Advanced Materials for **PERFORMANCE**

PC-1000 Epoxy Siloxane Monomer

Technical Bulletin

Polyset product no. **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:

Physical appearance Colorless to pale vellow liquid Viscosity 60-100 cps @ 25°C Specific gravity 0.99 Weight per gallon 8.3 lbs/gal Thermal decomposition point >200°C 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 as diaryliodonium 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, the Polyset Company 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 epoxybased resins to your specifications.

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