

# TC-878 A/B CLEAR 78 SHORE D POLYURETHANE CASTING SYSTEM

**PRODUCT DESCRIPTION:**

TC-878 A/B produces a high impact rigid 78 Shore D material with excellent heat resistance. This product is a clear casting system that is easy to tint or pigment. TC-878 A/B can be easily processed by hand or meter-mix dispense equipment.

**PHYSICAL PROPERTIES:**

Hardness, Shore D ASTM D2240-04e1.....	78 ± 2
Density, (g/cc) ASTM D792-00.....	1.09
Cubic Inches per Pound.....	26.3
Color/Appearance.....	Pale yellow/Clear
Tensile Strength, (psi) ASTM D638-03.....	4,230
Tensile Modulus, (psi) ASTM D638-03.....	1.27 x 10 <sup>5</sup>
Elongation, (%) ASTM D638-03.....	155
Flexural Strength, (psi) ASTM D790-03.....	5,060
Flexural Modulus, (psi) ASTM D790-03.....	1.29 x 10 <sup>5</sup>
Shrinkage, (in/in) linear 12"x ½"x ½".....	0.005
Izod Impact, notched (ft-lb/in) ASTM D256-05.....	1.23
Heat Deflection Temperature, ASTM D648-04:	
66 psi.....	190°F (88°C)
264 psi.....	145°F (63°C)

Note: Reported physicals based on elevated temperature cured test specimens.

**HANDLING PROPERTIES:**

Mix Ratio (by weight):	
Part A.....	85 parts by weight
Part B.....	100 parts by weight
Mix Ratio (by volume):	
Part A.....	81 parts by volume
Part B.....	100 parts by volume
Specific Gravity:	
Part A.....	1.08
Part B.....	1.03
Viscosity, (cps) @ 77°F (25°C) Brookfield:	
Part A.....	600
Part B.....	1,625
Mixed.....	1,250

**HANDLING PROPERTIES (continued):**

Color:

Part A.....Colorless  
Part B.....Pale yellow

Work Time, (100-gram mass) @ 77°F (25°C) ..... 15 minutes

Gel Time .....25 minutes

Demold Time @ 77°F (25°C) ..... 8-10 hours, **See Note #1**

**NOTE #1:**

Faster de-molds can be achieved by pre-heating the A/B components and molds up to 150°F (66°C).

**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.

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