

Indusil™ 139 Silicone

Product Description

Indusil 139 silicone is an aqueous solution of a silicone polymer modified with organic groups. At temperatures below its cloud point, it is completely soluble in water, forming a clear yellow solution. It possesses a dual functionality: at temperatures below its cloud point, it typically stabilizes emulsions and latexes, but at temperatures higher than its cloud point, it destabilizes them. As such, Indusil 139 silicone differs from typical polydimethylsiloxanes (PDMS), which are not water-soluble and require emulsifiers to produce milky-white emulsions.

Key Features and Typical Benefits

- Emulsion and latex stabilization below its cloud point can help improve bath stability and service life of latexes
- Emulsion and latex destabilization at temperatures above its cloud point can help improve the coagulation process
- At temperatures below its cloud point, it can help improve the shear stability of emulsions/latexes
- Can help control foam
- Can help improve film formation from latexes and speed up the drying process by improving wetting
- Can help form films without defects (pinholes, fisheyes)
- Can provide release properties
- Due to its highly hydrophilic nature, it typically dissipates static electricity
- Effective at low concentrations, cannot be easily detected by IR in the final item
- Low cyclics content of D4, D5, and D6 ($\leq 0.1\%$)

Typical Physical Properties

Appearance	Pale yellow slightly hazy liquid
Viscosity at 25 °C, cSt	45
Specific Gravity at 20 °C, g/ml	1.03
Active Content, %	33
Cloud Point, °C	36
pH	8.0
Diluent	Water

Typical properties are average data and are not to be used as, or to develop, specifications.

Potential Applications

- Aids in the coagulation process of various latexes, e.g., natural rubber latex, PU dispersions, NBR latex, SBR latex, and others
- Aids in stabilizing latexes, e.g., natural rubber latex, NBR latex, PU dispersions, SBR latex, and others
- Aids in controlling foam, minimizing defects, and increasing production speed in gloves manufacture
- Aids in improving the production speed in the coagulation process of carpet backing

General Considerations for Use

Indusil 139 silicone can be used as is or after dilution with water. Typical dosage levels are 0.5 – 2.0 phr. Actual dosage levels need to be determined by the end-user. They will depend on the nature of the latex, the severity of the situation, and the desired effect. Indusil 139 silicone should be added to the latex, not to the coagulant bath. As long as the latex temperature remains below its cloud point, Indusil 139 silicone will generally stabilize the latex. However, if the latex temperature becomes greater than the cloud point of Indusil 139 silicone, it will destabilize the latex.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement, or recommendation to practice any invention covered by any patent without authority from the owner of the patent.

Product Safety, Handling, and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment, if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in MyMomentive™ Order Management Site. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Customer Service Centers

For additional information, please contact our Customer Service Team

AMERICAS	+1 800 295 2392 Toll Free* +704 805 6946 Direct Number
LATIN AMERICA	BRAZIL +55 11 4534 9650 Direct Number MEXICO +52 55 2169 7670 Direct Number *All American countries
EMEI - EUROPE, MIDDLE EAST, AFRICA & INDIA	EUROPE +39 0875 758888 Direct Number INDIA, MIDDLE EAST & AFRICA +91 44 71212207 Direct Number* *All Middle Eastern countries, Africa, India, Pakistan, Bangladesh, Sri Lanka
ASIA PACIFIC	CHINA 800 820 0202 Toll Free +86 21 3860 4892 Direct Number JAPAN Sales-JP.Silicones@momentive.com KOREA +82 2 6201 4600 Direct Number SOUTH EAST ASIA, AUSTRALIA & NEW ZEALAND +60 3 9206 1543 Direct Number* *All East Asia countries (Malaysia, Singapore, Thailand, Indonesia, Vietnam, Philippines, Cambodia, Myanmar / other countries located in Pacific region)
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2750 Balltown Road
Niskayuna, NY 12309
momentive.com