



TC-851 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

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.

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240	78 ± 2
Specific Gravity, (g/cc) cured ASTM D-792	1.13
Cubic Inches Per Pound	25.2
Color/Appearance.....	White
Tensile Strength, (psi) ASTM D-638.....	7,200
Tensile Modulus, (psi) ASTM D-638.....	2.1 x 10 ⁵
Elongation, (%) ASTM D-638.....	8
Flexural Strength, (psi) ASTM D-790.....	10,300
Flexural Modulus, (psi) ASTM D-790	2.6 x 10 ⁵
Shrinkage, (in./in.) linear 12"x1/2"x1/2".....	0.005
Izod Impact, (ft.-lb./in.) notched ASTM D-256	0.65
Heat Deflection Temperature ASTM D-648:	
@ 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, (g/cc):

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	Clear, pale amber
Part B	Clear

Work Time, (100-gram mass) @ 77°F (25°C)..... 8 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-851 parts for a period of 2 - 4 hours at a minimum of 150°F (66°C) and to a maximum of 180°F (82°C). Four hours at 180°F (82°C) will provide a final heat distortion temperature @ 264 psi of 195°F (91°C). Parts generally should be supported during post-cures.

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 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. 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.

NON-WARRANTY "Except for a warranty that materials substantially comply with the data presented in Manufacturer's latest bulletin describing the product (the basis for this substantial compliance is to be determined by the standard quality control tests generally performed by Manufacturer), all materials are sold "AS IS" and without any warranty express or implied as to merchantability, fitness for a particular purpose, patent, trademark or copyright infringement, or as to any other matter. In no event shall Manufacturer's liability for damages exceed Manufacturer's sale price of the particular quantity with respect to which damages are claimed."