



# 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:

- Exceptional clarity
- Good exterior weatherability, non-yellowing, light stable product
- Impact resistant
- No odor
- 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 color/Clear
Tensile Strength, (psi) ASTM D 638.....	6,650
Tensile Modulus, (psi) ASTM D 638 .....	2.6 x 10 <sup>5</sup>
Elongation, (%) ASTM D 638 .....	65
Flexural Strength, (psi) ASTM D 790 .....	11,000
Flexural Modulus, (psi) ASTM D 790.....	3.2 x 10 <sup>5</sup>
Shrinkage, (in/in) linear 12"x1/2"x1/2"	
5 minute work time.....	0.002
15 minute work time.....	0.002
30 minute work time.....	0.002
Izod Impact, notched (ft-lb/in) ASTM D 256.....	1.0
Heat Deflection Temperature, (66 psi) ASTM D 648 .....	158°F (70°C)
Compressive Strength, (psi) ASTM D 695.....	8,350
Compressive Modulus, (psi) ASTM D 695.....	3.5 x 10 <sup>5</sup>
Coefficient of Thermal Expansion, -4° to 266°F (-20° to 130°C) .....	9 x 10 <sup>-5</sup>

#### HANDLING PROPERTIES:

Mix Ratio (by weight):

Part A .....	100 parts by weight
Part B .....	90 parts by weight

Mix Ratio (by volume):

Part A .....	100 parts by volume
Part B .....	93 parts by volume

**HANDLING PROPERTIES (continued):**

Specific Gravity:	
Part A .....	1.06
Part B .....	1.03
Viscosity, (cps) @ 77°F (25°C) Brookfield:	
Part A .....	600 ± 50
Part B .....	550
Mixed .....	650 ± 50
Work Time, (100 gram mass) @ 77°F (25°C) .....	15 minutes*
Demold Time @ 77°F (25°C) .....	6-8 hours

\*The 15 minute work time is the standard in-stock product. Products with 5, 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 ambient temperature, 77°F (25°C). In order to achieve maximum physical properties, a post cure with heat is required. BJB recommends 24 hours at ambient temperature, 77°F (25°C), followed by 16 hours at 180°F (82°C). Support of the part may be required to prevent part deformation during heat cure.

**NOTE:**

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

**STORAGE AND HANDLING:**

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 65°F (18°C) storage. Warming to 80°-90°F (27°-32°C) will return product to a clear state. Purge opened containers with dry nitrogen before re-sealing.

**PACKAGING:**

Gallon Kits.....	8 lbs. A, 7.2 lbs. B
5 Gallon Kits.....	40 lbs. A, 36 lbs. B
55 Gallon Drum Kits .....	400 lbs. A, 360 lbs. B

**SAFETY PRECAUTIONS:**

Avoid contact with skin using 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.**

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."