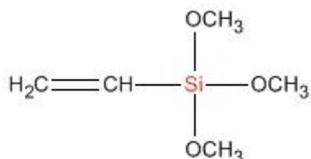


SICOSIL® SICO-V171

Vinyltrimethoxysilane

Chemical structure:**Typical physical properties**

Product No.:	SICOSIL® SICO-V171
Chemical name:	Vinyltrimethoxysilane
CAS No.:	2768-02-7
EINECS No.:	220-449-8
Formula:	C ₅ H ₁₂ O ₃ Si
Appearance:	Colorless transparent liquid
Refractive index(n ²⁵ D):	1.3880 ~1.3980
Purity:	99%

Applications:**Polymer Modification**

SICOSIL® SICO-V171 is used to modify polyethylene and other polymers by grafting its vinyl group to the polymer backbone using a radical initiator, such as peroxide. This provides a polymer with pendant trimethoxysilyl groups that may be used as moisture-activated crosslinking sites via hydrolysis of the alkoxy groups followed by condensation of the resulting silanols.

Crosslinking of Silane-Grafted Polymers.

The reaction of Silane-grafted polyethylene to form a crosslinked or vulcanized polyethylene uses water to form the crosslinks. This technology is widely used around the world for commercial applications in wire and cable insulation, tubing, and other similar uses.

The basic reaction sequence is as follows: polyethylene is reacted (grafted) with vinyltrimethoxysilane, using a peroxide initiator, in an extruder. The grafted polyethylene is then formed into a finished product, such as cable jacketing, wire insulation, or pipe. The forming step is usually done by a second extrusion, during which a catalyst for the moisture-cure step is added. Finally, the formed article is exposed to moisture or hot water to cause hydrolysis of the Silane and condensation to form crosslinks via Si-O-Si bond formation.

Benefits of Crosslinking

- Higher maximum use temperature
- Reduced deformation under load (creep)

Sico Performance Material (Shandong) Co., Ltd

Address: Jining Chemical Industrial Park, Jinxiang, Shandong, China
 Website: www.sicosil.com Email: sales@silanechem.com



Improved chemical resistance
Superior environmental stress crack resistance
Increased abrasion resistance
Improved impact strength
Memory characteristics (shrink film, tubing)
Improved impact strength

Advantages of Silane Crosslinking over Radiation or Peroxide Crosslinking

Low capital investment
Low operating (energy) costs
Higher productivity
Processing versatility
Thick, thin, or variable thicknesses possible
Complex shapes possible
Wider processing latitude (control of premature crosslinking)
Useful with filled composites
Applicable to all polyethylene densities and copolymers.

Packing:

210L Iron Drum: 190kg/drum

1000L IBC Container: 950kg/container

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