



# TC-879 A/B CLEAR 78 SHORE D POLYURETHANE CASTING SYSTEM

TC-879 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-879 A/B can be easily processed by hand or meter-mix dispense equipment.

| PHYSICAL PROPERTIES                  | TEST METHOD      | TEST RESULTS           |
|--------------------------------------|------------------|------------------------|
| Hardness, Shore D                    | ASTM D2240-04e1  | 78 ± 2                 |
| Density (g/cc)                       | ASTM D792-00     | 1.09                   |
| Cubic Inches per Pound               | N/A              | 26.3                   |
| Color/Appearance                     | Visual           | 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 1/2" x 1/2" | 0.005                  |
| Izod Impact, notched (ft-lb/in)      | ASTM D256-05     | 1.23                   |
| Heat Deflection Temperature @ 66psi  | ASTM D648-04     | 190°F (87.8°C)         |
| Heat Deflection Temperature @ 264psi | ASTM D648-04     | 145°F (62.8°C)         |

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

| HANDLING PROPERTIES                            | Part A                   | Part B      |
|--|--------------------------|-------------|
| Mix Ratio by weight                            | 85                       | 100         |
| Mix Ratio by volume                            | 81                       | 100         |
| Specific Gravity @ 77°F (25°C)                 | 1.08                     | 1.03        |
| Color  | Colorless                | Pale Yellow |
| Viscosity (cps) @ 77°F (25°C) Brookfield       | 600                      | 1,625       |
| Mixed Viscosity (cps) @ 77°F (25°C) Brookfield | 1,250                    |             |
| Work Time, 100g mass @ 77°F (25°C)             | 5 minutes                |             |
| Gel Time                                       | 8 minutes                |             |
| Demold Time @ 77°F (25°C)                      | 2 – 3 hours, See Note #1 |             |

Properties above are typical and not for specifications

**NOTE #1:**

Faster de-molds can be achieved by pre-heating the A/B components and molds up to 90° - 100°F (32° - 38°C).

**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 180 °F (82°C). Do not exceed curing temperatures of 200°F (93°C). Support of the part may be required to prevent part deformation during the heat curing process.

**STORAGE:**

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

| <b>PACKAGING</b>    | <b>Part A</b> | <b>Part B</b> | <b>Cubic Inches per Kit</b> |
|---------------------|---------------|---------------|-----------------------------|
| Quart Kits          | 1.7 lbs.      | 2 lbs.        | 97.3                        |
| Gallon Kits         | 6.8 lbs.      | 8 lbs.        | 389                         |
| 5-Gallon Kits       | 34 lbs.       | 40 lbs.       | 1,946                       |
| 55-Gallon Drum Kits | 340 lbs.      | 400 lbs.      | 19,462                      |

**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.

**⚠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](http://www.P65Warnings.ca.gov).

**NOTE:**

Refer to the Safety Data Sheet before using this product. For processing tips and guides, please visit: [learn.bjbmaterials.com](http://learn.bjbmaterials.com) to discover additional information.