



Silfluo LS-VI33

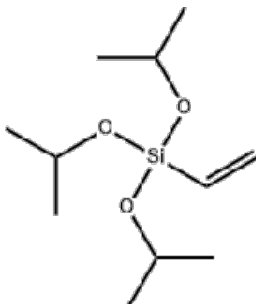
Vinyl Functional Organosilane

Description:

Silfluo LS-VI33 is a highly specialized vinyl-functional silane monomer, chemically identified as Vinyltriisopropoxysilane. Unlike standard vinyl silanes with highly reactive methoxy or ethoxy groups, this advanced molecule features a reactive vinyl double bond coupled with three bulky, sterically hindered isopropoxy groups. This unique molecular architecture is the absolute key to its extraordinary hydrolytic stability in aqueous environments. It is specifically engineered to formulate high-performance, one-component (1K) water-borne acrylic and vinyl emulsions. It provides long-term in-can shelf stability without premature crosslinking or gelation, only reacting to form a highly crosslinked, durable film upon application and curing.

Performance equivalent to industry standards: Momentive CoatOSil 1706, Dow Z-6550.

Typical Technical Properties

Silfluo Code:	LS-VI33
Chemical Name:	Vinyltriisopropoxysilane
Synonyms:	Triisopropoxyvinylsilane
CAS No. :	18023-33-1
EINECS No. :	241-931-4
Molecular Formula:	C ₁₁ H ₂₄ O ₃ Si
Molecular Weight:	232.39
Appearance:	Colorless transparent liquid
Purity (by GC, %):	97.0 min
Density (25°C, g/cm ³):	0.8650~0.8750
Refractive Index (nD 25°C):	1.3940~1.4040
Boiling Point (760mmHg)	180°C
Flash Point (Closed Cup):	<51°C
Chemical Structure:	

Features

1. Exceptional In-Can Stability: The massive steric hindrance of the isopropoxy groups dramatically slows

Nanjing Silfluo New Material Co., Ltd.

1 / 2

Web: www.silfluosilicone.com Email: inquiry@silfluo.com

The offered information of this docs is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are fully satisfactory for end use. Suggestions of use shall not be taken as inducements to infringe any patent. Please confirm with us prior to any problems.

Technical Data Sheet



www.silfluosilicone.com

down the hydrolysis rate in water. This ensures that water-borne formulations containing LS-VI33 maintain excellent viscosity stability and effectiveness even after a year of storage aging.

2. Formaldehyde-Free 1K Systems: Empowers formulators to create environmentally friendly, formaldehyde-free, true one-component (1K) crosslinking emulsions, eliminating the need for toxic external crosslinkers.

3. Reactive Vinyl Crosslinking: The active vinyl double bond readily copolymerizes with acrylic and vinyl monomers during emulsion polymerization, seamlessly grafting the silane functionality onto the polymer backbone.

4. Superior Film Performance: Upon final curing, it creates a densely crosslinked siloxane network that drastically enhances the hardness, scratch resistance, and wet adhesion of the resulting coating.

Applications:

Silfluo LS-VI33 opens up new formulation possibilities for advanced water-borne (WB) coatings:

1. Premium Wood Coatings: Highly recommended for water-based coatings used on kitchen cabinets, industrial woodwork, and advanced furniture, providing superior block resistance and hardness.

2. Industrial Metal Coatings: Enhances the anti-corrosion properties and substrate adhesion of WB coatings for metal furniture, stationary appliances, machinery, and industrial equipment.

3. High-Performance Architectural Paints: Acts as a robust crosslinking additive in premium interior and exterior architectural coatings to significantly improve weatherability and scrub resistance.

4. Advanced Plastic Coatings: Improves the chemical resistance and structural integrity of water-borne finishes applied to diverse rigid plastic substrates.

Packing

In 5L, 10L, 25L pail, 200L drum and 1000L IBC.

Safety and Storage

Keep in a cool, strictly dry, and well-ventilated environment, aggressively avoiding direct sunlight, heat, sparks, and open flames. Classified and shipped as a hazardous substance (Class 3 Flammable Liquid due to its 51° C flash point). The shelf life is a minimum of 12 months from the date of manufacture when stored in tightly sealed, original unopened containers.