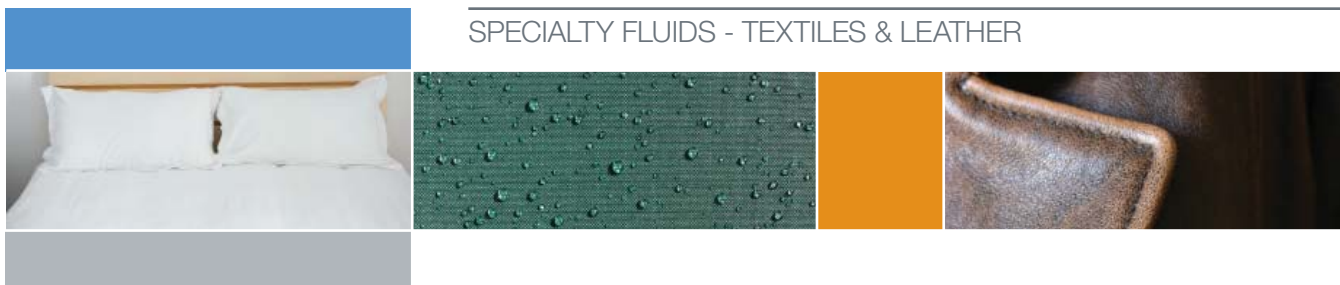


MAGNASOFT* SciTex textile softener concentrate

SPECIALTY FLUIDS - TEXTILES & LEATHER



Magnasoft SciTex textile softener concentrate is a new, potentially cost-effective, silicone copolymer that can be considered for all levels of fabric finishing. It is easy-to-use and can deliver a multitude of desirable benefits related to moisture management; whiteness for bleached fabrics; color maintenance in dyed fabrics; and shear stability at wide pH and temperature ranges in finishing baths.

Magnasoft SciTex textile softener concentrate can achieve results without sacrificing fabric softness. It typically imparts a luxurious touch with a comfortably soft-feel on cotton and cotton blends, while maintaining the hydrophilic nature of cellulosic fabrics, and can provide a cotton-like feel when applied to synthetic fabrics such as polyester and polyester blends. Additionally, Magnasoft SciTex textile softener concentrate helps protect these treated fabrics from the effects of aging and various dry/cure conditions typically used in textile finishing.

Magnasoft SciTex textile softener concentrate is dispersible in water, with simple agitation in the presence of co-emulsifiers, and is compatible with most typical finishing chemicals such as organic softeners, durable press resins, anti-static agents and selective optical brightening agents. The resulting emulsion possesses excellent stability to high shear in textile finishing baths, even with broad pH and temperature differences.

Absorbing quickly and uniformly, Magnasoft SciTex textile softener concentrate can provide many desired features for premium fabric finishing at a reasonable cost.

Key Features and Typical Benefits

- Luxurious touch with ultra-soft feel for cotton knits
- Quick absorption of water and/or perspiration on the treated fabric
- Limited impact of the hydrophilicity against the treated fabric aging time and high temperature curing
- Superior stability at broad pH and temperature ranges (e.g., up to 80 °C at pH10) in typical textile finishing processes
- Excellent shear stability in padding and exhaustion processes, including jet finishing and over-flow finishing
- May be compatible with durable press resin systems, anti-static agents and optical brightening agents
- Virtually no yellowing on the bleached fabrics and no discoloration on the dyed fabrics
- May improve phenolic yellowing, in conjunction with a pH adjustment to 4~5, with citric acid

Typical Physical Properties⁽¹⁾

Property	Unit	Value
Appearance	–	Pale yellow liquid
Viscosity at 25 °C	cSt	1,500
Specific Gravity, 25/25 °C	gr/cm ³	1.02
Amine Content	%	0.6
Preferred Diluent	–	Water with emulsifiers

(1) Typical data are average data and are not to be used as or to develop specifications.

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Potential Applications

Magnasoft SciTex textile softener concentrate may be considered for a variety of fabrics in textile finishing, but is typically most beneficial for the cellulose fabrics listed below:

- Cotton and cotton blended knits and woven fabrics
- Viscose fabric and its blends
- Linen fabric and its blends
- Quick-drying cotton knits
- Polyester and polyamide woven fabrics requiring a cotton-like feel

Magnasoft SciTex textile softener concentrate is a concentration of a premium silicone softener; it needs to be pre-diluted with surfactants in advance to applying at the textile finishing bath. The pre-dilution is simple, and can be obtained by using a simple mixer, or even by hand-stirring. A sample formulation for the pre-dilution is as follows:

Sample Diluting Formulation

Product	% wt.	Note
Magnasoft SciTex textile softener concentrate	27.0	Premium textile softener concentrate
TDA-6	4.2	Tri-decyl alcohol 6 ethoxylated
TDA-12	8.8	Tri-decyl alcohol 12 ethoxylated
Acetic Acid	0.3	pH buffer
Sodium Acetate	0.3	pH buffer
Water	59.4	–

Product formulations are included as illustrative examples only. Momentive makes no representation or warranty of any kind with respect to any such formulations, including, without limitation, concerning the efficacy or safety of any product manufactured using such formulations.

