

# Data sheet: vacuum casting resin 6230

[www.renishaw.com/additive](http://www.renishaw.com/additive)

## Specification

Description		Properties similar to ABS	
Features		Good impact resistance	
Suitable for		Prototype parts and low volume production	
Cured properties		Test / ISO standard where applicable	
Colour	Milky white		
Transparency			
Shore hardness At 23 °C	83 D	868	
Flexural strength	80 MPa	178	
Flexural modulus	1800 MPa	178	
Tensile strength	67 MPa	R 527	
Tensile modulus	1850 MPa	R 527	
Izod impact	15 kJ/m <sup>2</sup>	180	
Yield strength	67 MPa	R 527	
Elongation at break	14%	R 527	
Elongation at yield	3%		
Thermal conductivity	0.241 W/mK	BS 874	
Heat deflection temperature (1.80 MPa) (test piece 110 mm × 12.7 mm × 6.4 mm)	98 °C	ISO 75	
Glass transition temperature	115 °C	TMA method	
Coefficient of thermal expansion	8 × 10 <sup>-5</sup>	JIS K-6911	
S. G. of finished article	1.23 G/cm <sup>2</sup>	1183	
Processing information		Notes	
Viscosity	Part A	850 MPa	At 25 °C
	Part B		
Specific gravity	Part A	1.11	At 25 °C
	Part B		
Mix ratio A:B	100:200		By weight
Mixing time	60 s		
Resin temperature	35 - 40 °C		Heating chamber
Mould temperature	70 °C		Heating chamber
Curing temperature	70 °C		Heating chamber
Demould time	25 - 60 min		at 70 °C
Pot life	6 min		100 g at 25 °C
	3 min 40 s		100 g at 35 °C
Post curing process	None		
Typical shrinkage	0.3%		

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 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)
- 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](http://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 hours then transfer to 40 °C oven to stabilise prior to use.



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](http://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](http://www.renishaw.com/contact)

