



## 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  $\frac{1}{8}$ " thick or larger can be readily cast. Castings that are less than  $\frac{1}{8}$ " thick generally require a mild post-cure. (See "HEAT CURING")

#### **PRODUCT HIGHLIGHTS:**

- Exceptional clarity
- Good exterior weatherability, non-yellowing, light stable product
- Impact resistant
- 15-minute standard working time with seven additional work speeds available
- No odor
- UV light and oxidation resistance

#### **PHYSICAL PROPERTIES:**

Hardness, Shore D ASTM D-2240 .....	82
Density, (g/cc) ASTM D-792 .....	1.05
Cubic Inches Per Pound .....	26.4
Color/Appearance .....	Water clear/slight color
Tensile Strength, (psi) ASTM D-638 .....	6,650
Tensile Modulus, (psi) ASTM D-638 .....	$2.6 \times 10^5$
Elongation, (%) ASTM D-638 .....	65
Flexural Strength, (psi) ASTM D-790 .....	11,000
Flexural Modulus, (psi) ASTM D-790 .....	$3.2 \times 10^5$
Shrinkage, (in./in.) linear ASTM D-2566 .....	0.005
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 .....	$3.5 \times 10^5$
Coefficient of Thermal Expansion, -4° to 266°F (-20° to 130°C) .....	$9 \times 10^{-5}$

#### **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

Specific Gravity:

Part A .....	1.06
Part B .....	1.03

### **HANDLING PROPERTIES (cont'd):**

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, 22, 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:**

**Cure on this product can be inhibited if cast against a tin catalyzed silicone RTV.**

### **STORAGE AND HANDLING:**

All materials should be kept in tightly closed containers out of contact with moist air. Stored under these conditions at temperatures of 60° - 80°F (16° - 27°C), the shelf life is 6 months from date of shipment. 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.

### **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.**