Procedure for Pre-dilution

1. Charge Magnasoft SciTex textile softener concentrate and emulsifiers, and then mix well until fully homogenous.
2. Pre-mix acetic acid and sodium acetate with water.
3. Slowly add the acidic water solution to the silicone/emulsifier blend while stirring; avoid stirring too much to prevent aerating the mixture.
4. Filter into the containers.

Magnasoft SciTex textile softener concentrate can be applied by padding and exhaustion, including jet-finishing and over-flow finishing. The use level is subject to the types of fabric and softness required; but 10~20g/l of 27% pre-diluted Magnasoft SciTex textile softener concentrate is typically recommended.

It is best to use soft water for dilutions. If not available, it is imperative to test the complete bath for stability before applying it in production.

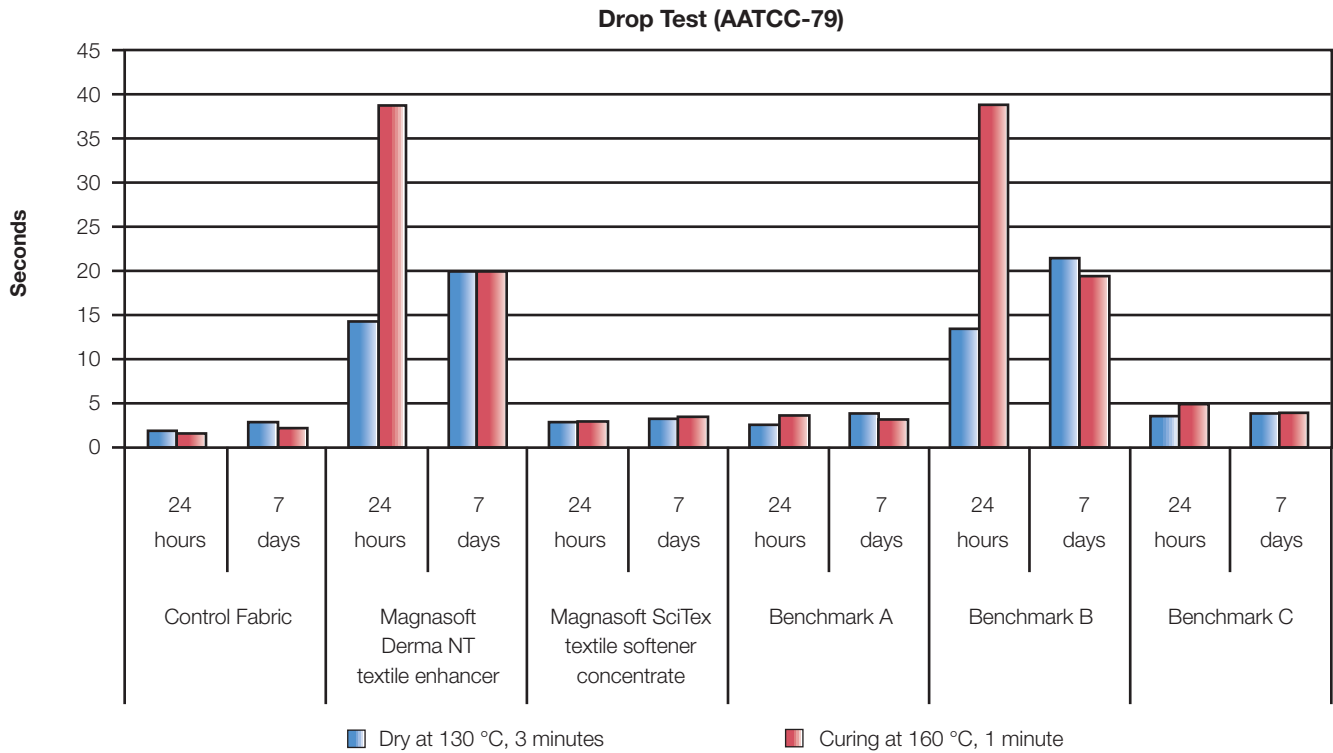
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Performance Test Data

1) Hydrophilicity at Equal Cost:

Test condition:

- Fabric: white cotton woven
- Finishing by pad-bath
- Dry at 130 °C x 3 minutes and Curing at 160 °C x 1 minute



Note: Test data. Actual results may vary.

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Performance Test Data (continued)

2) Shear Stability:

Test condition: 20 g/L emulsion, 80 °C, pH=10, 2000rpm, 30 minutes

Product	Test Result
Magnasoft SciTex textile softener concentrate	Stable; no oil
Benchmark A	Unstable; has silicone oil on surface
Benchmark B	Unstable; has silicone oil on surface
Benchmark C	Unstable; has silicone oil on surface

Note: Test data. Actual results may vary.

