



Agricultural Silicone Surfactant Silfluo LA-15

Polyalkyleneoxide Modified Trisiloxane

Description:

Agricultural Silicone Spreading and Penetrating Agent Silfluo LA-15 is a high-performance, non-ionic organosilicone surfactant based on polyalkyleneoxide modified trisiloxane chemistry. It functions primarily as an advanced spreading and cuticular permeation agent for agricultural formulations. By reducing the surface tension of aqueous spray droplets to approximately 21.5 mN/m, it mitigates droplet bounce and dramatically expands the wetting footprint on hydrophobic foliage, ensuring maximum bioavailability of the active ingredients.

Performance equivalent to Momentive Silwet L-806; Break Thru S240

Typical Technical Properties:

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| Silfluo Code: | LA-15 |
| Chemical Name: | Polyalkyleneoxide Modified Trisiloxane |
| Synonyms: | Organosilicone Adjuvant, Cuticular Penetrant, Spray Modifier |
| CAS NO.: | 134180-76-0 |
| Appearance: | Clear, colorless to pale yellow liquid |
| Viscosity (25°C, mPa·s): | 20 - 45 |
| Density(g/cm ³): | 1.01-1.03 |
| Surface Tension (0.1% aq., 25°C, mN/m): | 21.0-22.0 |
| Cloud Point (1.0 wt% aq.): | < 10 ° C |
| Ionic Nature: | Non-ionic |

Mechanism of Action

Silfluo LA-15 alters the dynamic surface tension of agricultural spray mixtures. Unlike conventional carbon-based surfactants, its specialized siloxane backbone allows the spray liquid to rapidly overcome the waxy barriers of plant cuticles. This physical mechanism not only provides exceptional droplet retention during application but also accelerates the systemic translocation of herbicides, fungicides, and nutrients through stomatal pathways, rendering them highly rainfast.

Tank-Mix Application Guidelines

Silfluo LA-15 is highly effective at extremely low concentrations. Standard usage dictates 0.015% to 0.15% by volume of the total spray liquid (e.g., approximately 5 grams per 20 liters of water).

Recommended Volume Rates:

Plant Growth Regulators: 0.025% - 0.05%

Technical Data Sheet



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Herbicides (Systemic & Contact): 0.025% - 0.15%

Insecticides: 0.025% - 0.1%

Fungicides / Bactericides: 0.015% - 0.05%

Foliar Fertilizers / Trace Elements: 0.015% - 0.1%

Preparation Protocol:

1. Fill the mixing tank with 80% of the targeted water volume.
2. Introduce the primary agrochemicals and agitate until a uniform suspension or solution is achieved.
3. Add the prescribed dosage of Silfluo LA-15.
4. Top up with the remaining water and mix gently. Note: Utilizing this adjuvant typically allows for a 30% to 50% reduction in total spray volume. Use small-aperture nozzles for optimized spray velocity.

In-Can Formulation Criteria

Silfluo LA-15 can be integrated directly into pesticide concentrates to enhance built-in performance. The recommended loading level is 0.5% to 8.0% based on the total weight of the formulation. Due to the inherent hydrolytic sensitivity of trisiloxanes, the final formulation matrix must be strictly buffered to a pH range of 6.0 to 8.0. Compatibility and accelerated stability testing are mandatory before commercial scaling.

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.