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ENGINEERING DATA SHEET
SILICONE CONFORMAL COATING 3180

3180 is a highly flexible silicone coating used for electronic circuit and component protection where weatherability, moisture, and UV resistance are important. This material may be applied by brushing, banding, dipping, or through automatic dispensing equipment. When properly cured, this product yields a chemically inert film which helps to prevent the effects of corrosion, moisture, oxidation, abrasion, and thermal shock. No ingredients that are corrosive or harmful to electronic components are used in this material. It meets the requirements for MIL-I-46058C Type SR and has a fluorescent system for detection under UV light.

COMPOSITION PROPERTIES:

Color	Transparent Clear
Viscosity	950-1,000 cps (Brookfield LVT, Spin #2, 12 rpm, 25°C)
Tack Free Time	10 minutes @ 25°C
Cure Schedule	10 minutes @25°C + 10 minutes @ 80°C or 24 hours @ 25°C
Service Temperature	-45 to 200°C
Dielectric Breakdown	>400 volts/mil
Insulation Resistance	>1 x 10 ¹³
Flexibility	Excellent (No cracking in bend over 1/8" mandrel)
Thinner*	Toluene
Shelf Life	One year @ 25°C (Sealed Container)

* 3180 is optimized for brushing/banding applications and thinning is not normally necessary. However, toluene may be added, with thorough blending, to replace solvent loss or to make slight adjustments for ease of application. In handling and using organic solvents, the safety precautions recommended in the MSDS should be observed.

PROCESSING PARAMETERS:

Surface Preparations	Be sure that all surfaces to be coated with 3180 are clean, dry, and free of any grease or oil.
Mixing	The material should be thoroughly stirred or shaken prior to use.
Application	Material is typically applied by brushing, banding, or dipping. Wet films should be allowed to air dry for one hour prior to handling or recoating.
Curing	Excellent results have been obtained by convection curing for 10 minutes @ 80°C. Optimum cure cycles using radiant or convection conveyer ovens are best determined experimentally. Satisfactory results have also been found in some applications with a 24 hour air dry cure @ 25°C.
Cleanup	Use Acetone, MEK, or Aromatic Hydrocarbon solvents.

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