3) Emulsion Stability Under Different Bath pH:

Test condition: 20 g/L emulsion, 80 °C

Product	PH=3	PH=7	PH=10	PH=12
Magnasoft SciTex textile softener concentrate	Stable; no oil	Stable; no oil	Stable; no oil	Stable; no oil
Benchmark A	Stable; no oil	Stable; no oil	Stable; no oil	Has oil on surface
Benchmark B	Stable; no oil	Stable; no oil	Has oil on surface	Has oil on surface
Benchmark C	Stable; no oil	Stable; no oil	Has oil on surface	Has oil on surface

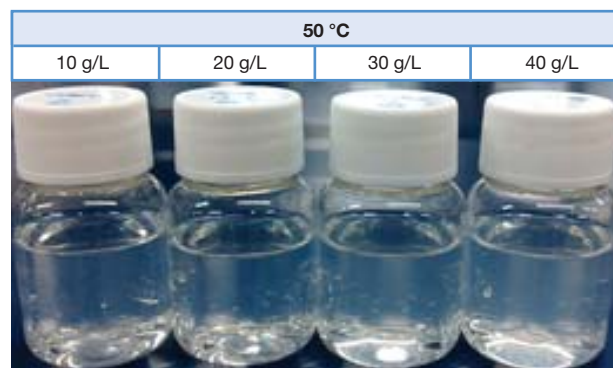
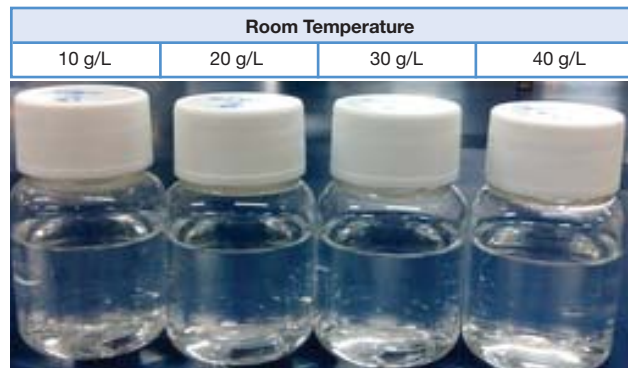
Note: Test data. Actual results may vary.

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Performance Test Data (continued)

4) Compatibility in Electrolyte (MgCl₂ · 6H₂O):

Test condition: 20 g/L emulsion, 10 days



Note: Test data. Actual results may vary.

5) Phenolic Yellowing:

Phenolic yellowing is the most common type of textile yellowing, which is caused by a reaction of oxides and nitrogen in an alkali medium. As most of the fabric is predominantly processed in alkaline medium, unless it is fully neutralized with specialty acids, it could become alkaline while in storage, and become more prone to yellowing. This is especially apparent on white or pastel fabric shades. Phenolic yellowing can also cause dark shades to become dull.

Test condition: 20 g/L of 27% Magnasoft SciTex textile softener concentrate dilution on white cotton woven

Test method: ISO 105-X 18, 2007

	Bath pH 4 with Citric Acid	Bath pH as Received	Bath pH 10	Note
Magnasoft SciTex textile softener concentrate	4~5	3	2~3	5: No phenolic yellowing 1: Heavily phenolic yellowing

Note: Test data. Actual results may vary.

Phenolic yellowing can be minimized by adjusting bath pH to 4~5 with citric acid, while applying Magnasoft SciTex textile softener concentrate.

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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.

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Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at www.momentive.com or, upon request, from any Momentive Performance Materials (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.

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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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Emergency Service

Momentive Performance Materials maintains an around-the-clock emergency service for its products.

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Canada	CHEMTREC	1-800-424-9300
Europe, Israel	NCEC	+44 (0) 1235239670
Middle East	NCEC	+44 (0) 1235239671
Asia Pacific (except China)	NCEC	+44 (0) 1235239670
China	NCEC	+86-10-5100-3039
Latin America (except Brazil)	NCEC	+44 (0) 1235239670
Brazil	SOS Cotec	08000111767 or 08007071767
All other locations world wide	NCEC	+44 (0) 1235239670
At sea	Radio U.S. Coast Guard in U.S. waters NCEC in International waters	+44 (0) 1235239670

For Health related calls, contact Momentive Performance Materials at +1-518-233-2500 (English only).

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

Customer Service Centers

Worldwide

4information@momentive.com

+1 614 986 2495 / T +1 800 295 2392

North America

Silicones

T +1 800 332 3390

Consumer Sealants/ Construction Sealants and Adhesives

T +1 877 943 7325

Latin America

South America

T +55 11 4534 9650

Mexico and Central America

T +52 55 2169 7670

Europe, Middle East, Africa and India

T +00 800 4321 1000 / +40 21 3111848

Pacific

China

T +800 820 0202 / +86 21 3860 4892

Japan

T +0120 975 400 / +81 276 20 6182

Korea

T +82 2 6201 4600

Malaysia

T +60 3 9206 1532

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260 Hudson River Road
Waterford, NY 12188 USA
momentive.com