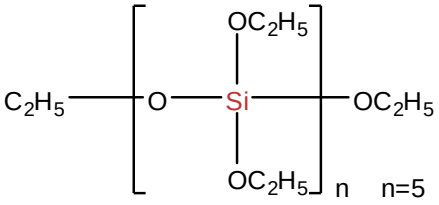
SiSiB® PC5424

Ethyl Polysilicate 40

Chemical Structure



Introduction

SiSiB® PC5424 is a hydrolyzed and oligomerized form of ethyl silicate. It is a mixture of monomers, dimers, trimers and cyclic polysiloxanes. SiSiB® PC5424 is a transparent liquid containing 40% silica (SiO2) by mass, but in practice, in addition to chain condensates, it also contains branch-shaped and ring-shaped condensates.

Typical Physical Properties

CAS No.	11099-06-2 or 68412-37-3
EINECS No.	234-324-0
Formula	$(OSi(OC_2H_5)_3)_5$
Molecular Weight	App.750
Boiling Point	160°C [760mmHg]
Flash Point	Min.62°C
Color and Appearance	Colorless transparent liquid.
Density $_{25/25°C}$	1.05-1.07
Refractive Index	1.397
Viscosity $_{(20°C)}$	5 cps
SiO_2 content	40.0-42.0%
Ethyl Polysilicate	Min.99.0%
Tetraethoxysilane	Max.1.0%
Ethanol	Max.0.5%

Applications

SiSiB® PC5424 is used to deposit silicic acid formed as a result of complete hydrolysis. The resulting silicic acid bonds well to many inorganic substrates, such as ceramic, fillers,

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glass, metal, pigments and synthetic fibers. The deposition of a thin SiO2 layer improves the chemical and the thermal stability and mechanical properties.

SiSiB® PC5424 may be used as a binder in zinc-rich (corrosion resistant) coating.

SiSiB® PC5424 may be used as a starting material for sol-gel process.

SiSiB® PC5424 may be used as a crosslinker component in cold curing silicone rubber systems.

SiSiB® PC5424 may be used as a hardening component in dentistry for impression materials and as binder for embedding material.

SiSiB® PC5424 may be used as a binder in precision foundry industry.

Packing and Storage

SiSiB® PC5424 is supplied in 200Kg steel drum or 1000Kg IBC container.

In the unopened original container SiSiB® PC5424 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.