Technical Data Sheet

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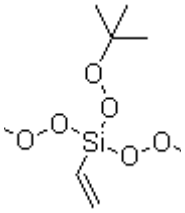
Silfluo LS-VTPS

Peroxy-Functional Vinyl Silane

Description:

Silfluo LS-VTPS is Vinyltris(tert-butylperoxy)silane, a peroxy-functional vinyl silane.
The molecule contains one vinyl group and three tert-butylperoxy groups attached to silicon.
The peroxide groups generate radicals under suitable thermal or chemical activation conditions.
The vinyl group participates in radical reactions in compatible polymer systems.
Used as adhesion promoter or reactive additive in selected peroxide-curing elastomer systems, particularly in fluoroelastomer, polyacrylate, and other peroxide-curing elastomer-to-metal bonding applications.
Supplied as 40% solution in toluene.

Typical Physical Properties

Silfluo Code:	LS-VTPS
Chemical Name:	Vinyltris(tert-butylperoxy)silane
Synonyms	
CAS No. :	15188-09-7
EINECS No. :	239-238-7
Molecular Formula:	$C_{14}H_{30}O_6Si$
Molecular Weight:	322.47
Appearance:	Colorless transparent liquid
Density (25°C, g/cm³):	0.905
Refractive Index (n25/D):	1.4575
Active content:	40% in toluene solution
Chemical Structure:	

Applications:

1. Elastomer-to-metal bonding

Used as adhesion promoter for bonding peroxide-curing elastomers to metal substrates. Verify adhesion performance with the target elastomer compound, metal pretreatment, and cure conditions.

2. Fluoroelastomer systems

Used in fluoroelastomer-to-metal bonding applications using peroxide-curing chemistry. Verify metal surface preparation and cure profile by application testing.

3. Polyacrylate elastomers

Used in polyacrylate elastomer systems requiring peroxide-related curing and metal adhesion. Verify cure behavior and bond strength in the target compound.

4. Peroxide-curing elastomers

Used in peroxide-curing elastomer systems including applications involving phosphatized metal

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surfaces. Verify bond strength, heat aging, and fluid resistance in the target system.
5. Reactive polymer modification
Used as peroxide-functional vinyl silane in polymer modification studies. Confirm processing temperature, decomposition behavior, gel formation, and safety profile before scale-up.

Packing

In 25kg pail, 200kg drum and 1000kg IBC.

Safety and Storage

Store in a cool, dry, well-ventilated environment. Keep containers hermetically sealed under dry nitrogen until ready for use.
The product contains organic peroxide functionality. Avoid heat, shock, friction, and contact with reducing agents or transition metal salts.
Toluene solvent: flammable liquid; handle per local flammable liquid and solvent regulations.

Shelf life: 12 months minimum from manufacture date when stored at ⩽25°C in original tightly sealed unopened containers.

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