye contact	Avoid contact with eyes.
Skin contact	Avoid contact with skin.
Ingestion	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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

	If you feel unwell, seek medical advice (show the label where possible).
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SECTION 5: Firefighting measures

5.1. Extinguishing media

	Water. Dry chemical. Carbon dioxide (CO ₂).
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5.2. Special hazards arising from the substance or mixture

	Carbon dioxide (CO ₂). Carbon monoxide. Nitrogen oxide. Hydrogen Cyanide.
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5.3. Advice for firefighters

	Self-contained breathing apparatus.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

	See section 8 for further information.
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6.2. Environmental precautions

	Do not allow runoff water to enter sewers or drains.
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6.3. Methods and material for containment and cleaning up

	Absorb with inert, absorbent material. Contact a licensed waste disposal company. Dispose of this material and its container to hazardous or special waste collection point.
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6.4. Reference to other sections

	See section 12 and 13 for further information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

	Keep container tightly closed in a cool place. Keep away from sources of ignition - No smoking.
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7.2. Conditions for safe storage, including any incompatibilities

	Do not allow runoff water to enter sewers or drains. Keep container tightly closed and dry.
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7.3. Specific end use(s)

Resin 410 B

Revision 0

Revision date 2011-12-01

7.3. Specific end use(s)

In case of insufficient ventilation, wear suitable respiratory equipment.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

Diphenylmethanediisocyanate	WEL 8-hr limit ppm: 0.005	WEL 8-hr limit mg/m3: 0.051
	WEL 15 min limit ppm:	WEL 15 min limit mg/m3:

8.2. Exposure controls



8.2.1. Appropriate engineering controls

Ensure adequate ventilation of the working area. Keep containers tightly closed. Keep in a cool, dry, well ventilated area.

8.2.2. Individual protection measures

Approved safety goggles. Protective clothing. Appropriate respiratory protection.

Eye / face protection

Approved safety goggles.

Skin protection - Handprotection

Nitrile rubber gloves.

Skin protection - Other

Wear suitable protective clothing.

Respiratory protection

Suitable respiratory equipment.

8.2.3. Environmental exposure controls

Appropriate local exhaust ventilation is required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State	Liquid
Colour	Yellow
Odour	Characteristic
Evaporation rate	Not determined
Melting point	Not determined
Freezing Point	Not determined
pH	No data available
Flammability limits	No data available
Vapour Flammability	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Fat Solubility	No data available
Partition coefficient	No data available
Autoignition temperature	No data available
Explosive	No data available
Oxidising	No data available
Boiling point	> 200 °C
Flash point	> 200 °C
Viscosity	= 55 mPas (Cone & Plate)
Solubility	= Insoluble in water

Resin 410 B

Revision 0

Revision date 2011-12-01

9.2. Other information

Conductivity	No data available
Surface tension	No data available
Gas group	No data available
Benzene Content	No data available
Lead content	No data available
VOC (Volatile organic compounds)	No data available

SECTION 10: Stability and reactivity

10.2. Chemical stability

Exothermic reaction with amins and alcohols, reacts with water forming carbon dioxide.

10.4. Conditions to avoid

Moisture. Keep only in the original container at a temperature not exceeding 80 °C.

10.5. Incompatible materials

Water. Avoid contact with: Amines, alcohols.

10.6. Hazardous decomposition products

Combustion may form carbon dioxide, CO, Nitrogen oxide and hydrogen cyanide.

SECTION 11: Toxicological information

11.1.4. Toxicological Information

Diphenylmethanediisocyanate	Inhalation Rat LC50/>370 h: 4	Oral Rat LD50: 5.00
Resin 410 B	Inhalation Rat LC50/370 h: 4	Oral Rat LD50: >5.00

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

No data is available on this product.

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

Not relevant.

SECTION 13: Disposal considerations

General information

Preferred method is by reaction with the complementary component A to form the product polyurethane, which can be disposed of a solid waste.

Disposal methods

Can be incinerated if in compliance with local authority regulations.

SECTION 14: Transport information

ADR/RID

The product is not classified as dangerous for carriage.

IMDG

The product is not classified as dangerous for carriage.

IATA

Resin 410 B

Revision 0

Revision date 2011-12-01

IATA	
	The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information

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

	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
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15.2. Chemical safety assessment

	R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R42/43 - May cause sensitisation by inhalation and skin contact. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S23 - Do not breathe gas/fumes/vapour/spray. S36/37 - Wear suitable protective clothing and gloves.
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SECTION 16: Other information

Other information

	P102 - Keep out of reach of children. P103 - Read label before use. P14 - Safety data sheet available for professional user on request. P15 - Restricted to professional users. R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R42/43 - May cause sensitisation by inhalation and skin contact. R53 - May cause long-term adverse effects in the aquatic environment.
Text of risk phrases in Section 3	R20 - Harmful by inhalation. R36/37/38 - Irritating to eyes, respiratory system and skin. R42/43 - May cause sensitisation by inhalation and skin contact.