



TC-871 A/B

75 SHORE D URETHANE CASTING SYSTEM

PRODUCT HIGHLIGHTS:

- ✓ Convenient 1:1 ratio by weight
- ✓ High impact semi-rigid material
- ✓ Odorless, clean light color/with oil free surfaces
- ✓ Problem free; superior to most oil filled fast castable products
- ✓ Relatively moisture insensitive
- ✓ Easily pigmented to most colors

PRODUCT DESCRIPTION:

TC-871 A/B produces a high impact, semi-rigid, 75 Shore D material that is commonly used to make various cast parts, prototypes, models and artwork components. TC-871 A/B provides substantially high tensile and flexural strength, elongation and impact resistance as well as heat sag resistance for a urethane product in this hardness.

TYPICAL PRODUCT USES:

- ✓ Computer Housings
- ✓ Models of all kinds
- ✓ Artwork components
- ✓ Architectural models
- ✓ Gears, wheels, fans
- ✓ Transportation cases
- ✓ Miniatures, movie props, parts
- ✓ Simulated injection molded pieces

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240	75 ± 2
Density, (g/cc) ASTM D-792.....	1.09
Cubic Inches per Pound	25.2
Color/Appearance.....	Light Cream
Tensile Strength, (psi) ASTM D-638.....	4,250
Elongation, (%) ASTM D-638.....	38
Flexural Strength, (psi) ASTM D-790	5,600
Flexural Modulus, (psi) ASTM D-790	1.65×10^5
Shrinkage, (in./in.) linear (12" x 1/2" x 1/2")	0.005
Izod Impact, notched (ft.-lb./in.) ASTM D-256	1.40
Heat Deflection Temperature, (66 psi) ASTM D-648.....	165°F (74°C)

HANDLING PROPERTIES:

Mix Ratio (by weight):

Part A 100 parts by weight
Part B 100 parts by weight

Mix Ratio (by volume):

Part A 90 parts by volume
Part B 100 parts by volume

Specific Gravity:

Part A 1.18
Part B 1.04

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

Part A 200
Part B 500
Mixed 250

Color:

Part A Translucent yellow
Part B Off white

Work Time, 100g mass @ 77°F (25°C) 13 - 15 minutes

Demold Time @ 77°F (25°C) 4 - 5 hours

Cure Schedule 3 - 5 days at 77°F (25°C) or see Heat Curing

HEAT CURING:

Enhanced physical properties can be achieved by heat-curing TC-871 A/B parts for a period of 4 to 6 hours at a minimum of 150°F (66°C) and to a maximum of 175°F (79°C). Six hours at 160°F (71°C) will provide a final heat distortion temperature of 160° - 165°F (71° - 74°C). Parts generally should be supported during heat curing.

NOTE:

It is advisable whenever possible to evacuate entrapped air prior to casting this system. The use of a de-airing agent can speed the process. BJB's AF-4 antifoam works best as the de-airing agent. For storage, a dry gas blanket is available in aerosol cans. 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.

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. Part B should be re-mixed before use until uniform in appearance.

PACKAGING:

Gallon Kits 8 lbs. A, 8 lbs. B
5 Gallon Kits 40 lbs. A, 40 lbs. B
55-Gallon Drum Kits 400 lbs. A, 400 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.