



TC-821 A/B

RIGID 84 SHORE D POLYURETHANE CASTING SYSTEM

PRODUCT DESCRIPTION:

TC-821 A/B produces a high impact rigid 84 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.

PRODUCT HIGHLIGHTS:

- Convenient 1:1 by volume ratio
- Non-mercury catalyst system
- RoHS compliant
- High impact rigid material
- Translucent-Easy to color
- Fast demolds
- Excellent for vacuum, pressure, hand, and rotational casting
- Exhibits high heat distortion temperature

PHYSICAL PROPERTIES:

| | |
|---|-----------------------|
| Hardness, Shore D ASTM D 2240-04e1 | 84 ± 2 |
| Density, (g/cc) ASTM D 792-00 | 1.18 |
| Cubic Inches per Pound | 24.7 |
| Color/Appearance..... | Translucent/colorless |
| Tensile Strength, (psi) ASTM D 638-03 | 7,600 |
| Tensile Modulus, (psi) ASTM D 638-03..... | 2.4 x 10 ⁵ |
| Elongation, (%) ASTM D 638-03..... | 11.5 |
| Flexural Strength, (psi) ASTM D 790-03 | 11,500 |
| Flexural Modulus, (psi) ASTM D 790-03 | 3 x 10 ⁵ |
| Shrinkage, (in/in) linear 12"x1/2"x1/2" | 0.005 |
| Izod Impact, notched (ft-lb/in) ASTM D 256-05 | 0.75 |
| Heat Deflection Temperature, ASTM D 648-04: | |
| @ 66 psi..... | 195°F (91°C) |
| @ 264 psi..... | 170°F (77°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 90 parts by weight

Mix Ratio (by volume):

- Part A 100 parts by volume
- Part B 100 parts by volume

Specific Gravity:

- Part A 1.19
- Part B 1.06

HANDLING PROPERTIES (continued):

| | |
|--|---------------|
| Viscosity, (cps) @ 77°F (25°C) Brookfield: | |
| Part A | 60 |
| Part B | 2,500 |
| Mixed | 1,200 |
| Color: | |
| Part A | Yellow |
| Part B | Colorless |
| Work Time, (100-gram mass) @ 77°F (25°C) | 2 minutes |
| Demold Time @ 77°F (25°C) | 30-60 minutes |

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.

NOTE:

Re-blend the “B” component thoroughly prior to use. It is advisable to evacuate entrapped air prior to casting this system. The use of a de-airing agent, (BJB’s AF-4), can speed up the process. 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, 7.2 lbs. B |
| 5 Gallon Kits..... | 40 lbs. A, 36 lbs. B |
| 55-Gallon Drum Kits..... | 400 lbs. A, 360 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."