

## TC-872 A/B

### RIGID 70 SHORE D HIGH HEAT RESISTANT POLYURETHANE CASTING SYSTEM

**PRODUCT DESCRIPTION:**

TC-872 A/B is a RoHS compliant, non-mercury based catalyst polyurethane system that produces a tough 70 shore D material. This system has an exceptionally high impact and a high heat deflection temperature which in some cases can be post cured without having to use fixtures.

**PRODUCT HIGHLIGHTS:**

- High heat resistance
- High Impact
- Non-mercury
- RoHS compliant
- Working time of 10-12 minutes

**PHYSICAL PROPERTIES:**

|  |                         |
|--|-------------------------|
| Hardness, Shore D ASTM D2240-04e1 .....                    | 70 ± 2                  |
| Density, (g/cc) ASTM D792-00 .....                         | 1.13                    |
| Cubic Inches per Pound .....                               | 25.5                    |
| Color/Appearance, (Note #2) .....                          | Translucent pale yellow |
| Tensile Strength, (psi) ASTM D638-03 .....                 | 3,310                   |
| Tensile Modulus, (psi) ASTM D638-03 .....                  | 71,350                  |
| Elongation, (%) ASTM D638-03 .....                         | 28.3                    |
| Flexural Strength, (psi) ASTM D790-03 .....                | 3,315                   |
| Flexural Modulus, (psi) ASTM D790-03 .....                 | 84,680                  |
| Shrinkage, (in/in) linear 12"x ½"x ½" .....                | 0.004                   |
| Izod Impact, notched (ft-lb/in) ASTM D256-05 .....         | 1.78                    |
| Heat Deflection Temperature, (@ 66 psi) ASTM D648-04 ..... | 240°F (116°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 .....                               | 35 parts by weight  |
| Mix Ratio (by volume):                     |                     |
| Part A .....                               | 100 parts by volume |
| Part B .....                               | 32 parts by volume  |
| Specific Gravity:                          |                     |
| Part A .....                               | 1.06                |
| Part B .....                               | 1.16                |
| Viscosity, (cps) @ 77°F (25°C) Brookfield: |                     |
| Part A .....                               | 830                 |
| Part B .....                               | 650                 |
| Mixed .....                                | 750                 |

**HANDLING PROPERTIES (continued):**

Color:

Part A.....Colorless  
Part B.....Amber

Work Time, 100g mass @ 77°F (25°C).....10-12 minutes

Gel Time .....13-15 minutes

Demold Time @ 77°F (25°C) .....2-3 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.

**NOTE #1:**

**Important: Shake or re-blend both ‘A’ and ‘B’ components separately prior to weighing and combining.** It is advisable whenever possible to evacuate entrapped air prior to casting this system. The use of a de-airing agent can speed up the process. BJB’s AF-4 antifoam works best as the de-airing agent. In conjunction with these support products BJB offers pigments in a wide variety of colors and stainless steel mixers called “Jiffy Mixers”. For additional information on the use of this product, refer to BJB Guidelines for Handling Polyurethane Products. If further information is required, please call BJB’s technical staff for assistance.

**NOTE #2:**

The natural color of TC-872 A/B is a translucent pale yellow. When the cured material is exposed to direct sunlight or strong UV light, the material will turn to an amber/orange color within approximately 2 hours.

**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, 2.8 lbs. B  
5-Gallon Kits .....40 lbs. A, 14 lbs. B  
55-Gallon Drum Kits .....400 lbs. A, 140 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.**