

ADVANCED MATERIALS FOR PERFORMANCE



PC-1000 Epoxy Siloxane Monomer

Technical Bulletin

Polyset PC-1000 is a low viscosity, difunctional silicon-containing epoxy resin with exceptionally high reactivity. PC-1000 is a clear, colorless to very pale yellow fluid which displays low toxicity and is non-mutagenic according to the Ames test.

The following physical and chemical characteristics make PC-1000 a unique product suitable for a wide range of applications:

Colorless to Pale Yello Liquid Physical Appearance 60-100 Viscosity, cps @ 25°C **Specific Gravity** 0.99 Weight per Gallon, lbs/gal 8.3 Thermal Decomposition Point, °C >200 Water Solubility, % <1 **Eye Irritation** Irritant Mutagenicity (Ames Test) Non-Mutagenic

PC-1000 can be employed in typical epoxy resin applications. Curing can be accomplished using a wide variety of curing agents including; amines, anhydrides, polyamides and polysulfides. The presence of the cycloaliphatic epoxy groups in the resin makes it especially suitable for cure with anhydrides. In such applications, amine accelerators can be used. PC-1000 can also be cured photochemically using cationic polymerizations such diaryliodonium as and triarylsulfonium salts. Such cationic polymerizations are especially useful in applications where high cure rates are desirable such as coatings for metals and in printing inks. PC-1000 is compatible with many different commercially available epoxy resins and may be formulated with those resins to modify their reactivity and mechanical characteristics.

The Polyset Company has considerable experience in tailoring formulations based on PC-1000 for specific applications. In addition, Polyset possesses unique thermal and UV epoxy cure systems which provide rapid cure of PC-1000 at low temperatures. We will gladly formulate PC-1000 and other epoxy-based resins to your specifications.

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