

WC-783 A/B
WATER CLEAR RIGID 82 SHORE D
URETHANE CASTING SYSTEM



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. The standard work time is 15 minutes, however 6 additional work speeds are available. A mild post-cure is recommended for best results.

- Exceptional clarity
- Impact resistant
- Good exterior weatherability, light stable
- No odor
- UV light and oxidation resistance

PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Hardness, Shore D	ASTM D2240	82 ± 2
Density (g/cc)	ASTM D792	1.05
Cubic Inches per Pound	N/A	26.4
Color/Appearance	Visual	Sight color/Clear
Tensile Strength (psi)	ASTM D638	6,650
Tensile Modulus (psi)	ASTM D638	2.6 x 10 ⁵
Elongation (%)	ASTM D638	65
Flexural Strength (psi)	ASTM D790	11,000
Flexural Modulus (psi)	ASTM D790	3.2 x 10 ⁵
Shrinkage (in/in) linear – 15-minute work time	12"x1/2"x1/2"	0.002
Shrinkage (in/in) linear – 30-minute work time	12"x1/2"x1/2"	0.002
Izod Impact, notched (ft-lb/in)	ASTM D256	1.0
Heat Deflection Temperature @ 66psi	ASTM D648	158°F (70°C)
Compressive Strength (psi)	ASTM D695	8,350
Compressive Modulus (psi)	ASTM D695	3.5 x 10 ⁵
Coefficient of Thermal Expansion (in./in./F°), -4° to 266°F (-20° to 130°C)	ASTM D3386	9 x 10 ⁻⁵

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	100	90
Mix Ratio by volume	100	94
Specific Gravity @ 77°F (25°C)	1.08	1.03
Color	Colorless	Colorless
Viscosity (cps) @ 77°F (25°C) Brookfield	650	550
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	650 ± 50	
Work Time, 100g mass @ 77°F (25°C)	15 minutes*	
Demold Time @ 77°F (25°C)	6 – 8 hours	

Properties above are typical and not for specifications.

*The 15-minute work time is the standard in-stock product. Products with 30, 60, 90, 180 and 240-minute work times are available on a special-order basis.

CURE SCHEDULE/HEAT CURING:

Most of the physical properties can be achieved in 5-7 days at 77°F (25°C). You may use your own post-cure schedule but the physical properties may vary from BJB's cure schedule of 1-3 hours at 77°F (25°C) followed by 16 hours at 160 °F (71). Do not exceed curing temperatures of 200°F (93°C). Support of the part may be required to prevent part deformation during the heat curing process.

NOTE:

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

STORAGE AND HANDLING:

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING	Part A	Part B	Cubic Inches per Kit
Gallon Kits	8 lbs.	7.2 lbs.	401
5-Gallon Kits	40 lbs.	36 lbs.	2,006
55-Gallon Drum Kits	400 lbs.	360 lbs.	20,064

SAFETY PRECAUTIONS:

Avoid contact with skin. Use protective gloves and protective clothing. Repeated or prolonged contact on the skin may cause an allergic reaction. Eye protection is extremely important. Always use approved safety glasses or goggles when handling this product. Use in well-ventilated areas. Avoid breathing vapors. If exposures cannot be kept at a minimum, a respirator may be necessary in addition to ventilation. The use of a positive pressure air supplied respirator is mandatory when airborne isocyanate concentrations are "not known" or exceeds OSHA'S TWA of 0.005 ppm. Air purifying, organic cartridge type respirators are not generally recommended to use when handling this material without implementation of an end of life service program. Observe OSHA regulations for respirator use (29 CFR 1910.134). Employers are responsible for selecting the correct respirator for each situation.

IF CONTACT OCCURS:

- Skin:** Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. It is *not* recommended to remove resin from skin with solvents. Solvents only increase contact and dry skin. Seek qualified medical attention if allergic reactions occur.
- Eyes:** Immediately flush with water for at least 15 minutes. Call a physician.
- Ingestion:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

Refer to the Material Safety Data Sheet before using this product.

⚠WARNING: This product can expose you to chemicals including N-Methylpyrrolidone, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.



Handling Guide



WC-783 Part A SDS



WC-783 Part B-15 SDS

NON-WARRANTY "Except for a warranty that materials substantially comply with the data presented in Manufacturer's latest bulletin describing the product (the basis for this substantial compliance is to be determined by the standard quality control tests generally performed by Manufacturer), all materials are sold "AS IS" and without any warranty express or implied as to merchantability, fitness for a particular purpose, patent, trademark or copyright infringement, or as to any other matter. In no event shall Manufacturer's liability for damages exceed Manufacturer's sale price of the particular quantity with respect to which damages are claimed."