



Oil Soluble Agricultural Silicone Adjuvant Silfluo LA-13

Alkyl-Modified Trisiloxane

Description:

Silfluo LA-13 is a 100% active, lipophilic, alkyl-modified trisiloxane. Unlike standard polyether-modified siloxanes, it is entirely insoluble in water. This highly non-polar architecture is specifically engineered to function as an advanced oil-soluble spreader and penetrant. It demonstrates excellent compatibility with non-aqueous carriers, serving to depress the surface tension of oil-based systems and dramatically increase the wetting footprint of lipophilic agrochemicals on plant cuticles.

Performance equivalent to Momentive Silwet L-560;

Typical Technical Properties:

Silfluo Code:	LA-13
Chemical Name: Synonyms:	Alkyl-Modified Trisiloxane Oil-Soluble Silicone Extender, Lipophilic Spreader, Alkyl Siloxane Adjuvant
CAS NO.:	17955-88-3
Appearance:	Clear, colorless to pale yellow liquid
Active Content (%):	100(Solvent-free)
Viscosity (25°C, mPa·s):	2.5 - 3.5
Specific Gravity (25°C, g/cm ³):	0.88 - 0.92
Refractive Index (at 25°C):	1.412
Surface Tension (0.1% aq., 25°C, mN/m):	20.8 ± 0.5
Aqueous Solubility:	Insoluble
Hydrocarbon Solubility:	Completely miscible

Mechanism of Action

Silfluo LA-13 utilizes its alkyl functional groups to seamlessly integrate with hydrocarbon and lipid matrices. When incorporated into oil-based pesticide delivery systems, it acts as a superior coupling agent and solubilizer. By reducing the surface tension of the oil phase, it forces the formulation to spread rapidly across waxy, hydrophobic leaf surfaces, ensuring that the active ingredients bypass surface defense mechanisms and achieve enhanced cuticular penetration.

Application

This product is uniquely suited for agricultural applications where water is absent or minimal. It is primarily utilized in:

Formulation processing of Emulsifiable Concentrates (EC) and Oil Dispersions (OD).

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Technical Data Sheet



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Carrier optimization for Ultra-Low Volume (ULV) aerial applications.

Tank-mix enhancement in conjunction with crop oil concentrates (COC) and methylated seed oils (MSO).

Recommended Dosage & Integration

As an In-Can Formulation Additive:

Silfluo LA-13 is highly compatible with mineral oils, methyl oleate, and aliphatic hydrocarbons. The standard recommended concentration ranges from 0.1% to 10.0% by weight of the total formulation, depending on the required spreading profile and compatibility of the active lipophilic ingredients.

As an Oil-Based Tank-Mix Adjuvant:

When deployed alongside tank-mixed oils (e.g., adding to a 5% mineral oil or MSO base), Silfluo LA-13 should be dosed at 0.01% to 5.0% of the oil carrier volume. This combination exponentially increases the coverage area and biological uptake of the primary pesticide.

Package & Storage:

In 20kg, 200kg plastic barrel or 1000kg, or up to clients request.

Keep in cool, dry and ventilated place. Keep away from sunlight and fire sources. Keep in unopened containers, shelf life is 24 months from the date of production. It is shipped as non-hazardous substance.

Storage beyond the shelf life does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.