



# MOMENTIVE

performance materials

The science behind the solutions.

## Magnasoft<sup>\*</sup> 238

textile enhancer

### Product Description

Magnasoft 238 is a new textile enhancer based on our patented (AB)n technology that has given rise to world-renowned products such as Magnasoft SRS textile enhancer, Magnasoft JSS textile enhancer and Magnasoft Derma NT textile enhancer. Magnasoft 238 textile enhancer can help provide outstanding softness and slickness to fabrics and garments, while minimizing the problem of yellowing, shear stability and thermal migration. This new product is water dispersible and can be effective at dosage levels three to four times lower than amino silicone fluids.

Magnasoft 238 textile enhancer may be used on a variety of fabrics but may be most beneficial for synthetics, synthetic/cotton blends, polyester fleece and wool.

### Key Features and Typical Benefits

• Linear Molecular Architecture	o Effective at 3-5 g/lit in the bath, as received. It may provide a high level of natural softness to synthetics and their blends with natural fibers
• High Molecular Weight	o Delivers properties similar to those of reactive elastomeric finishes, such as durability and resistance
• Hindered Amine Functionality	o Low yellowing o Good stability under most finishing conditions, including jet/overflow
• Combines Hydrophilic and Silicone Moieties	o May be co-applied with crease (durable press) resist resins, their catalysts and optionally OBA's. o Self-dispersible, no need for emulsifiers, hence potentially lower cost for formulators and mills o May be blended directly into the textile finishing bath with minimal agitation
• Low Viscosity	o Easy to handle

### Typical Physical Properties

Property	Unit	Value
Appearance	–	Colorless to slightly hazy, light yellow fluid
Viscosity at 25°C	CSt	5000
Specific Gravity	–	1.046
Amine Content	%	0.12
Preferred Diluent	–	Water

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting Momentive Performance Materials.

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Momentive Performance Materials provides versatile materials as the starting point for our creative approach to ideas that help enable new developments across hundreds of industrial and consumer applications. We are helping customers

solve product, process, and performance problems; our silanes, fluids, elastomers, sealants, resins, adhesives, urethane additives, and other specialty products are delivering innovation in everything from car engines to biomedical devices.

From helping to develop safer tires and keeping electronics cooler, to improving the feel of lipstick and ensuring the reliability of adhesives, our technologies and enabling solutions are at the frontline of innovation.

# Magnasoft\* 238 textile enhancer

## How to Use

Magnasoft 238 textile enhancer may be considered for use in textile finishing of all synthetics, synthetic/cotton blends, polyester fleece and wool. It typically provides good lubricity and hand-feel during the manufacture of polyester fleece. Magnasoft 238 textile enhancer may also be used on cotton fabrics.

Magnasoft 238 textile enhancer should be used at a dosage level of 3-5 g/liter in the bath. Higher dosage levels are not recommended and in certain cases, may be detrimental to the performance of this product. Even though Magnasoft 238 textile enhancer is one of the most stable silicone finishes in the market, it is best to use soft water for its dilutions. If this not available, it is prudent to test the complete bath for stability before applying it in production.



**10% dilution of Magnasoft 238 textile enhancer**

**15% Microemulsion of Amino Silicone Fluid TSF 4708**

## Performance Comparison

**Table 1. Magnasoft 238 Textile Enhancer Hand-Feel Comparison**

Polyester Woven	4.3	>180	52
PW Untreated	2.5	50	53
Cotton Knit	4.4	>180	140
CK Untreated	2.5	1	142
Polyester Fleece	3.7	180	NA
Polyviscose	4.7	>120	NA
Polyester / Cotton	4.6	>120	NA
PA / Lycra†	4.6	>120	NA

†Lycra is a trademark of INVISTA

**5 - Best softness; 1- Worst softness  
6 Panelists; 5 Fabrics**

**Softness** tested as per ATCC evaluation procedure 5

**Hydrophilicity** tested as per ATCC-79-1995

**Whiteness** tested as per ATCC test method 110-1995

	Magnasoft 238 Textile Enhancer				Amino Emulsion <sup>(1)</sup>		Untreated
	1.5 g/L	2 g/L	3 g/L	4 g/L	15 g/L	30 g/L	
Cotton Knit	4.1	4.4	4.5	4.7	4.3	4.6	2.5
Polyester Woven	4.3	4.6			4.4		3

(1) 15% Amino micro emulsion

**2 g/L of Magnasoft 238 textile enhancer provided better softness and slickness on Cotton Knit and Polyester Woven than Amino Emulsion at 15 g/L**

Note: Test results. Actual results may vary.

