

Vinyltrimethoxysilane

Features of Vinyltrimethoxysilane China

- Product Name: Vinyltrimethoxysilane
- Chemical Formula: C₅H₁₂O₃Si
- CAS No.: 2768-02-7
- Dangerous Grade: III Flammable Liquid

Technical Data of Vinyltrimethoxysilane

ITEMS	SPECIFICATION
Appearance	Colorless transparent liquid
Reactive index(n _{25D})	1.3930±0.0050
Assay	99%

Package and Storage:

- 200kg/drum or 950kg/IBC drum
- Store in a cool, dry place. Keep container closed when not in use

Application /Application Industries:

Polymer modification

CG-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.

Cross-linking 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.

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