

Product Name

WC-783 A/B

Water Clear Rigid 82 Shore D

Polyurethane Casting System



Product Description

WC-783 A/B is an impact resistant, rigid, 82 Shore D material that is commonly used to make clear or tinted castings of all kinds. When used at room temperature, castings 1/8" thick or larger can be readily cast. Castings that are less than 1/8" thick generally require a mild post-cure.

Product highlights include: exceptional clarity, good exterior weatherability, non-yellowing, light stable product, impact resistant, no odor, and UV light and oxidation resistance.

Physical Properties

| | | | |
|----------------------------------|------------------------------------|---------------------|-----------------------|
| Hardness | Shore D | ASTM D-2240 | 82 ± 2 |
| Density | g/cc | ASTM D-792 | 1.05 |
| Cubic Inches Per Pound | | | 26.4 |
| Color/Appearance | | | Slight Colour/Clear |
| Tensile Strength | psi | ASTM D-638 | 6,650 |
| Tensile Modulus | psi | ASTM D-638 | 2.6X10 ⁵ |
| Elongation | % | ASTM D-638 | 65 |
| Flexural Strength | psi | ASTM D-790 | 11,000 |
| Flexural Modulus | psi | ASTM D-790 | 3.2X10 ⁵ |
| Shrinkage | in./in. linear (12" x 1/2" x 1/2") | 15 minute work time | 0.002 |
| Izod Impact, notched | ft.-lb./in. | ASTM D-256 | 1.0 |
| Heat Deflection Temperature | @ 66 psi | ASTM D-648 | 70°C |
| Compressive Strength | psi | ASTM D-695 | 8,350 |
| Compressive Modulus | psi | ASTM D-695 | 3.5 x 10 ⁵ |
| Coefficient of Thermal Expansion | -20° to 130°C | | 9 x 10 ⁻⁵ |

Handling Properties

| | | | |
|------------------|-----------------------|--------|------------|
| Mix Ratio | by weight | Part A | 100 pbw |
| | | Part B | 90 pbw |
| Mix Ratio | by volume | Part A | 100 pbv |
| | | Part B | 93 pbv |
| Specific Gravity | g/cc | Part A | 1.08 |
| | | Part B | 1.03 |
| Viscosity | cps @ 25°C Brookfield | Part A | 600 ± 50 |
| | | Part B | 550 |
| | | Mixed | 650 ± 50 |
| Work Time | 100 gram mass @ 25°C | | 15 minutes |
| Demold Time | @25°C | | 6-8 hours |

Cure Schedule/Heat Curing

Most of the physical properties can be achieved in 5-7 days at ambient temperature, 25°C. In order to achieve maximum physical properties, a post cure with heat is required. BJB recommends 24 hours at ambient temperature, 25°C, followed by 16 hours at 82°C. Support of the part may be required to prevent part deformation during heat cure.

Storage

Store in a cool dry place. Unopened containers will have a shelf life of 6 months from the date of shipment when properly stored at room temperatures. Part B may turn hazy or partially freeze below 18°C storage. Warming to 27°-32°C will return product to a clear state. Purge opened containers with dry nitrogen before re-sealing.

Notes

The cure will be inhibited if cast against a tin catalyzed silicone RTV.

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Revision Number

2

Disclaimer

The data presented in this leaflet are in accordance with the present state of our knowledge, and does not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. Recommendations for use do not constitute a warranty, either expressed or implied, of the fitness or suitability of the product for a particular purpose.

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