



## 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:**

- 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, 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 <sup>5</sup>
Shrinkage, (in./in.) linear (12"x1/2"x1/2").....	0.005
Heat Deflection Temperature, (@ 66 psi) ASTM D-648.....	145°F (63°C)
Compressive Strength, (psi) ASTM D-695 .....	7,150
Compressive Modulus, (psi) ASTM D-695 .....	2.75 x 10 <sup>5</sup>

#### **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:

Part A .....	1.08
Part B .....	1.03

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

Viscosity, (cps) @ 77°F (25°C) Brookfield:

Part A .....	600 ± 50
Part B .....	550
Mixed .....	600 ± 50

Color:

Part A .....	Clear/colorless
Part B .....	Clear/colorless

Work Time, 100g 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:**

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:**

5 Gallon Kits.....	40 lbs. A, 38.4 lbs B
55-Gallon Drum Kits.....	400 lbs. A, 384 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.**