

WC-781 A/B

MASS CASTING WATER CLEAR RIGID 82 SHORE D POLYURETHANE CASTING SYSTEM



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 ¼" thick or larger can be readily cast. Castings that are less than ¼" thick generally require a pre-warming of materials, molds, and a mild post-cure.

- Water clear with exceptional clarity
- Good weatherability
- 30 minute working time provide the option for large pours
- Impact resistant
- No odor

PHYSICAL PROPERTIES	TEST METHOD	TEST 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	Water Clear/Colorless
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
Compressive Strength, (psi)	ASTM D695	8,350
Compressive Modulus, (psi)	ASTM D695	3.5 x 10 ⁵
Shrinkage (in/in) linear	12"x ½" x ½"	0.004
Izod Impact, notched (ft-lb/in)	ASTM D256	1.0
Heat Deflection Temperature @ 66psi	ASTM D648	158°F (70°C)

HANDLING PROPERTIES	Part A	Part B
Mix Ratio (by weight)	100	85
Mix Ratio (by volume)	100	89
Specific Gravity	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)	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 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°C). Do not exceed curing temperature of 200°F (93°C).

NOTE:

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

ACCESSORIES:

BJB offers silicone RTV mold making materials along with a wide range of accessory items. These include de-airing agents, pigments, mold releases, and Jiffy® Mixers. Visit BJB's website at www.bjbenterprises.com or consult a BJB representative for more information.

STORAGE AND HANDLING:

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	Part A	Part B	Cubic Inches per Kit
Gallon Kits	8 lbs.	6.8 lbs.	391
5-Gallon Kits	40 lbs.	34 lbs.	1954
55-Gallon Drum Kits	400 lbs.	340 lbs.	19,536

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.

⚠WARNING: This product can expose you to chemicals including Phenyl mercury acetate and Naphthalene, 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