



# TECHNICAL DATA SHEET

TDS# 1517

DATE: JUNE 2013

## BACON INDUSTRIES

### THERMALLY CONDUCTIVE SILICONE COMPOUND SC-17

Silicone Compound SC-17 is a filled silicone-based polymer which cures to a resilient solid. It has high thermal conductivity, good thermal stability, and excellent electrical properties. It is useful in electronic applications requiring a heat conductive encapsulant. The cured compound may be knife-cut for replacement of components. New compound may be poured in place and cured to re-form a tight seal.

### RECOMMENDED MIXING AND HANDLING PARAMETERS

Resin	SC-17
Activator	BA-58
Parts by weight of activator required per hundred of adhesive	2.5
Recommended potting temperature, °F	77
Working life at potting temp, hours	16
Viscosity of mixed compound at 77°F, poise	2500
Recommended cure, hr/°F	1/212 (1)

### TYPICAL PROPERTIES OF CURED ADHESIVE:

Color	White
Specific Gravity	2.23
Hardness	
Shore A	74
Shore D	25
Thermal Conductivity (ASTM C518-76) at 75°F	4.2
Coefficient of Linear Thermal Expansion, (est) $10^{-6}/^{\circ}\text{F}$	60
Lap Shear Strength to Aluminum, psi	
Unprimed	200
Primed	400
Volume Resistivity, ohm-cm	$8 \times 10^{14}$

#### NOTE:

1. Alternate cures for Silicone Compound are as follows: 4 hours at 150°F or 16 hours at 77°F.

(over)

### **INSTRUCTIONS FOR USE:**

**CAUTION:** Containers, molds and components used in contact with these compounds must be clean and dry. Traces of certain rubbers, plastics and chemicals, especially amines, may inhibit the cure.

These materials have marginal adhesion to metals and non-silicones. Use Primer SP-2 which will markedly improve adhesion to non-silicone materials. Apply the primer by brush, spray or dip. A uniform coat of 0.1 to 0.3 mil provides the strongest bond. Air dry for one hour prior to the application of the Silicone Compound SC-17.

Mix well the compound in the container in which it is received. Some settling occurs during storage and it is important to insure complete uniformity from the top to the bottom of the container. At a temperature between 70°F and 160°F, add the specified amount of activator to the compound. Mix well. Deaerate at a minimum vacuum of 26 inches of mercury. Apply the compound and cure as indicated.

### **SHELF LIFE:**

The shelf life of this compound and activator is in excess of six months when stored in unopened containers at an average temperature below 85°F. The shelf life of SC-17 Freeze Paks is at least four months when stored at a temperature of -40°F or colder.

### **AVAILABILITY:**

SC-17 and Activator BA-58 are available in kits. For package sizes and prices, see Data Sheets No. 1201 and 1211. SC-17 is also available pre-mixed and frozen in FREEZE PAKS, see Data Sheet No. 2031.