Barnes **Technical Data Sheet**

Product Name

WC-786 A/B
Water Clear Rigid 80 Shore D Urethane Casting System

Product Description

WC-786 A/B produces a high impact, rigid, 80 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 pre-warming of materials, molds, and mild post-cure. Easy 1:1 by volume mix ratio for machine casting.

Product highlights include: exceptional clarity, very high impact rigid material, 15-minute standard working time with six additional work speeds available, no odor, UV light and oxidation resistance, good weatherability, and non-yellowing.

Physical Properties

Hardness	Shore D	ASTM D-2240	80 ± 2
Density	g/cc	ASTM D-792	1.05
Cubic Inches Per Pound			26.4
Color/Appearance			Water Clear/Colorless
Tensile Strength	psi	ASTM D-638	4,000
Elongation	%	ASTM D-638	13 ± 2
Flexural Strength	psi	ASTM D-790	7,200
Flexural Modulus	psi	ASTM D-790	1.6 x 10^5
Shrinkage	in./in. linear (12”x1/2” x1/2”)		0.005
Heat Deflection Temperature	@ 66 psi	ASTM D-648	63°C
Compressive Strength	psi	ASTM D-695	7,150
Compressive Modulus	psi	ASTM D-695	2.75 x 10^5

Handling Properties

Mix Ratio	by weight	Part A	100 parts by weight
		Part B	96 parts by weight
Mix Ratio	by volume	Part A	100 parts by volume
		Part B	100 parts by volume
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	600 ± 50
Colour		Part A	Clear/Colorless
		Part B	Clear/Colorless
Work Time	100 gram mass @ 25°C		15 minutes
Demold Time	@ 25°C		6-8 hours

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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

All materials should be kept in tightly closed containers out of contact with moist air. Stored under these conditions at temperatures of 16° - 27°C, the shelf life is 6 months, from date of shipment. Part B may turn hazy or partially freeze below 18°C storage. Warming to 27° - 32°C will return product to a clear state.

Notes

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

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Revision Number

1

Disclaimer

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