

Indusil™ 139 Silicone

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 is different from typical polydimethylsiloxanes (PDMS) which are not water soluble and which require emulsifiers to produce milky-white emulsions.

Key Features and Typical Benefits

- Emulsion and latex stabilization below 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 the formation of films from latexes and speed the drying process by improving wetting
- Can help form films without defects (pinholes, fisheyes)
- Can provide release properties
- Because of its highly hydrophilic nature, it typically dissipates static electricity
- Effective at low concentrations, can not be easily detected by IR in the final item

Typical Physical Properties

Property	Typical Values
Appearance	Pale yellow slightly hazy liquid
Specific Gravity (20 °C) g/ml	1.03
Active Content %	33
Viscosity (25 °C), cSt	45
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

- Aid for the coagulation process of various latexes, e.g., natural rubber latex, PU dispersions, NBR latex, SBR latex and others
- Aid to stabilize latexes, e.g., natural rubber latex, NBR latex, PU dispersions, SBR latex and others
- Aid to control foam, minimize defects and increase production speed in gloves manufacture
- Aid to improve the speed of production 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 needed. Indusil 139 silicone should be added to the latex and not to the coagulant bath. So long as the temperature of the latex is below its cloud point, Indusil 139 silicone will generally stabilize the latex but will destabilize the latex if the latex temperature becomes greater than the cloud point temperature of Indusil 139 silicone.

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 the Order Center. 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.

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