

## Set-Sil P-1710

Two-component Addition Cured Silicone Elastomer

**Set-Sil P-1710** RTV silicone is a two-component, addition reaction, platinum-catalyzed system that cures at room temperature. It is available in Grey, Black and Red. **Set-Sil P-1710** has a low viscosity, is easy to process and its cure rate can be accelerated with heat. **Set-Sil P-1710** has excellent electrical and thermal properties and is reversion resistant. In addition, **Set-Sil P-1710** offers outstanding fire resistant properties and is approved for UL 94VO.

<u>Properties-Uncured</u>	Part A	Part B	
Color, visual	Black	White	
Viscosity, cps	3,500	2,000	ASTM D 1084
Mix Ratio by weight	1:	1	
Specific Gravity	1.35	1.33	
Mixed Viscosity, cps	3,000		ASTM D 1084
Pot Life @ 25°C, hours	2-4		
Cure Schedule	4 hrs @ 150 °F (63 °C), 1 hr @ 212 °F (100 °C), 15 min @ 302 °F (150 °C)		
Shelf Life @ 25°C, months	12		

### Physical Cured Properties

Durometer, Shore A		ASTM D 1084
Tensile Strength, psi	500 psi	ASTM D 412
Tensile Elongation, %	150%	ASTM D 412
Tear Strength, ppi	30	
Coefficient of Thermal Expansion, °C	$17.0 \times 10^{-5}$	
Thermal Conductivity, (cal/cm <sup>2</sup> /°C/sec/cm)	$7 \times 10^{-4}$	ASTM D 257
Service Temperature, °F	-60 to +425	

### Electrical:

Volume Resistivity, ohms/cm	$1 \times 10^{15}$	
Dielectric Strength, volts/mil	450	ASTM D 149
Dielectric Constant @ 100Hz	3.1	ASTM D 150
Dielectric Factor @ 100Hz	0.008	ASTM D 150

**SEE BACK OF TECHNICAL DATA SHEET FOR WARRANTY.**

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## **APPLICATIONS**

**Set Sil P-1710** is used in the potting and encapsulating of power supplies, amplifiers, relays, transformers, connectors, etc.

## **MIXING INSTRUCTIONS**

Mix 50 parts by weight of **Set-Sil P-1710A** with 50 parts by weight of **Set-Sil P-1710B** in a container that will hold approximately two times the volume being used. Stir thoroughly either by hand or by mechanical mixing. Immediately after mixing, place the material in a vacuum chamber capable of 28 to 29 inches of mercury vacuum. The material will expand and then collapse. Maintain vacuum for an additional two to three minutes and remove. Carefully pour the catalyzed silicone so as not to entrap air.

## **CURE SCHEDULE**

After mixing, **Set-Sil P-1710** will remain work able for a minimum of 2 hours. A cure of 8 hours at 73<sup>0</sup>F(23<sup>0</sup>C) is required before material can be handle. Full cure at room temperature is achieved in 24 hours. Accelerated cure at elevated temperatures can be accomplish based upon the following cure schedule:

**4 hours at 150<sup>0</sup>F (63<sup>0</sup>C)**  
**1 hour at 212<sup>0</sup>F (100<sup>0</sup>C)**  
**15 minutes at 302<sup>0</sup>F (150<sup>0</sup>C)**

## **ADHESION:**

**For maximum adhesion, use Set-Sil primer.**

## **SURFACE PREPARATION:**

Prior to potting or encapsulating all surfaces should be cleaned with suitable solvent such as naphtha.

## **TEMPERATURE STABILITY:**

**Set-Sil P-1710** A and B cures chemically to a thermoset material that will not melt or appreciably soften, even at elevated temperatures. Under exposure to lower temperatures, **Set-Sil P-1710** will not approach a stiffening point until -55<sup>0</sup>C (-67<sup>0</sup>F).

## **Warranty**

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