

TC-803 A/B

75 SHORE D POLYURETHANE CASTING SYSTEM



TC-803 A/B produces a 75 Shore D material that provides excellent physical properties. TC-803 A/B was designed for a wide variety of part making applications. For longer work times, consider TC-805.

- RoHS/REACH Compliant
- 1-2 hour demold time
- Odorless, clean white
- 6-7 minute work time
- Excellent for vacuum or pressure casting
- Low viscosity

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Hardness, Shore D	ASTM D2240-04e1	75 ± 2
Density (g/cc)	ASTM D792-00	1.12
Cubic Inches per Pound	N/A	25.6
Color/Appearance	Visual	White/Opaque
Tensile Strength (psi)	ASTM D638-03	6,800
Tensile Modulus (psi)	ASTM D638-03	2.1 x 10 ⁵
Elongation (%)	ASTM D638-03	10
Flexural Strength (psi)	ASTM D790-03	9,800
Flexural Modulus (psi)	ASTM D790-03	2.42 x 10 ⁵
Shrinkage (in/in) linear	12"x 1/2" x 1/2"	0.006
Izod Impact, notched (ft-lb/in)	ASTM D256-05	0.66
Heat Deflection Temperature @ 66 psi	ASTM D648-04	203°F (95°C)
Heat Deflection Temperature @ 264 psi	ASTM D648-04	193°F (89.4°C)

Note: Reported physical properties based on elevated temperature cured test specimens.

HANDLING PROPERTIES	Part A	Part B
Mix Ratio (by weight)	100	50
Mix Ratio (by volume)	100	52
Specific Gravity @ 77°F (25°C)	1.10	1.06
Color	Pale Yellow	Colorless
Viscosity (cps) @ 77°F (25°C) Brookfield	75	1,350
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	160	
Work Time, 100g mass @ 77°F (25°C)	6 – 7 minutes	
Gel Time	7 – 8 minutes	
Demold Time @ 77°F (25°C)	1 – 2 hours	

Properties above are typical and not for specifications.

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.

VACUUM DE-GASSING/DE-AIRING:

It is advisable whenever possible to evacuate entrapped air prior to casting this system. The use of de-airing agent, (BJB’s AF-4), can speed the process.

NOTE:

TC-803 A/B should be stored at ambient temperature and the TC-803 “B” component may require vacuum de-airing prior to combining it with the “A” component. Evacuation of the mixing components is mandatory in order to achieve best results. It is recommended that the “A” & “B” components as well as the mold should be pre-conditioned to a minimum of 80°F (26.7°C) prior to use. If further information is required, please contact BJB’s technical staff for assistance.

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	8 lbs.	4 lbs.	307
5 Gallon kits	40 lbs.	20 lbs.	1,536
Drum kits	440 lbs.	220 lbs.	16,896

SAFETY PRECAUTIONS:

Use in a well-ventilated area. 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.

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.



Handling Guide



TC-803 Part A SDS



TC-803 Part B SDS

