



WC-788 A/B

WATER CLEAR RIGID 84 SHORE D URETHANE CASTING SYSTEM

PRODUCT HIGHLIGHTS:

- Colorless with exceptional clarity
- Excellent impact strength
- 15 minute standard working time with six additional work speeds available
- No odor
- Good weatherability, non-yellowing all aliphatic
- Excellent heat resistance

PRODUCT DESCRIPTION:

WC-788 A/B is an impact resistant, rigid, 84 Shore D aliphatic polyurethane that is commonly used to make clear or tinted castings of all kinds. Note: WC-788 A/B requires post-curing. Thin section casts, less than ½" thick, may require in mold post-curing. See post-cure instructions on page 2.

TYPICAL PRODUCT USES:

- ◆ Prototype computer parts
- ◆ Models of all kinds
- ◆ Artwork components
- ◆ Architectural models
- ◆ Transportation cases
- ◆ Miniatures and movie props

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240.....	84 ± 2
Specific Gravity, (g/cc) cured ASTM D-792	1.1
Cubic Inches Per Pound	26.2
Color/Appearance.....	Water clear/colorless
Tensile Strength, (psi) ASTM D-638.....	8,300
Tensile Modulus, (psi) ASTM D-638.....	2.7 x 10 ⁵
Elongation, (%) ASTM D-638.....	20
Flexural Strength, (psi) ASTM D-790.....	11,200
Flexural Modulus, (psi) ASTM D-790	3.0 x 10 ⁵
Shrinkage, (in./in.) linear (12"x ½"x ½")	0.006
Izod Impact, (ft.-lb./in.) ASTM D-256	1.1
Heat Deflection Temperature, (@ 66 psi) ASTM D-648.....	175°F (79°C)
Index of Refraction ASTM D-542.....	1.49

HANDLING PROPERTIES:

Mix Ratio (by weight):

Part A	100 parts by weight
Part B	75 parts by weight

HANDLING PROPERTIES (con't):

Mix Ratio (by volume):	
Part A	100 parts by volume
Part B	78 parts by volume
Viscosity, (cps) @ 77°F (25°C) ASTM D-2393:	
Part A	650 ± 50
Part B	750
Mixed	650 ± 50
Specific Gravity, (g/cc):	
Part A	1.08
Part B	1.04
Work Time, 100g mass @ 77°F (25°C)	15 - 20 minutes**
Demold Time @ 77°F (25°C)	16 - 24 hours
*Cure Schedule	5 - 7 days at R.T., or 16 hours at 160° - 180°F (71° - 82°C)
*See <u>HEAT CURING</u> , below. Product is sufficiently cured after one day, ambient, for general handling.	

**The 15-20 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.

HEAT CURING:

We would recommend that WC-788 A/B be heat cured by post curing for 16 hours at 160° - 180°F (71° - 82°C), or 6 - 8 hours at 190°F (88°C). Parts may require some support during heat cure. A suggested cure schedule is: 3 - 5 days at room temperature (to minimize softening during further heating), followed by 4 - 6 hours at 130° - 150°F (54° - 66°C), and an additional 16 hours at 175° - 185°F (79° - 85°C). This cure schedule minimizes part distortion and shrinkage, while affording maximum toughness and heat resistance.

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:

Gallon Kits.....	8 lbs. A, 6 lbs. B
5 Gallon Kits.....	40 lbs. A, 30 lbs. B
55 Gallon Drum Kits	400 lbs. A, 300 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. 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."