



WC-783 A/B

WATER CLEAR RIGID 82 SHORE D POLYURETHANE CASTING SYSTEM

PRODUCT HIGHLIGHTS:

- Water White with 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

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")

TYPICAL PRODUCT USES:

- ◆ Prototype computer parts
- ◆ Models of all kinds
- ◆ Architectural models
- ◆ Miniatures and movie props

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240.....	82
Specific Gravity, (g/cc) cured 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.....	2.6×10^5
Elongation, (%) ASTM D-638.....	65
Flexural Strength, (psi) ASTM D-790.....	11,000
Flexural Modulus, (psi) ASTM D-790	3.2×10^5
Shrinkage, (in./in.) linear ASTM D-2566.....	0.005
Izod Impact, (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	3.5×10^5
Coefficient of Thermal Expansion, -4° to 266°F (-20° to 130°C)	9×10^{-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 (g/cc):	
Part A	1.06
Part B	1.03
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
Cure Schedule.....	5 - 7 days at R.T., or 16 hours at 160° - 180°F (71° - 82°C)

Product is sufficiently cured after one day, ambient, for general handling. See HEAT CURING, below.

*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.

HEAT CURING:

Generally, for most applications, ambient temperature curing is adequate; however, maximum physical properties and heat resistance is obtained by post curing WC-783 A/B for 16 hours at 160° - 180°F (71° - 82°C), or 6 - 8 hours at 180° - 210°F (82° - 99°C). Parts may require some support during heat cure. A suggested cure schedule is: 3 - 5 days at room temperature (to minimize shrinkage and any softening during heating), followed by 4 - 6 hours at 130° - 150°F (54° - 66°C), and an additional 16 hours at 160° - 180°F (71° - 82°C). This cure schedule minimizes part distortion and linear shrinkage, while imparting maximum toughness and heat resistance.

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. 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."