Silicones, Inc.

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RTV-2 Silicones Since 1974

P Series for Electronic Applications

Product Information

General Information

P-4 is a low viscosity, transparent silicone rubber used for potting or encapsulation of intricate parts where visual inspection is required. **P-4** offers electrical stability, radiation resistance and will resist reversion when heated in confined spaces. Although it has high tensile strength, it can be easily cut and removed for part repair and then repoured.

P-17 has excellent electrical insulating and thermal properties. It has improved mechanical properties and excels in those applications where mechanical stresses are applied. It is available in a 1:1 mixing ratio (***black*** Activator) in addition to the standard 10:1 mixing ratio (***red*** Activator).

P-157 is a low viscosity, transparent silicone rubber gel used for potting or encapsulating intricate electrical parts where visual inspection is necessary. **P-157** has excellent electrical insulating properties and provides superior damping characteristics.

Typical Properties

Uncatalyzed Base	P-4	P-17	P-17	P-157
Color	Clear	White	White	Clear
Viscosity (± 5,000 cps)	7,500	25,000	25,000	10,000
Mixing Ratio (B/A)				
By weight:	100/10	100/100	100/10	100/10
By volume:	100/10.6	100/100	100/13.6	100/10
Mixed Viscosity (± 5,000 cps)	4,000	25,000	15,000	5,000
Working Time (Hours)	2 to 3	1 to 2	1 to 2	2 to 4
Cure Time (Hours)	16 to 24	16 to 24	16 to 24	16 to 24
Shelf Life (Months)	6	6	6	6

Vulcanized (cured) Properties (7 days @ 70° F / 50% relative humidity)

Shore A Hardness (±4)				
One day / 7 Days:	41 / 41	50 / 50	50 / 50	*gel*
Tear Resistance (ASTM D624)	11 ppi	27 ppi	27 ppi	*gel*
Tensile Strength (ASTM D412)	700 psi	495 psi	495 psi	*gel*
Elongation (ASTM D412)	150%	150%	150%	*gel*
Service Temperature, ° F	-60 to 675	-60 to 650	-60 to 650	-60 to 600
Shrinkage	*nil*	*nil*	*nil*	*nil*
Specific Gravity	1.01	1.30	1.28	1.00
Coverage, in^3 / lb	27.4	21.3	21.8	27.5
Arc Resistance, seconds	115	120	120	115
Dielectric Strength, volts/mil	450	450	450	350
Dielectric Constant @ 100 HZ	2.7	3.0	3.0	*n.a.*
Dissipation Factor @ 100 HZ	9×10^{-4}	8×10^{-3}	8×10^{-3}	*n.a.*
Volume Resistivity, ohms/cm	2×10^{15}	1×10^{15}	1×10^{15}	1×10^{14}
Thermal Cond., cal/cm^2/°C/sec/cm	3×10^{-4}	7×10^{-4}	7×10^{-4}	*n.a.*
Coef. of Thermal Exp., cm/cm/°C	9×10^{-4}	8×10^{-4}	8×10^{-4}	1×10^{-4}