

Product Data

Amino Modified Silicone Fluid MAGNASOFT 310

Magnasoft*310 is an amino-modified silicone fluid that imparts superior softness with novel fullness to a variety of woven or knit fabrics, whether prepared from ring or open-end spun yards. It is effective on 100% synthetic, 100% cotton, synthetic/cotton, and acrylic blended fabrics.

Magnasoft 310 imparts outstanding softness with enhancing unique fullness characteristics to 50/50 polyester/cotton blends and 100% cotton knits. It also imparts superior softness to a wide variety of other fabric types, such as denim and 65/35 polyester/cotton blends.

KEY FEATURES

- ◆ Outstanding softness to all type of fabrics
- ◆ Good affinity with fabrics
- ◆ Easy to formulate
- ◆ Imparts durable softness to many fabrics
- ◆ Excellent stretch recovery of fabrics
- ◆ Compatibility with wide range of chemicals used for textile finish

APPLICATIONS

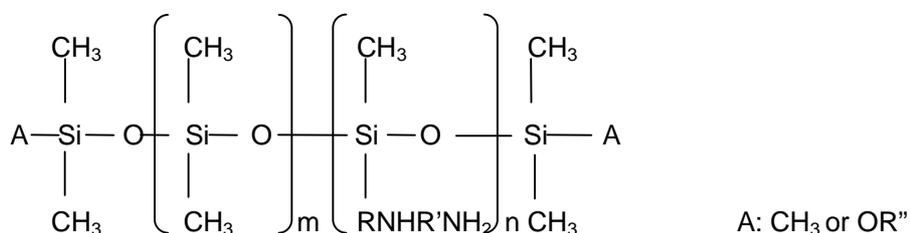
- ◆ Textile softener for all type of fabrics

TYPICAL PROPERTY DATA

PROPERTIES	
Appearance	Light yellow, transparent
Specific gravity (25°C)	0.98
Viscosity (25°C) mPa·s {cP}	1,000 {1,000}
Refractive index (n_D^{25})	1.408
Amino equivalent g/mol	1,600

Typical property data values should not be used as specifications. Assistance and specifications are available by contacting GE Toshiba Silicones Commercial Office.

CHEMICAL STRUCTURE



SOLUBILITY

Soluble	Toluene, Mineral sprits, Methyl ethyl ketone, Isopropanol, Dimethyl silicone fluid
Insoluble	Methyl cellosolve, Water, Liquid paraffin

EMULSIFICATION INSTRUCTIONS

- Blend the following ingredients using an overhead stirrer.

MAGNASOFT 310	15.0 parts
DOBANOX 23E (Lion Corporation)*	7.5 parts
Ethylene glycol monobutyl ether	7.5 parts

* C₁₂₋₁₃H₂₅₋₂₇O(CH₂CH₂O)₅H (HLB9.9)
- Slowly add 69.7 parts of ion exchanged with good agitation.
Note: if desired, biocides may be added in this step.
- Slowly add 0.3 parts of acetic acid. Agitate well for 5-10 minutes to insure homogeneity.

SOFTNESS TEST RESULTS

TEST CONDITION

Treating bath	2% effective content (MAGNASOFT 310+DOBANOX 23E) of above emulsion
Test fabrics	Cotton woven
Treating condition	Padding (pick up 100% for Cotton); Drying (130°C, 3min)
Evaluation of softness	Pure Bending Tester (KES-FB2: KATO TECH Co., LTD) Softness* ¹ : (B+2HB)/2 B: Bending rigidity (g·cm ² /cm), 2HB: Hysteresis of B (g·cm/cm)
Evaluation of smoothness	Surface Tester (KES-FB4: KATO TECH Co., LTD) MIU* ² : Mean friction coefficient MMD* ³ : Mean deviation of friction coefficient
Yellowing	Δb measured after heating at 175°C for 30min. with color differential tester based on untreated fabric color
Washing durability	Residual Si rate (%) measured with X-ray Fluorescence Spectrometer (Washing condition: JIS L-0217 103 method)
Water absorption	Water absorbing capacity measured height (mm) of drawn up water for

10 minutes (JIS L-1018 B-method)

TEST RESULTS

Softener	Handling touch	Softness* ¹ (B+2HB)/2	Smoothness MIU* ² /MMD* ³	Yellowing* ⁴ Δb	Washing durability %	Water absorptior mm
MAGNASOFT 310	Slippery	0.043	0.08/0.012	+1.6	94	30
Untreated	Rough	0.070	0.14/0.015	0	0	71

Note *1: A smaller number means softer touch.

*2, *3: A smaller number means smoother touch.

*4: A larger number means better durability.

*5: A smaller number means less yellowing.

HANDLING AND SAFETY

- ◆ Maintain adequate ventilation in the work area at all times.
- ◆ Wear eye protection, protective gloves at all times when working with this product.
- ◆ In case of skin contact, wash skin with soap and plenty of water. If irritation occurs, contact a physician.
- ◆ A study of the chemical in rats, using fumes, shows very high lethal dose. Do not use in aerosol applications.

STORAGE

- ◆ Store in a cool, dry place out of direct sunlight.
- ◆ Keep out of the reach of children.

PACKAGING

- ◆ 200kg drum available

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