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Silfluo LF-AF11

Amino-Functional Fluorosilicone Fluid

Description:

Silfluo LF-AF11 is a series of amino-functional fluorosilicone fluids comprising fluorosiloxane polymers or fluorosiloxane-siloxane copolymers with amino-functional end groups and pendant trifluoropropyl groups.

The incorporated trifluoropropyl groups contribute to resistance to oils and selected organic solvents. The reactive amino groups can react with isocyanate groups, enabling fluorosilicone segments to be incorporated into polyurethane systems through urea linkages.

Available grades provide nominal viscosities of 200-3,000 mPa.s and amine values of 0.1-0.4 mmol/g. Grade selection, active-hydrogen-to-NCO stoichiometry, compatibility, pot life and final performance must be confirmed in the complete formulation.

Typical Technical Properties:

Silfluo Code:	LF-AF11
Chemical Name / Synonyms:	Amino-Functional Fluorosilicone Fluid; Amino-Functional Fluorosilicone Oil
Appearance	Transparent or translucent viscous liquid
Viscosity (25°C, mPa.s)	200-3,000
Amine Value (mmol/g)	0.1-0.4
Refractive Index (25°C)	1.3800 ± 0.01
Density (25°C, g/cm³)	—
pH (test medium/method to be confirmed)	7.0-8.0
Notes:	Viscosity and amine value can be customized. Typical values; not for specification.

Applications:

1. Reactive Modifier for Polyurethane Coatings and Inks

LF-AF11 may be evaluated as a reactive fluorosilicone modifier for polyurethane coatings and inks.

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Reaction of amino functionality with isocyanates can chemically introduce fluorosilicone segments into the binder. Depending on formulation and surface enrichment, it may contribute to oil and solvent resistance, slip, stain resistance and easy-clean performance. Compatibility, catalyst effects, cure response, adhesion and final film properties must be verified.

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2. Polyurethane Elastomers, Plastics and Resin Modification

The product may be evaluated in polyurethane elastomers, plastics and other compatible resin systems where reactive amino functionality and a fluorosilicone segment are required. The amino-isocyanate reaction is typically rapid; addition sequence, moisture control, temperature and NCO index should be established by qualified formulators.

3. Textile and Surface-Treatment Formulation Development

Consistent with reactive amino-modified silicone chemistry, LF-AF11 may also be screened as a component of textile-finishing or surface-treatment formulations where lubricity, water repellency and affinity to substrates are sought together with oil- and solvent-resistant fluorosilicone character. This TDS does not establish wash durability, repellency ratings or use level; these must be determined for each substrate and process.

Package & Storage:

Available packaging indicated in the supplied product information: 100 g, 1 kg, 5 kg and 10 kg pails; and 20 kg, 25 kg and 200 kg plastic or steel drums. Confirm pack type and availability when ordering.

Keep away from strong oxidizing agents, corrosive materials, acids and alkalis. Store tightly closed in a cool, dry, well-ventilated place, protected from direct sunlight, rain, heat and open flames. Avoid moisture contamination.

Recommended shelf life: 12 months from the date of manufacture under the recommended storage conditions. Material stored beyond this period should be re-evaluated against the applicable quality requirements before use.

Transport as non-dangerous goods, subject to the current SDS and applicable transport regulations.

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