



RIGID FILLED & UNFILLED URETHANES

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

TC-850 A/B RIGID 75 SHORE D POLYURETHANE CASTING SYSTEM

PRODUCT DESCRIPTION:

TC-850 A/B produces a high impact rigid 75 Shore D material that is commonly used to make computer housings, models of all kinds, artwork, and can also be used for electronic component encapsulation. It provides a working time of 6 - 7 minutes.

PRODUCT HIGHLIGHTS:

- Non-Mercury Based Catalyst System
- High impact rigid material
- Odorless, clean white
- One to two hour demold time
- Excellent for vacuum or pressure casting
- Low viscosity

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D2240	75 ± 2
Density, (g/cc) ASTM D792.....	1.12
Cubic Inches per Pound.....	25.6
Color/Appearance.....	White/Opaque
Tensile Strength, (psi) ASTM D638.....	6,800
Tensile Modulus, (psi) ASTM D638.....	2.1 x 10 ⁵
Elongation, (%) ASTM D638.....	10
Flexural Strength, (psi) ASTM D790.....	9,800
Flexural Modulus, (psi) ASTM D790.....	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.....	0.66
Heat Deflection Temperature ASTM D648:	
66 psi.....	203°F (95°C)
264 psi.....	193°F (89°C)

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

HANDLING PROPERTIES:

Mix Ratio (by weight):	
Part A	100 parts by weight
Part B	50 parts by weight
Mix Ratio (by volume):	
Part A	100 parts by volume
Part B	52 parts by volume
Specific Gravity @ 77°F (25°C):	
Part A	1.10
Part B	1.06
Viscosity, (cps) @ 77°F (25°C) Brookfield:	
Part A	75
Part B	1,350
Mixed.....	160

HANDLING PROPERTIES (continued):

Color:

Part A Pale yellow
Part B Colorless

Work Time, (100-gram mass) @ 77°F (25°C)..... 6 - 7 minutes

Gel Time 7 - 8 minutes

Demold Time @ 77°F (25°C)..... 1 - 2 hours

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.

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-850 A/B with its non-mercury catalyst system does exhibit greater sensitivity to moisture than do similar products that use mercury-containing catalysts. TC-850 A/B should be stored at ambient temperature and the TC-850 “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 prior to use. If further information is required, please contact BJB’s technical staff for assistance.

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..... 8 lbs. A, 4 lbs. B
5 Gallon Kits..... 40 lbs. A, 20 lbs. B
Drum Kits 440 lbs. A, 220 lbs. B

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.