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Data sheet: polyurethane resin 8045

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Description			**Translucent PP/PE type**		
Features			**Variable hardness, pigmentable**		
Suitable for			**High impact, snap fit applications**		
Cured properties					
	Condition	**8045**	**8045-1**	**8045-2**	**8045-3**
Colour		White / transparent	Clear / transparent	Transparent	Clear / transparent
Specific gravity	at 25 °C	1.07 g/cc	1.07 g/cc	1.16 g/cc	0.99 g/cc
Viscosity	at 25 °C	1000 MPa	1000 MPa	220 MPa	90 MPa

	Condition	**Unit**	**Mixing ratio by weight**			
			8045	8045-1	8045-2	8045-3
	ISO		100:140:0	100:140:25	100:140:50	100:140:75
Pot life	100 g at 25 °C	s	345	320	300	270
Cure time	60 °C	min	60			
Moulding colour			White	Translucent	Translucent	Translucent
Hardness	at 25 °C	Shore D	74	70	61	48
Tensile strength	527	MPa	32	24	12	10
Tensile modulus	527	MPa	970	700	400	150
Elongation	527	%	55	60	65	75
Bending strength	178	MPa	43	22	11	5
Bending modulus	178	MPa	1000	580	300	110
Impact strength	180	kJ/m^2	16	16	19	21
Deflection temperature under load	75-1 at 0.45 MPa	°C	79	53	42	35

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Handling procedure

Casting procedure

- Shake unopened A and B component cans vigorously for 10 s to 15 s
- Pre-heat mould in oven at 70 °C
- Pre-heat unopened A and B component cans in oven at 70 °C for 2 hours, then place in oven at 40 °C to stabilise prior to use
- Weigh A and B components into separate cups, allowing for cup loss (the amount of resin left in cup A after tipping)
- **When using the C component**, please weigh out A component and then add C component to same mixing cup according to the required mixing ratio
- Add colour pigment to cup A
- Place filled cups in the machine and attach mixing paddle to cup B
- Start vacuum pump
- Switch on mixer motor
- Wait 10 minutes after reaching maximum vacuum level before mixing
- Pour contents of cup A into cup B and mix as fast as possible without splashing
- Pour mixed resin into silicone mould and leak vacuum chamber before the end of the pot life
- Place filled mould in oven to cure resin
- For full instructions on casting procedures refer to *Vacuum Casting Technique: a guide for new users, available at www.renishaw.com*

Special notes

- Exact mould temperature is important
- Exact resin temperature is important
- Use no more than 2% of total weight colour pigment

Product information

- **Mould life**
  Mould life can be increased by using the correct Renishaw release agent and demoulding the casting immediately after curing.
- **Storage**
  Store unopened cans at > 20 °C
  Protect against frost
  Store opened cans in oven at 40 °C with caps on
  All components are sensitive to humidity.
- **In case of crystallisation of B-component**
  Place cans in oven at 70 °C for 2 - 4 hours and stir resin afterwards.

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Please follow the correct procedure for use of your vacuum casting system, as set out in its operating instructions.

Always follow the instructions in the Product Safety Data Sheets and always work in accordance with the safety instructions of the materials manufacturer. Safety Data Sheets can be found at www.renishaw.com.

Wear suitable respiratory protection, safety gloves and safety goggles during the entire filling procedure in accordance with the Product Safety Data Sheets.

For worldwide contact details, please visit our main website at www.renishaw.com/contact

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