



TC-851 A/B

RIGID 78 SHORE D POLYURETHANE CASTING SYSTEM

PRODUCT DESCRIPTION:

TC-851 A/B produces a high impact rigid 78 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 8 minutes.

PRODUCT HIGHLIGHTS:

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

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D2240	78 ± 2
Density, (g/cc) cured ASTM D792	1.13
Cubic Inches per Pound	25.2
Color/Appearance.....	White/Opaque
Tensile Strength, (psi) ASTM D638.....	7,200
Tensile Modulus, (psi) ASTM D638	2.1 x 10 ⁵
Elongation, (%) ASTM D638	8
Flexural Strength, (psi) ASTM D790	10,300
Flexural Modulus, (psi) ASTM D790.....	2.6 x 10 ⁵
Shrinkage, (in/in) linear 12"x1/2"x1/2".....	0.005
Izod Impact, (ft-lb/in) notched ASTM D256.....	0.65
Heat Deflection Temperature ASTM D648:	
@ 66 psi.....	210° ± 5°F (99° ± 3°C)
@ 264 psi.....	195° ± 5°F (91° ± 3°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:

Part A	1.11
Part B	1.07

HANDLING PROPERTIES (continued):

Viscosity, (cps) @ 77°F (25°C) Brookfield:

Part A	150
Part B	1,400
Mixed	400

Color:

Part A	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 the heat curing process.

NOTE:

TC-851 A/B with its non-mercury catalyst system does exhibit greater sensitivity to moisture than do similar products that use mercury-containing catalysts. TC-851 A/B should be stored at ambient temperature and the TC-851 “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. 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
55 Gallon Drum Kits	400 lbs. A, 200 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.