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Performance Comparison (continued)

**Table 2. Magnasoft 238 Textile Enhancer vs. Amino Silicone Fluid: Whiteness**

Sample Description	Whiteness Index		
	Cotton Knit	Cotton Woven	Polyester Woven
1.5 g/L of Magnasoft 238 textile enhancer	151	63	59
2 g/L of Magnasoft 238 textile enhancer			57
3 g/L of Magnasoft 238 textile enhancer	150	63	
4 g/L of Magnasoft 238 textile enhancer	150	63	
15 g/L of 15% Amino	135	61	56
30 g/L of 15% Amino	131	58	
Untreated	151	64	59

***Magnasoft 238 textile enhancer had reduced yellowing (Whiteness tested as per ATCC test method 110-1995)***

Note: Test results. Actual results may vary.

**Table 3. Magnasoft 238 Textile Enhancer vs. Amino Silicone Fluid: Thermal Stability**

pH	4	7	10
Magnasoft 238 textile enhancer	Stable to 100°C	Stable to 90°C	Stable to 60°C
Amino Emulsion	Hazy with free oil after cooling	Fails after 60°C	Fails at room temperature



**Top View of Magnasoft 238 textile enhancer at pH 7 at 70°C**  
**1% actives dispersion in water**  
**Clear, no oiling observed**



**Top view of Amino emulsion at pH 7 at 70°C**  
**1% actives dispersion in water**  
**Hazy, oiling observed**

Note: Test results. Actual results may vary.

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Performance Comparison (continued)

Table 4. Magnasoft 238 Textile Enhancer vs. Amino Silicone Emulsion: Shear Stability

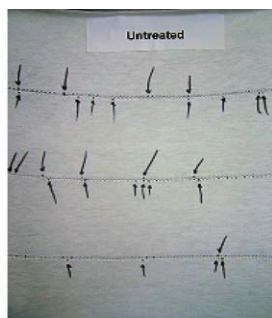
Sample Description	Dosage	After Shearing for 30 min.
10% dilution of Magnasoft 238 textile enhancer	2% based on wt. of solution	Clear, no oiling observed
20% microemulsion of Amino	2% based on wt. of solution	Clear, slight oiling observed



Magnasoft 238 textile enhancer after shearing at 3000 rpm for 30 mins

Table 5. Magnasoft 238 Textile Enhancer vs. Amino Emulsion: Sewingability

Needle Holes / Meter of Seam		
g/lt	Magnasoft 238 Textile Enhancer	Amino
5	0	5
7.5	0	3
10	0	0



Note: Test results. Actual results may vary.

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Performance Comparison (continued)

Table 6. Magnasoft 238 Textile Enhancer vs. Amino Emulsion: Thermomigration

Finish	99 / 1 PA / Spandex	50 / 50 Polycotton	50 / 50 Polyrayon
Magnasoft 238 textile enhancer	1.3	2.5	2.3
Amino Emulsion	7.4	3.8	6.4

*5% change is allowable*



PolyA/Spandex



PolyE/Cotton



PolyE/Rayon

Note: Test results. Actual results may vary.

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## Magnasoft\* 238 textile enhancer

### Packaging

Magnasoft 238 textile enhancer is available in pails of 19kgs net weight and in drums of 212kgs net weight.

### Patent Status

Technical subject matter in this publication is described and protected by one or more of the following U.S. Patents and their foreign counterpart patents and/or patent applications: U.S. Patent Nos. 5,807,956 and 5,981,681. Other U.S. and foreign patents and/or patent applications not listed covering the subject matter may be relevant.

### Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any Momentive Performance Materials representative. Use of other materials in conjunction with Momentive Performance Materials 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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