Magnasoft 588TX textile softener, a specialty silicone emulsion concentrate, is an excellent candidate to consider for high-to mid/low-end fabric finishing. It offers multiple benefits such as quick water absorbency, moisture management, fabric whiteness, non-discoloration and - most importantly - shear stability at broad pH and temperature conditions in a finishing bath without compromising softness. These benefits are chiefly attributed to the silicone copolymer that promotes quick and uniform adsorption to fibers, in addition to reorganization of the silicone molecules on cellulosic fabric.

Using Magnasoft 588TX textile softener can result in a luxuriously voluminous touch with a comfortably soft feel on cotton and cotton blends while maintaining the hydrophilic nature of cellulosic fabrics. It can provide a cotton-like feel with hydrophilicity when applied to synthetic fabrics such as polyester and polyester blends. Its hydrophilic performance is virtually unaffected by the aging time of treated fabrics and at various dry/cure conditions typically used for textile finishing.

Magnasoft 588TX textile softener is easily water dispersible; hence, it is ready to use in a textile finishing bath. It possesses good compatibility with most typical textile finishing chemicals including organic softeners, durable press resins, anti-static agents and selected optical brightening agents.

### Key Features and Typical Benefits
- Luxuriously voluminous touch with ultra-soft feel, particularly for cotton knits
- Quick water/perspiration absorbency on fabrics; limited impact of fabric aging time and high temperature curing conditions on hydrophilicity
- Water dispersible, ready to use
- Maintains fabric whiteness (non-discoloring)
- Superior stability at broad pH and temperature ranges (e.g., up to boiling at pH 4~10 range) in typical textile finishing
- Excellent shear stability in both padding and exhaustion processes, including jet finishing and over-flow finishing
- Low pour point (< -20 °C)

### Potential Applications
Magnasoft 588TX textile softener may be considered for use with all types of fabrics in the textile finishing process, but can be most beneficial for cellulose fabrics such as:
- Cotton and cotton-blended knits & woven
- Viscose fabric and its blends
- Linen fabric and its blends
- Quick-drying cotton knits
- Polyester and polyamide woven requiring cotton-like feel

### Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>–</td>
<td>Yellowish transparent to translucent liquid</td>
</tr>
<tr>
<td>Viscosity at 25 °C 3/12</td>
<td>cps</td>
<td>2000</td>
</tr>
<tr>
<td>Specific Gravity, 25 °C</td>
<td>gr/cm³</td>
<td>1.0</td>
</tr>
<tr>
<td>Solid Content</td>
<td>%</td>
<td>64</td>
</tr>
<tr>
<td>pH, 25 °C</td>
<td>–</td>
<td>5.5</td>
</tr>
<tr>
<td>Ionic Characteristics</td>
<td>–</td>
<td>Slightly cationic</td>
</tr>
<tr>
<td>Suitable Diluent</td>
<td>–</td>
<td>Water</td>
</tr>
</tbody>
</table>

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

### General Considerations for Use
Magnasoft 588TX textile softener is a ready-to-use emulsion concentrate; hence, it can be readily diluted with water and directly applicable to the textile finishing bath with no emulsification.

It can be applied by both padding and exhaustion, including jet-finishing and over-flow finishing. The optimum use level is subject to the type of fabric and softness required, but 10~20 g/L of Magnasoft 588TX textile softener is typically recommended.

It is best to use soft water if pre-dilution is required. If soft water is unavailable, it is prudent to test the complete bath for stability before applying it in the production of textile finishing.

*Magnasoft is a trademark of Momentive Performance Materials Inc.*
**Performance Test Data**

1) **Whiteness on cotton woven:** Magnasoft 588TX textile softener is virtually non-yellowing on bleached fabrics.

**Test Conditions:**
- Fabric: White cotton woven
- Finished by pad bath
- Dried at 130 °C x 3 min. and cured at 170 °C x 2 min.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>5 g/L</th>
<th>8 g/L</th>
<th>10 g/L</th>
<th>12 g/L</th>
<th>15 g/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>130 °C x 3 min</td>
<td>73.11</td>
<td>73.46</td>
<td>73.60</td>
<td>73.85</td>
<td>73.32</td>
<td>73.44</td>
</tr>
<tr>
<td>170 °C x 2 min</td>
<td>72.21</td>
<td>72.34</td>
<td>72.87</td>
<td>72.38</td>
<td>72.37</td>
<td>72.62</td>
</tr>
</tbody>
</table>

Note: Test data. Actual results may vary.

2) **Hydrophilicity:** Limited impact of Magnasoft 588TX textile softener hydrophilicity against high temperature curing.

![Drop Test (AATCC-79)](image)

3) **Shear stability:** Magnasoft 588TX textile softener exhibited shear stability in both padding and exhaustion processes.

**Test Conditions:**
- Dosing level: 20 g/L Magnasoft 588TX textile softener
- Bath conditions: pH 12, 80 °C
- Shearing at 2,000 rpm for 30 min.

**Magnasoft 588TX textile softener**
- Stable, no oil particles observed

**Benchmark A**
- Unstable, oil particles observed on surface

**Benchmark B**
- Unstable, oil particles observed on surface

Note: Test data. Actual results may vary.

4) **Emulsion stability at different bath pH:** Magnasoft 588TX textile softener exhibited superior stability at broad pH and temperature ranges.

**Test Condition:** 20 g/L Magnasoft 588TX textile softener at varying bath pH levels

<table>
<thead>
<tr>
<th>Product</th>
<th>Bath pH 3</th>
<th>Bath pH as received</th>
<th>Bath pH 10</th>
<th>Bath pH 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnasoft 588TX textile softener</td>
<td>Stable up to boiling</td>
<td>Stable up to boiling</td>
<td>Stable up to boiling</td>
<td>Stable up to boiling</td>
</tr>
<tr>
<td>Benchmark A</td>
<td>Stable up to boiling</td>
<td>Stable up to boiling</td>
<td>Haze at 60 °C, oiling at &gt;65 °C</td>
<td>Haze at 50 °C, oiling at &gt;60 °C</td>
</tr>
<tr>
<td>Benchmark B</td>
<td>Stable up to boiling</td>
<td>Stable up to boiling</td>
<td>Stable up to 80 °C, oiling at &gt;85 °C</td>
<td>Stable up to 80 °C, oiling at &gt;85 °C</td>
</tr>
</tbody>
</table>

Note: Test data. Actual results may vary.

*Magnasoft is a trademark of Momentive Performance Materials Inc.*
5) Alkali & low temperature stability of Magnasoft 588TX textile softener:

**Alkaline Stability**
Stable at pH 12, boiling for 60 min.

**Low Temperature Stability**
Stable at -20 °C for 30 days

Note: Test data. Actual results may vary.

6) Electrolyte compatibility in MgCl₂·6H₂O: Magnasoft 588TX textile softener was compatible in a durable press system.

**Test Condition:** 20 g/L Magnasoft 588TX textile softener with different dosing levels of MgCl₂·6H₂O for five days

<table>
<thead>
<tr>
<th>Room Temperature</th>
<th>10 g/L</th>
<th>20 g/L</th>
<th>30 g/L</th>
<th>40 g/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Test data. Actual results may vary.

**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 Material Safety Data Sheet (MSDS) 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. MSDS 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.