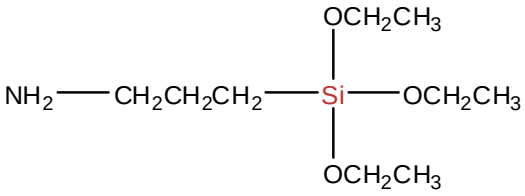
SiSiB® PC1100

Gamma-Aminopropyltriethoxysilane

Chemical Structure



Introduction

SiSiB® PC1100 is a versatile amino-functional coupling agent used over a broad range of applications to provide superior bonds between inorganic substrates and organic polymers. The silicon-containing portion of the molecule provides strong bonding to substrates. The primary amine function reacts with a wide array of thermoset, thermoplastic, and elastomeric materials.

Typical Physical Properties

CAS No.	919-30-2
EINECS No.	213-048-4
Formula	$C_9H_{23}NO_3Si$
Molecular Weight	221.3
Viscosity $_{25°C}$	2 cSt
Boiling Point	215°C [760mmHg]
Flash Point	96°C
Color and Appearance	Colorless transparent liquid
Density $_{25/25°C}$	0.945-0.955
Refractive Index	1.420 [25°C]
Min. Purity	98.0% by GC

Solubility: SiSiB® PC1100 is completely and immediately soluble in water (with reaction), alcohol, and aromatic and aliphatic hydrocarbons. Ketones are not recommended as diluents.

Applications

SiSiB® PC1100 is applied in plastic products (including cables, glassfiber-reinforcement

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plastics etc.), rubber products, adhesives, coatings, pigments dispersion, inks, magnetic materials (plastic magnet and rubber magnet), metallic casting resins and resins concrete, etc.

SiSiB® PC1100 maximizes the physical and electrical properties of mineral-filled phenolics, epoxies, polyamides, polybutylene terephthalate, and a host of other thermoset and thermoplastic composites. Filler wetting and dispersibility in the polymer matrix are also improved.

SiSiB® PC1100 improves adhesion between magnetic powder and organic resins and dispersion of magnetic powder inorganic resins. Also these magnetic appliances attain higher magnetic orientation and excellent magnetic properties, higher mechanical strength, good processability, excellent weathering resistance.

In glass-reinforced thermoset plastics, SiSiB® PC1100 enhances the flexural, compressive, and interlaminar shear strengths before and after exposure to humidity. SiSiB® PC1100 greatly improves wet electrical properties.

With nitrile, polysulfide, epoxy, urethane, and adhesives and sealants, SiSiB® PC1100 improves pigment dispersion and maximizes adhesion to glass, aluminum, and steel.

When SiSiB® PC1100 is used, glass-reinforced thermoplastics, polyamides, polyesters, and polycarbonates exhibit increased flexural and tensile strengths before and after wet exposure.

In glass fiber and mineral wool insulation, as a phenolics resin binder additive, SiSiB® PC1100 imparts moisture resistance and allows recovery after compression.

In shell molding foundry applications, SiSiB® PC1100 strengthens the bond between the phenolics binder and foundry sand.

In grinding wheels, SiSiB® PC1100 promotes an improved, water-resistant bond between the abrasive grit and phenolics resin binder.

SiSiB® PC1100 is an excellent adhesion prompter in urethane, epoxy, and acrylic latex coatings, adhesives, and sealants.

Packing and Storage

SiSiB® PC1100 is supplied in 20Kg plastic drum, 190Kg steel drum or 900Kg IBC container.

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In the unopened original container SiSiB® PC1100 has a shelf life of one year in a dry and cool place.

Notes

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

We specifically disclaim any other express or implied warranty of fitness for a particular purpose or merchantability. We disclaim liability for any incidental or consequential damages.

Please send all technical questions concerning quality and product safety to: silanes@SiSiB.com.

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