



# TC-852 A/B

## RIGID 78 SHORE D POLYURETHANE CASTING SYSTEM

### 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
- Exhibits exceptional high heat distortion temperature

### PRODUCT DESCRIPTION:

TC-852 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. TC-852 A/B is an excellent hand-castable product that produces parts with heat deflection temperatures up to 220°F (104°C).

### PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240.....	78 ± 2
Specific Gravity, (g/cc) cured ASTM D-792 .....	1.15
Cubic Inches Per Pound .....	25.2
Color/Appearance.....	Off White
Tensile Strength, (psi) ASTM D-638.....	7,000
Tensile Modulus, (psi) ASTM D-638.....	2.4 x 10 <sup>5</sup>
Elongation, (%) ASTM D-638.....	12
Flexural Strength, (psi) ASTM D-790.....	10,500
Flexural Modulus, (psi) ASTM D-790 .....	2.7 x 10 <sup>5</sup>
Shrinkage, (in./in.) linear (12" x 1/2" x 1/2") .....	0.004
Izod Impact, (ft.-lb./in.) ASTM D-256.....	0.70
Heat Deflection Temperature ASTM D-648:	
@ 66 psi 220° ± 5°F (104° ± 3°C)	
@ 264 psi.....	200° ± 5°F (93° ± 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 .....	50 parts by volume
Specific Gravity, (g/cc):	
Part A .....	1.12
Part B .....	1.05

### HANDLING PROPERTIES (continued):

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

Part A .....	70
Part B .....	1,450
Mixed .....	250

Color:

Part A .....	Clear yellow
Part B .....	Clear/slight yellow

Work Time, (100-gram mass) @ 77°F (25°C)..... 4.5 - 5 minutes  
 Demold Time @ 77°F (25°C)..... 1 - 2 hours  
 Cure Schedule.....For maximum physical properties the material should be post cured (see "HEAT CURING").

**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.

**HEAT CURING:**

Enhanced physical properties can be achieved by post-curing TC-852 A/B parts for a period of 2 - 4 hours at a minimum of 150°F (66°C) and to a maximum of 175°F (79°C). Four hours at 160°F (71°C) will provide a final heat distortion temperature @ 264 psi of 200°F (93°C). Parts generally should be supported during post-cures.

**NOTE:**

TC-852 A/B with its non-mercury catalyst system does exhibit greater sensitivity to moisture than do similar products that use mercury-containing catalysts. TC-852 A/B should be stored at ambient temperature and the TC-852 "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 at ambient temperature in a 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. 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.**