



ALIPHATIC & WATER CLEAR URETHANES

"Dedicated to QUALITY, SERVICE, SAFETY, and INNOVATION"

**WC-781 A/B
MASS CASTING WATER CLEAR RIGID 82 SHORE D
POLYURETHANE CASTING SYSTEM**

PRODUCT DESCRIPTION:

WC-781 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 pre-warming of materials, molds, and a mild post-cure.

PRODUCT HIGHLIGHTS:

- Exceptional clarity
- Impact resistant
- 30 minute working time provides the option for large pours
- No odor
- Good weatherability

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D2240	82 ± 2
Density, (g/cc) ASTM D792	1.05
Cubic Inches per Pound.....	26.4
Color/Appearance.....	Colorless/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 (12" x 1/2" x 1/2")	0.004
Izod Impact, notched (ft-lb/in) ASTM D256.....	1.0
Heat Deflection Temperature, (66 psi) ASTM D648.....	158°F (70°C)
Compressive Strength, (psi) ASTM D695.....	8,350
Compressive Modulus, (psi) ASTM D695.....	3.5 x 10 ⁵

HANDLING PROPERTIES:

Mix Ratio (by weight):	
Part A	100 parts by weight
Part B	85 parts by weight
Mix Ratio (by volume):	
Part A	100 parts by volume
Part B	89 parts by volume
Specific Gravity:	
Part A	1.08
Part B	1.03

HANDLING PROPERTIES (continued):

Viscosity, (cps) @ 77°F (25°C) Brookfield:	
Part A	650
Part B	550
Mixed	650 ± 50
Color:	
Part A	Colorless
Part B	Colorless
Work Time, (100-gram mass) @ 77°F (25°C)	30 minutes
Demold Time @ 77°F (25°C)	24 hours

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 the heat curing process.

NOTE:

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

STORAGE:

Store in a cool dry place. Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at room temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING:

Gallon Kits.....	8 lbs. A, 6.8 lbs. B
5 Gallon Kits.....	40 lbs. A, 34 lbs. B
55 Gallon Drum Kits	400 lbs. A, 340 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.