



TC-891 A/B FR

RIGID 80 SHORE D URETHANE CASTING SYSTEM

FIRE RETARDANT

PRODUCT DESCRIPTION:

TC-891 A/B FR incorporates a non-mercury based catalyst system that produces a tough 80 shore D material with a 12-minute work time. This system can be used to hand pour large electronic housing, models of all kinds, and point of purchase items.

PRODUCT HIGHLIGHTS:

- ✓ Non-mercury
- ✓ Demold time: 3-4 hours at ambient temperature in a silicone rubber mold (1/8" thick section)
- ✓ Fire retardant material. Meets UL 94 V0

PHYSICAL PROPERTIES:

Hardness, Shore D ASTM D-2240.....	80 ± 2
Density, (g/cc) ASTM D-792.....	1.31
Cubic Inches per Pound	21.9
Color/Appearance.....	White/Opaque
Tensile Strength, (psi) ASTM D-638.....	6,400
Tensile Modulus, (psi) ASTM D-638.....	2.63x10 ⁵
Elongation, (%) ASTM D-638.....	4.6
Flexural Strength, (psi) ASTM D-790.....	11,450
Flexural Modulus, (psi) ASTM D-790	3.29x 10 ⁵
Shrinkage, (in./in.) linear 12" x 1/2" x 1/2"	0.004
Izod Impact, notched (ft.-lb./in.) ASTM D-256	0.55
Heat Deflection Temperature, (@66 psi) ASTM-D-648	195°F (91°C)
(@264 psi) ASTM-D-648.....	183°F (84°C)

Note: Reported physical properties based on elevated temperature cured test specimens.

HANDLING PROPERTIES:

Mix Ratio (by weight):

Part A	70 parts by weight
Part B	100 parts by weight

Mix Ratio (by volume):

Part A	79 parts by volume
Part B	100 parts by volume

Specific Gravity:

Part A	1.18
Part B	1.33

HANDLING PROPERTIES (Cont'd):

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

Part A	325
Part B	2,700
Mixed	975

Color:

Part A	Yellow
Part B	White

Work Time, 100g mass @ 77°F (25°C)	12-14 minutes
Gel Time	13-15 minutes
Demold Time @ 77°F (25°C)	3-4 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:

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-5 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." If help is required call BJB for assistance. 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.

PACKAGING:

Gallon Kits	5.6 lbs. A, 8 lbs. B
5-Gallon Kits	28 lbs. A, 40 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."