

## TC-690 A/B

### 90 SHORE A CASTABLE ALIPHATIC POLYURETHANE ELASTOMER

TC-690 A/B is a two-component polyurethane elastomer compound. This product is a safe, easy-to-handle, room temperature mixing and curing system that contains no TDI, MDI, MDA or MOCA. The low shrinkage, superior toughness, and excellent detail reproduction of TC-690 A/B makes this system ideal for general-purpose castings and quality tooling operations. TC-690 A/B contains UV ray stabilizers to provide added protection when used in outdoor applications.

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Hardness, Shore A	ASTM D2240	90 ± 5
Density (g/cc)	ASTM D792	1.09
Cubic Inches per Pound	N/A	25.9
Color/Appearance	Visual	Transparent Pale Yellow
Tensile Strength (psi)	ASTM D412	1,930
Elongation (%)	ASTM D412	700
Tear Strength (pli)	ASTM D624	280
Shrinkage (in/in) linear	ASTM D2566 @ 1" depth	0.002

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	100	45
Mix Ratio by volume	100	45
Specific Gravity @ 77°F (25°C)	1.07	1.08
Color	Colorless	Amber
Viscosity (cps) @ 77°F (25°C) Brookfield	6,300	90
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	2,450	
Work Time, 100g mass @ 77°F (25°C)	12 – 15 minutes	
Gel Time	17 – 20 minutes	
Demold Time @ 77°F (25°C)	4 – 6 hours	

Properties above are typical and not for specifications.

## CURE SCHEDULE/HEAT CURING:

Most of the physical properties can be achieved in 5-7 days at 77°F (25°C). You may use your own post-cure schedule but the physical properties may vary from BJB's cure schedule of 1-3 hours at 77°F (25°C) followed by 16 hours at 160 °F (71). Do not exceed curing temperatures of 200°F (93°C).

## STORAGE AND HANDLING:

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 6 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

PACKAGING	Part A	Part B	Cubic Inches per Kit
5-Gallon Kits	40 lbs.	18 lbs.	1,502

## 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.**

**⚠WARNING:** This product can expose you to chemicals including Butyl benzyl phthalate (BBP), which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



Handling Guide