



Silfluo LR-610

Polymethylsilsesquioxane(PMSQ)

Description:

Silfluo LR-610 is a series of spherical polymethylsilsesquioxane (PMSQ) micropowders (CAS 68554-70-1) produced by hydrolysis and condensation polymerization of organosilanes, forming a highly crosslinked three-dimensional siloxane network $(RSiO_3/2)_n$. Active content $\geq 99\%$ across all grades.

The crosslinked siloxane network is insoluble and non-swelling in organic solvents including alcohols, esters, ketones, and petroleum fractions, and maintains spherical morphology without melting or deformation below $400^\circ C$. Five grades are available, differentiated by particle size range and surface treatment; LR-610-1 is a hydrophobic-treated variant of LR-610-2.

Chemical Name: Polymethylsilsesquioxane (PMSQ)

Synonyms: Spherical Silicone Resin Powder, Silicone Microspheres, Light Diffusion Agent

CAS NO: 68554-70-1

Typical Technical Properties:

| Silfluo Code: | LR-610-1 | LR-610-2 | LR-610-3 | LR-610-4 | LR-610-5 | |
|---------------------------------|---------------------------|-------------|-------------|-------------|-------------|---|
| Overview | Hydrophobic type of 610-2 | | | | | |
| Appearance | White spherical powder | | | | | |
| Average Particle size | 3~6um | 3~6um | 0.5-1um | 1.5-2um | 1-1.5um | |
| Particle Size distribution | 1-15um | 1-10um | 0.3-1.2um | 1-3um | 0.8-2um | |
| Active Ingredient/Solid Content | $\geq 99\%$ | $\geq 99\%$ | $\geq 99\%$ | $\geq 99\%$ | $\geq 99\%$ | |
| Specific Gravity(25°C) | 0.98 | 0.98 | 1.3 | 1.3 | 1.3 | |
| Suggested Dosage | PS resin | 0.5-1.0% | 0.5-1.0% | 0.5-1.0% | 0.5-1.0% | |
| | PC resin | 0.25-0.75% | 0.25-0.75% | 0.25-0.75% | 0.25-0.75% | |
| | Coatings and Adhesives | 0.2-1.0% | 0.2-1.0% | - | - | - |
| | Makeup | 0.5-5% | 0.5-5% | - | - | - |



Applications

1. LED Lighting and Optics

Used as a light diffusing agent in optical plastics (PS, PC), providing heat resistance, high haze, and light transmittance for LED diffuser panels and optical lenses.

2. Cosmetics and Personal Care

Used as a sensory modifier and filler in makeup and skincare formulations to provide a smooth skin feel.

3. Polymer and Rubber Modification

Incorporated into epoxy, acrylic, polyester, ABS, and rubber systems to improve wear resistance, scratch resistance, and surface finish of molded products.

4. Coatings and Inks

Incorporated into varnishes, paints, and printing inks to improve dispersibility, haptic feel, and matting (anti-glare) properties.

5. Powder Flow Agents

Used to improve dispersion, flow, and anti-caking properties of pigments and ceramic powders.

Package & Storage:

In carton packing, the net weight is 20kg per carton. Or 540 ton bag.

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. Transported 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.