FF190
Foam Control Agent

Description
FF190 foam control agent is a 100% actives fluorosilicone polymer (modified with fluoro-containing groups) having the advantages of combined silicone and fluorocarbon chemistries for use in a variety of foam systems. It is an excellent candidate to consider for use in high-foaming non-aqueous systems, including those found with petroleum stocks in high-pressure separators.

Key Features and Typical Benefits

- Insolubility in a variety of solvents for excellent foam control
- Excellent resistance to emulsification for long lasting antifoam effect
- Chemical and oxidation resistance, enabling use in extreme air temperatures (–60 to 200°C) and high chemical reactivity systems
- Low surface tension
- Foam control at very low treat rates
- Low viscosity, easy to handle

Potential Applications

- Foam control in gas/oil separators
- Lube oil additive packages

Typical Physical Properties
<table>
<thead>
<tr>
<th>Property</th>
<th>Typical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Translucent colorless liquid</td>
</tr>
<tr>
<td>Active content, %</td>
<td>100</td>
</tr>
<tr>
<td>Density (25 °C / 77 °F) g/cm³</td>
<td>1.17</td>
</tr>
<tr>
<td>Soluble in</td>
<td>Ketones, some esters</td>
</tr>
<tr>
<td>Viscosity at 25 °C / 77 °F (cPs)</td>
<td>500</td>
</tr>
<tr>
<td>Freeze Point, °C / °F</td>
<td>&lt;-20 / &lt;-4</td>
</tr>
<tr>
<td>Flash point - ASTM D93, °C / °F</td>
<td>&gt; 150 / &gt; 302</td>
</tr>
</tbody>
</table>

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

**General Consideration For Use**

FF190 foam control agent belongs to a special class of organofunctional silicone materials capable of controlling foam in non-aqueous systems due to its inherently low surface energy. FF190 foam control agent can be used alone, but dilution with an appropriate solvent is recommended to reduce its viscosity and help ensure accurate, low dose treat rates. Depending on the lowest possible setting of the dosing pumps, dilutions will typically vary between 1 and 5% by weight. Ketones, esters and ethers are generally recommended for use as solvents, and will vary depending upon the desired effect. For example, if a high boiling point solvent is needed, tributyl phosphate is recommended, as are esters of dicarboxylic acids should a high flash point solution be desired.

Neither THF (tetrahydrofuran) nor dioxane should be considered for a solvent, as they may degrade the polymer. It is highly recommended that diluted solutions be used within four weeks to avoid diminished performance.

**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**

*Silbreak is a trademark of Momentive Performance Materials Inc.*
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.

**Contact Information**

For product prices, availability, or order placement, contact our customer service at Momentive.com/CustomerService/

For literature and technical assistance, visit our website at: www.momentive.com

**DISCLAIMER:**

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY “SUPPLIER”), ARE SOLD SUBJECT TO SUPPLIER’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED
HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER’S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of Supplier’s materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier’s products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier’s standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

*Silbreak is a trademark of Momentive Performance Materials Inc.

Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.