

RIGID FILLED & UNFILLED URETHANES

"Dedicated to *QUALITY, SERVICE, SAFETY, and INNOVATION*"

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 ⁵
Elongation (%)	ASTM D638-03	155
Flexural Strength (psi)	ASTM D790-03	5,060
Flexural Modulus (psi)	ASTM D790-03	1.29 x 10 ⁵
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 @ 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 150°F (66°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 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.

PACKAGING	Part A	Part B	Cubic Inches Per Kit
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.