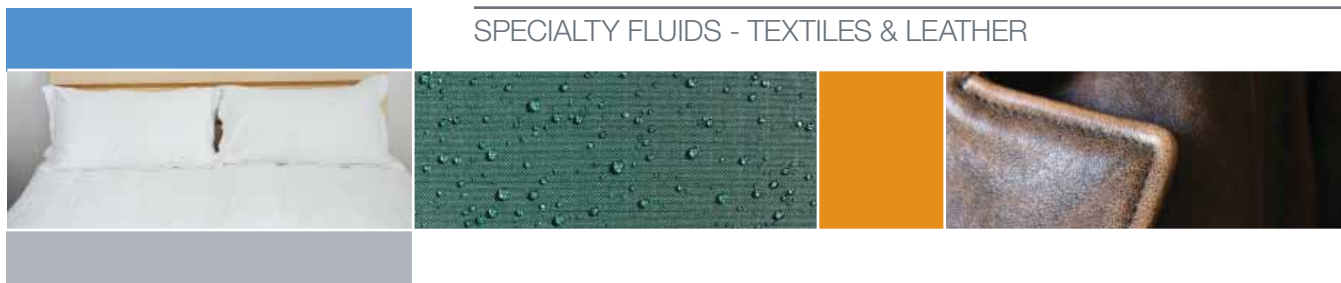


MAGNASOFT* HTS textile softener

SPECIALTY FLUIDS - TEXTILES & LEATHER



Magnasoft HTS textile softener is a textile softener based on a patented, linear [AB]_n block-copolymer platform. It can help impart hydrophilic properties with washing-durable softness to fibers and textiles.

Magnasoft HTS textile softener is water-dispersible and is an excellent candidate to consider for use in textile mills either directly as received or in a diluted form for padding and exhaustion applications that require outstanding shear stability. It can also help prevent oil spotting on fabrics when applied in the textile finishing process.

Key Features and Typical Benefits

- Silicone molecule is based on patented [AB]_n block-copolymer technology
- Can help impart unique smoothness and natural softness to woven and knitted fabrics
- Outstanding hydrophilic properties to cotton goods
- Washing/durable softness to home laundry
- Can be considered for use with various types of fibers and textiles
- Low fabric yellowing property
- Very stable in routine textile finish processes and may be applied in combination with fluorocarbon soil release finish in the padding continuous process
- Ready to use: Low viscosity, easily disperses and dilutes with water
- Excellent candidate to consider for both padding and exhaust applications
- Produced without alkyl phenol-based chemicals (APEO)

Potential Applications

Magnasoft HTS textile softener can be considered for use on various types of fabrics, including:

- Cotton and cotton-blended woven and knits
- Cotton denim and corduroy
- Wool and wool-blended knits and woven
- Viscose rayon, CVC woven

Typical Physical Properties

Property	Value
Appearance	Colorless liquid
Solid Content, %	35
Viscosity (cPs, 25 °C)	< 500
Specific Gravity, 25 °C	1.0
Suitable Dilutant	Water

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

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General Instructions for Use

Magnasoft HTS textile softener can be directly applied without pre-diluting because of its excellent water dispersibility. However, it is recommended to pre-dilute with water prior to application in the textile finish process.

The optimum dosage depends on the required softness, type of fabric and finishing conditions. 7~20 g/L is the starting dosage generally recommended for cotton-woven goods. The following are sample processes and dosages that are subject to adjustment based upon the user's particular materials and procedures.

1. Pad-dry process (for 100% cotton woven)

Dosage	:	7 ~ 20 g/L
pH	:	5.0 ~ 7.0
Temperature	:	Room temperature
Drying	:	100 ~ 130 °C

2. Exhaustion process (for 100% cotton knitted)

Dosage	:	1.0 ~ 2.0% on the weight of fabric
Liquor ratio	:	1/8 ~ 1/20
pH	:	5.5 ~ 7.0
Temperature	:	40 °C
Time	:	20 ~ 30 minutes
Drying	:	100 ~ 130 °C

3. Garment washing process

Dosage	:	1.0 ~ 2.0% on the weight of garment
Condition	:	Same as exhaustion process

Performance Data

1) Test Conditions

Test fabric	100% cotton woven
Treating condition	Padding (pick up 80%), drying (130 °C, 3 minutes), curing (170 °C, 1 minute)
Evaluation of softness	KES-FB2 Automatic Pure Bending Tester. Softness: (B+2HB)/2
Evaluation of smoothness	KES-FB4 Automatic Surface Tester MIU: Mean friction coefficient
Evaluation of yellowing	WI CIE measured with Hunter Lab based on untreated fabric color
Evaluation of hydrophilicity	AATCC 79-2000 (water drop)

2) Test data of Softness, Smoothness and Fabric Yellowing on 100% Cotton Applied by Padding Continuous Process.

Softener Samples (dosage, same cost based)	Softness ⁽¹⁾ (B+2HB)/2	Smoothness MIU ⁽²⁾	Yellowing ⁽³⁾ (170 °C x 5 min.) WI CIE	Hydrophilicity (sec.)	
				130 °C	170 °C
Untreated	0.0612	0.162	71.24	2.01	2.34
Magnasoft HTS textile softener (8 g/L)	0.0456	0.127	70.02	3.93	7.18
Sample #1	0.0493	0.134	70.48	6.86	8.27
Sample #2	0.0504	0.144	70.82	3.74	5.65
Sample #3	0.0552	0.148	68.24	3.21	4.08

Note: (1) The smaller the number, the softer the touch
 (2) The smaller the number, the smoother the touch
 (3) The smaller the number, the less yellowing

Test data. Actual results may vary.

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Patent Status

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