

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 |

The information in this data sheet is provided for general guidance only and must not be relied upon as a definitive statement of the product's properties or suitability. Renishaw will not be liable for the consequences of any decision by you to use the product and you must conduct your own testing to determine whether or not the product is suitable for your needs.

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 B 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.



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

