

Silsource SC-6110 Silicone Fluid

PRODUCT DESCRIPTION

SC-6110 is a Vinyltrimethoxysilane fluid used to modify polyethylene and other polymers by grafting its vinyl group.

This technology is widely used around the world for commercial applications in wire and cable insulation, tubing, and other similar applications.

TYPICAL PRODUCT DATA

(not intended for use in preparing specifications)

Property	Value
Appearance:	Colourless Transparent Liquid
Refractive Index (n^{25}_D):	1.3880 ~ 1.3980
Purity:	99%
CAS:	2768-02-7
Formula:	$C_5H_{12}O_3Si$

TYPICAL APPLICATION

SC-6110 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 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 basic reaction sequence is as follows:

polyethylene is reacted (grafted) with Vinyltrimethoxysilane in an extruder, using a peroxide initiator.

The grafted polyethylene is then formed into a finished product, such as wire insulation, cable jacketing, 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.

The reaction of Silane-grafted polyethylene to form a crosslinked or vulcanized polyethylene uses water to form the crosslinks.

PACKAGING AND AVAILABILITY

SC-6110 is supplied in 200 Kg. metal drums and 1000 Kg. totes, net weight. Samples are available upon request.

STORAGE AND SHELF LIFE

Shelf life is 12 months from date of shipment.

PRODUCT SAFETY INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND CONTAINER LABELS AND SAFETY DATA SHEET FOR SAFE USE, PHYSICAL, ENVIRONMENTAL, AND HEALTH HAZARD INFORMATION.

LIMITATIONS

Not intended for human injection. This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

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