# Technical Data Sheet

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# Agricultural Silicone Spreading Agent Silfluo LA-14

Polyether-Modified Trisiloxane

## Description:

Agricultural Silicone Spreading Agent Silfluo LA-14 is a non-ionic, polyether-modified trisiloxane surfactant. It is engineered to reduce the aqueous surface tension of spray solutions to approximately 21 mN/m at a concentration of 0.1 wt%. This reduction in surface tension diminishes the contact angle between the spray droplets and the leaf cuticle, expanding the coverage area. The product facilitates stomatal infiltration of agrochemicals, enhancing rainfastness and biological efficacy.
Performance equivalent to Momentive Silwet ECO; OFX-0309;

## Typical Technical Properties:

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|---|---|
| Silfluo Code: | LA-14 |
| Chemical Name:<br>Synonyms: | Polyether-Modified Trisiloxane (Trisiloxane Ethoxylate)<br>Organosilicone Spreading Agent, Low-Foam Silicone Adjuvant |
| CAS NO.: | 125997-17-3 |
| Appearance: | Clear, colorless to pale yellow liquid |
| Active Content (%): | 100(Solvent-free) |
| Viscosity (25°C, mPa·s): | 20 - 40 |
| Surface Tension (0.1% aq., 25°C, mN/m): | 21.0 +/- 1.0 mN/m |
| Cloud Point (1.0 wt% aq.): | < 10 ° C |

## Mechanism of Action

Silfluo LA-14 functions by physically altering the interfacial tension of water-based sprays. The trisiloxane molecular structure allows for rapid film formation over hydrophobic surfaces. By promoting stomatal flooding, the surfactant ensures that systemic active ingredients bypass the leaf’s waxy barrier, reducing the time required for uptake and mitigating the risk of wash-off from precipitation.

## Application Guidelines

Tank-Mix Adjuvant:
Recommended Concentration: 0.01% - 0.1% by volume of the total spray solution.
Operational pH Range: 6.0 - 8.0.
Application Window: Spray mixtures containing Silfluo LA-14 must be applied within 24 hours of preparation to avoid hydrolytic degradation of the silicone backbone.

In-Can Formulation Additive:
Silfluo LA-14 is suitable for incorporation into concentrated pesticide formulations. Due to the susceptibility

of trisiloxanes to hydrolysis under extreme pH conditions, the final formulation must be buffered to pH 6.5 - 7.5.
Recommended Loading: 0.1% - 5.0% based on the total formulation weight.

### Technical Advantages

Low-Foaming Profile: Formulated to minimize air entrainment during tank agitation, ensuring consistent pump pressure and spray pattern.
Reduced Spray Volume: Enables a reduction in total carrier water volume while maintaining or increasing the effective coverage area.
Enhanced Bioavailability: Maximizes the penetration of systemic insecticides, herbicides, and fungicides into target plant tissues.

### 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.