

## TC-5045 A/B 45 SHORE A ROOM TEMPERATURE CURING SILICONE

TC-5045 A/B is a room temperature, addition/platinum curing silicone rubber designed for mold making, encapsulation applications, pressure pads, gaskets, and various types of parts. It is an excellent mold material for casting rigid and flexible urethane systems. It may also be used as a mold making material for casting low melting metals in continuous operations to 650°F (344°C) and sporadic applications of 850°F (454°C). TC-5045 A/B has proven to be less inhibited in its cure than standard platinum based silicones. It has a very favorable CTE for heat expandable mandrels used in composite tooling.

PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Hardness, Shore A	ASTM D2240	45 ± 5
Density (g/cc)	ASTM D792	1.33
Cubic Inches per Pound	N/A	20.5
Color/Appearance	Visual	Pink/Opaque
Tensile Strength (psi)	ASTM D412	756
Elongation (%)	ASTM D412	400
Tear Strength (pli)	ASTM D624 Die B	96
Shrinkage (in/in) linear	ASTM D2566 @ 1" depth	Nil
Coefficient of Thermal Expansion (in/in/°F)	ASTM831	14.64 x 10 <sup>-5</sup>
Dielectric Constant, 100 Hz	ASTM D150	3.187
Dissipation Factor, 100 Hz	ASTM D150	0.0054
Dielectric Constant, 100 kHz	ASTM D150	3.139
Dissipation Factor, 100 kHz	ASTM D150	0.0014

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	100	10
Mix Ratio by volume	100	13
Specific Gravity @ 77°F (25°C)	1.38	1.03
Color	Tan	Red Oxide
Viscosity (cps) @ 77°F (25°C) Brookfield	56,900	900
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	25,500	
Work Time, 100g mass @ 77°F (25°C)	45 minutes	
Gel Time	60 minutes	
Demold Time @ 77°F (25°C)	16 – 24 hours	
Demold Time @ 150°F (65.6°C)	2 – 4 hours	

## **INHIBITION:**

Although TC-5045 A/B has proven to be less inhibited in curing against most substrates some materials may cause inhibition or neutralization of the curing agent. Inhibition may easily be determined by brushing a small quantity of TC-5045 A/B over a localized area of the surface to be reproduced. If the TC-5045 A/B is gummy or uncured after the curing time, then you know the mold surface is acting as an inhibitor. Molds made from wood, plaster, metal or plastic should not cause inhibition if they are clean. To insure against possible problems, it is advisable to spray a RF barrier film (BJB product RF-5215) over any questionable surfaces. This is the best way of treating clays and surfaces that cause inhibition.

## **STORAGE:**

Store ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 12 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
Quart Kits	2 lbs.	3.2 oz.	46
Gallon Kits	8 lbs.	13 oz.	182
5-Gallon Kits	40 lbs.	4 lbs.	902
55-Gallon Drum Kits	450 lbs.	45 lbs.	10,148

## **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. Solvent 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.**



Silicone Handling Guide



TC-5045 Part A SDS



TC-5045 Part B SDS