



**BCC PRODUCTS, INC.**

FAST CAST – EPOXIES – ADHESIVES - POLYSULFIDES - URETHANES – POLYESTER PASTES – TOOLING BOARDS – RELEASE AGENTS – SILICONES



**BLEHM PLASTICS**

## **SILICONE RTV RUBBER**

(High Strength, Molding  
(Potting, Encapsulating))

**BC9040T**

Silicone

**BC 9040T** is a clear, addition/platinum cure, two-component, flowable compound that, regardless of thickness or confinement, cures at room temperature or by application heat. The cured rubber is high strength and high tear with good elongation.

### Application

BC9040T is a mold-making material recommended for repetitive production of intricate shapes cast in epoxy or urethane resins. It is also used in the potting of electronic components and in protecting sensitive assemblies against thermal shock and vibration.

### Instruction for Use

Temperatures above 100° F in the modeling and encapsulating area should be avoided to prevent premature expiration of pot life. Mixing containers should be clean and dry before use and then should be filled to 1/4 capacity to allow room for mixing and deaeration.

BC 9040T base is mixed with Catalyst-BC 9040T in a 10:1 ratio by weight. Mixing may be done by hand with a spatula or by machine. When mixing by hand, material clinging to sides and bottom should be folded into main contents twice. When mixing is done with a power mixer, two fifteen second cycles are generally sufficient for thorough mixing. Avoid prolonged mixing at high speeds as this will generate heat and decrease the pot life of the material.

### Deaeration

Air entrapped during the mixing cycle must be removed to eliminate voids in the cured compound. Place the mixture in a vacuum of 29 inches of mercury. The mixture will expand to 4-5 times its original volume, crest and recede approximately to its original level. Continue the deaeration for an additional 1-2 minutes and the material will be ready to use.

### Pouring

Pour the silicone material in a continuous stream from approximately 3 inches above the pattern and allow to settle for 5 minutes. Remaining contents are then poured into the mold frame.

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# BC9040T

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## Adhesion

Two components RTV rubbers show no adhesion to any material except RTV rubbers or conventional silicone rubbers, so primers are required to achieve adhesion to other materials.

## Cure Compatibility

Cure inhibition (poisoning) of BC 9040T may be caused by various materials used in the master pattern. When the BC 9040T comes in contact with such materials as sulphur containing clays, phosphorous, nitrogen containing materials, organometallic salt (Dibutyl-tin dilaurate, etc.) certain organic adhesives and tapes, cure is hindered. This condition is characterized by a gummy appearance in the surface of the silicone rubber at the interface of the silicone and substrate. A pretest of compatibility is recommended for each suspect substrate to determine whether a barrier coat or other inhibition prevention measure is necessary.

## Storage and Handling

BC 9040T base and Catalyst-BC 9040T will remain useful for six (6) months from date of shipment when stored in their original unopened containers in a dry place at or below 80 °F. Avoid contact of Catalyst-BC 9040T with acidic bases and oxidizing materials as such can generate flammable gas.

## General Properties

BEFORE CURE		AFTER CURE (1.5 hours @ 60° C)	
Appearance	Translucent	Specific Gravity @ 25° C	1.10
Viscosity, 25° C, cps		Hardness, Shore A	40
Base Compound	52,000	Elongation %	375
Catalyst	1,000	Tensile Strength (psi)	750
Mixed	38,000	Tear Strength (ppi)	85
Work Time @ 25° C	1.5 Hours	Heat Resistance (° F)	~ 450
		(If metal such as pewter is poured into mold at ~ 550° F BC9040T will melt)	

### ELECTRICAL (AS CURED)

Arc Resistance	180 seconds
Dielectric Strength	584 (V/Mil)
Dielectric Constant	3.1 (100Hz)
Dielectric Constant	3.1 (1 Hz)
Dissipation Factor	0.001 (100Hz)
Dissipation Factor	0.001 (1Hz)
Volume Resistivity	1 x 10 <sup>15</sup> (ohm-cm)

### TYPICAL CURE TIMES

75° F	24 hrs
100° F	95 minutes
200° F	5 minutes

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