SiSiB® PC1300 SILANE

Chemical Name

Diethylenetriaminopropyltrimethoxysilane
Synonym: N-(3-trimethoxysilylpropyl)diethylenetriamine
N-[N’-(2-aminoethyl)aminoethyl]-3-aminopropyl-trimethoxysilane

Chemical Structure

\[
\begin{align*}
\text{H}_2\text{N} & \quad \text{N} \quad \text{N} \\
\text{CH}_2 & \quad \text{CH}_2 & \quad \text{CH}_2 \\
\text{H} & \quad \text{Si} & \quad \text{OCH}_3 \\
\text{N} & \quad \text{OCH}_3
\end{align*}
\]

Introduction

SiSiB® PC1300 is an organofunctional silane possessing three reactive amino groups and a hydrolyzable trimethoxysilyl group. Due to the nature of its amino group, this substance reacts as a strong base. The silane hydrolyzes autocatalytically in the presence of moisture (methanol is released) to form silanols, which can then react with themselves to produce siloxanes or can bind to inorganic substrates. As a bifunctional organosilane, it can also interact with numerous organic polymers and thus function as a molecular bridge (adhesion promoter, surface modifier) between organic and inorganic substrates.

SiSiB® PC1300 is a clear, light to dark yellow liquid with a slight amine-like odor. It is soluble in alcohols, ketones, esters and aliphatic and aromatic hydrocarbon solvents.

Applications

SiSiB® PC1300 can be used as an adhesion promoter in sealants, adhesives and coatings, specifically suited for plastisol sealants.

SiSiB® PC1300 can be used as a surface modifier for fillers.

SiSiB® PC1300 can be used in the production of silyl-modified polymers which serve as binders in adhesives and sealants.
**SiSiB® PC1300 SILANE**

### Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No.</td>
<td>35141-30-1</td>
</tr>
<tr>
<td>EINECS No.</td>
<td>252-390-9</td>
</tr>
<tr>
<td>Formula</td>
<td>C_{10}H_{27}N_{3}O_{3}Si</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>265.43</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>116°C [2mmHg]</td>
</tr>
<tr>
<td>Flash Point</td>
<td>137°C</td>
</tr>
<tr>
<td>Color and Appearance</td>
<td>Clear, light to dark yellow liquid</td>
</tr>
<tr>
<td>Density 25/25°C</td>
<td>1.031</td>
</tr>
<tr>
<td>Refractive Index</td>
<td>1.458 [25°C]</td>
</tr>
<tr>
<td>Purity:</td>
<td>Min.93.0%</td>
</tr>
</tbody>
</table>

### Packing and Storage

SiSiB® PC1300 is supplied in 200Kg steel drum or 1000Kg IBC container.

In the unopened original container SiSiB® PC1300 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.