www.silfluosilicone.com

# Silfluo LR-MQV Powder

Vinyl-Functional MQ Silicone Resin

## Description:

Silfluo LR-MQV is a vinyl-functional MQ silicone resin (CAS 68998-89-6) supplied as a free-flowing white spherical powder with ⩾95% active content. The resin is synthesized by co-hydrolysis of silicate (Q units) and vinyldimethylsiloxy/trimethylsiloxy (M units), forming a three-dimensional polysiloxane network with controlled M/Q ratio of 0.7–1:1 and customizable vinyl group content.

Terminal and pendant vinyl groups participate in Pt-catalyzed hydrosilylation with Si–H crosslinkers, incorporating the MQ resin into the addition-cure network. The Q-unit silicate core provides the reinforcing function — restricting siloxane chain mobility and raising modulus, hardness, and tensile strength of the cured elastomer relative to unfilled or resin-free formulations. M/Q ratio controls resin compatibility with silicone polymer matrices and the balance between reinforcing effect and film flexibility.

Spherical particle morphology and low fine dust content reduce airborne dust generation during handling and improve powder flow and dispersion rate in high-shear mixing operations.

## Typical Technical Properties:

| | |
|---|---|
| Silfluo Code: | LR-MQV Powder |
| Chemical Name:<br>Synonyms: | Vinyl-Functional MQ Silicone Resin<br>Methyl Vinyl MQ Resin, Vinyl MQ Copolymer Powder, VQM Resin |
| CAS NO.: | 68998-89-6 |
| Appearance | White spherical powder |
| Effective substance content (≥%) | 95 |
| M/Q Value | (0.7-1):1 |
| Vinyl Content(%) | Customized according to the customer's requirements |



## Solubility:

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|---|---|
| Hydroxyl Silicone Fluid: | ● |
| Methyl Silicone Oil: | ● |
| Vinyl silicone Oil: | ● |
| White Oil: | ○ |
| Castor Oil: | ○ |



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| | |
|---|---|
| Paraffin 52: | ○ |
| PE wax: | ○ |
| Isopropanol: | ● |
| Ethanol: | ● |
| Water: | ○ |
| Toluene: | ● |
| Glycerin: | ○ |
| Propylene Glycol: | ○ |
| Ethyl Acetate: | ● |
| C9-C13 isoparaffins: | ● |

○=Insoluble ●=Soluble (⩾20%)

## Delivery form
Powder type

## Applications:
1. High-Performance Liquid Silicone Rubber (LSR)
The critical reinforcing resin for optical-grade, medical-device, and food-contact addition-cure LSR, upgrading mechanical strength while preserving clarity and zero yellowing.
2. Controlled-Release Anti-Stick Coatings
Acts as a peel force modifier in addition-cure paper release coatings, pressure-sensitive adhesives (PSA), and semi-permanent industrial mold release agents.
3. H-Class Electrical Insulation
Incorporated into high-temperature resistant dielectric coatings, potting compounds, and encapsulation varnishes for bonding and sealing H-class motors and transformers.
4. Transfer-Resistant Color Cosmetics
Used as a water-repellent and film-forming component in the personal care industry for formulating long-lasting, smudge-proof lipsticks and waterproof suncare formulations.
5. High-Consistency Rubber (HCR) Modifiers
Added as a compounding agent to heat-cured silicone rubber (HTV) systems to improve Shore hardness, modulus, and high-temperature compression set performance.

## Usage and Dosage
For direct integration: apply heat and high-shear mixing to disperse powder into the polymer matrix. For indirect liquid-phase addition: pre-disperse in compatible solvents (toluene, xylene, C9–C13 isoparaffins, or ethyl acetate) before adding to the formulation system. For zero-VOC, odorless, or optically clear applications: pre-disperse in low-viscosity methyl or vinyl silicone oil — solvent-free route eliminates residual solvent in the cured product.


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Typical loading: 1–20 wt% of total formulation weight, dependent on target mechanical strength, hardness, or peel force requirement. Determine optimum loading by systematic variation and testing on the specific formulation.

**Package &Storage:**

In 40kg pail.

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.



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