

Data sheet: vacuum casting resin 8040

Description	Low viscosity, good all-round material, similar to polypropylene (PP)		
Features	Excellent flow properties, easy to colour		
Suitable for	Thin wall section moulding		
Cured properties	Test / ISO standard where applicable		
Colour	White		
Transparency	Opaque		
Shore hardness	At 23 °C	70 D	868
	At 60 °C	64 D	
	At 80 °C	37 D	
Flexural strength	42 N/mm ²		178
Flexural modulus	1050 N/mm ²		178
Tensile strength	27 N/mm ²		R 527
Tensile modulus	942 N/mm ²		R 527
Izod impact	15 kJ/m ²		180
Yield strength	Not measured		R 527
Elongation yield	Not measured		
Elongation at break	50 %		R 527
Tear strength	Not measured		34
Thermal conductivity	0.201 W/mK		BS 874
Heat deflection temperature	65 °C		(test piece 110 mm × 12.7 mm × 6.4 mm)
Glass transition temperature	78 °C		
Processing information	Notes		
Viscosity	Part A	1200 cPs	At 25 °C
	Part B	140 cPs	
Specific gravity	Part A	1.05	At 25 °C
	Part B	1.22	
Mix ratio A:B	110:90		By weight
Mixing time	30 s to 60 s		
Resin temperature	40 °C		Heating chamber
Mould temperature	70 °C		Heating chamber
Curing temperature	70 °C		Heating chamber
Curing time in mould	90 min to 120 min		
Pot life	300 s		100 g at 25 °C
Post curing process	None		
Typical shrinkage	0.5 %		

All information is based on results gained from experience and tests and is believed to be accurate but is given without acceptance of liability for loss or damage attributable to reliance thereon. Users should always carry out sufficient tests to establish the suitability of any products for their intended applications.

Handling procedure

Casting procedure

- Shake unopened A and B component cans vigorously for 10 s to 15 s
- Pre-heat mold 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)
- 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 mold 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
Both components are sensitive to humidity.
- **In case of crystallisation of B-component**
Place cans in oven at 70 °C for 2 hours to 4 hours and stir resin afterwards.



Please follow the procedure for preparing the vacuum casting system as described in the system operation manual!



Always observe the instructions in the Safety Data Sheets of the product 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 Safety Data Sheets.

