

TC-300 A/B RIGID POLYURETHANE FOAM 3# DENSITY



The TC-300 A/B polyurethane foam system is a series of rigid, closed cell foams available in a variety of densities. The TC-300 can be easily mixed by hand in small batches using a rapid, vigorous mixing action or by using a Jiffy Mixer® in a drill to provide a high-shear mix in small to large quantities. For low to high production, these foam systems can also be machine dispensed using BJB's Centerpointe Meter-Mix equipment. Cured parts can be sanded, stapled, painted or stained within a short time after demolding. Also available in 6# and 10# densities.

- Easy to hand mix or machine cast
- Fast Demolds
- Flows well into mold cavities
- Excellent physical properties

PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Density, (free rise) lbs/ft ³	--	2.5 – 3.5
Compressive Strength (psi)	ASTM D1621	50
Tensile Strength (psi)	ASTM D1623	80
Flexural Strength (psi)	ASTM D790-84A	100
K Factor @ 77°F (25°C)	ASTM C177-85	0.15
Closed Cell Content (%)	ASTM D2856	95
Water Vapor Transmission (perms/in)	ASTM E96	1.8
Dielectric Constant, 1 MHz	ASTM D150	1.032
Dissipation Factor, 1 MHz	ASTM D150	0.0021

HANDLING PROPERTIES (All densities)	Part A	Part B
Mix Ratio by weight	100	100
Mix Ratio by volume	87	100
Specific Gravity @ 77°F (25°C)	1.23	1.07
Color	Brown	Amber
Viscosity (cps) @ 77°F (25°C) Brookfield	250	900 – 1,200
Cream Time	40 – 50 seconds	
Gel Time	2 – 4 minutes	
Tack Free Time	3 – 4 minutes	
Demold Time	30 – 45 minutes	

Properties above are typical and not for specifications.

MOLD PREPARATIONS:

The mold should be well sealed and released. Foams will seek moisture through release waxes and stick to mold surfaces if an insufficient seal exists. Sealing can be accomplished by using acrylic or other similar sealers. The mold should be warmed to between 75-85°F (24-29°C) prior to casting the first part. Once a mold is heated and cycled it will maintain heat for continued production.

Release systems vary in accordance to the type of mold used, however, as a general product we recommend Challenge 95 Release or a mold release such as Partall paste wax from our line of products. As a rule, silicone based releases do not work with either the flexible or rigid foam groups of materials. The silicone migrates and often causes poor surface conditions. Silicone will also inhibit the adhesion of paints and over-coatings.

The best molds for production (rather than prototype or limited production parts) are either machined aluminum molds or epoxy molds. Epoxy molds offer the least expensive method for long term use.

STORAGE:

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	3-Pound Density Free Rise* Cubic Inches per Kit	6-Pound Density Double Load* Cubic Inches per Kit
Quart Kits	2 lbs.	2 lbs.	2,304	1,152
Gallon Kits	8 lbs.	8 lbs.	9,216	4,608
5-Gallon Kits	40 lbs.	40 lbs.	46,080	23,040
55-Gallon Drum Kits	480 lbs.	480 lbs.	552,960	276,480

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 Ethylene oxide, 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.



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