

Magnasoft™ SRS-70 Textile Softener

Magnasoft* SRS-70

Description

Magnasoft SRS-70 textile softener is a novel (AB)_n linear, polydimethylsiloxaneamino polyalkyleneoxide polyether block copolymer. Magnasoft SRS-70 textile softener is designed to provide soft, silky, full hand to fabrics treated with fluorocarbon soil release additives, while incurring little or no interference with the soil release properties. The softening properties that are provided by Magnasoft SRS-70 textile softener are durable for numerous detergent washes.

The use of Magnasoft SRS-70 textile softener imparts superior softness and very low yellowing compared to conventional amino silicones when applied to a wide variety of fabrics, including 100% cotton knits and wovens, synthetics and cotton/synthetic blends. In addition, fabrics treated with Magnasoft SRS-70 textile softener are not hydrophobic. Magnasoft SRS-70 textile softener imparts a slow wetting durable hydrophilic character to fabrics.

Key Features and Benefits

- Provides the high level of softness for all types of fabrics
- Does not interfere with soil release properties of fabrics treated with fluorocarbon soil release agents
- Does not cause fabric yellowing
- Suitable for all normal application methods, such as pad bath, exhaustion and spray
- Can be diluted with water or alcohol
- Water dilution's of Magnasoft SRS-70 textile softener have excellent compatibility with finishing baths
- Formulations containing up to 23% Magnasoft SRS-70 textile softener actives (33%

as received Magnasoft SRS-70 textile softener) are only combustible and at 7.5% actives no flammability warning label would be required

Typical Physical Properties

| | |
|-----------------------------------|---------------------|
| Appearance | Clear, straw liquid |
| Viscosity, @ 25°C, cps | 6000 |
| Specific Gravity, 25/25°C, g/cc | 0.90 |
| Amine Content (in actives), % | 0.23 |
| Active Copolymer Concentration, % | 70 |
| Solvent | Isopropyl Alcohol |
| Preferred Diluent | Water |

Potential Applications

Magnasoft SRS-70 textile softener is intended to be used in textile finishing as a premium softener for all types of fabrics such as cotton, synthetics and cotton/synthetic blends, especially those which are also treated with fluorocarbon soil release agents. Magnasoft SRS-70 textile softener is a very effective softener for use in wrinkle free garments that are treated with DP resin and fluorocarbon soil release. Dispersions of Magnasoft SRS-70 textile softener have excellent shear stability. Therefore it can be an excellent softener for applications where normal, emulsified softeners do not show adequate shear stability such as in EVAC systems.

Magnasoft SRS-70 textile softener is normally applied as a water dilution, which is blended into the treatment bath formulation to provide the desired silicone add-on.

Processing Recommendations

Performance

Performance Soil Release and Softness

The data presented below demonstrate the superior soil release and softness provided by Magnasoft SRS-70 textile softener to fluorocarbon and DP resin treated 100% cotton twill. Performance was compared to that of:

(a) L-45* (1000), a conventional silicone

- (b) Magnasoft Plus, a high performance aminosilicone softener
- (c) Magnasoft HSSD, a hydrophilic silicone-amino-polyalkeleneoxyde terpolymer
- (d) 80/20 blend of Magnasoft HSSD and Magnasoft Plus

Soil Release Rating, Softness and Silicone Durability on 100% Cotton Twill Fabric Treated with 1.0% FC-248, 1.0% Silicone, BOWF

| Treatments | Soil Release Rating (Dirty Motor Oil) | | | | Softness | | |
|-----------------------------------|---------------------------------------|--------|----------|-------------------|----------|--------|----------|
| | Initial | 1 Wash | 5 Washes | Re-Stain & 1 Wash | Initial | 1 Wash | 5 Washes |
| Silicone / FC-248 / Resin) | | | | | | | |
| Magnasoft SRS-70 Textile Softener | 1 | 3 | 3.5 | 3.5 | 7 | 7 | 6 |
| Magnasoft HSSD Textile Softener | 1 | 3 | 3.5 | 3 | 5 | 3 | 3 |
| Magnasoft Plus Textile Softener | 1 | 1.5 | 3 | 2 | 8 | 6 | 5 |
| HSSD/Plus, 4/1 Blend | 1 | 2 | 3.3 | 3 | 6 | 4 | 3 |
| LE-460 | 1 | 2 | 3 | 3 | 4 | 3 | 3 |
| FC-248 / Resin Only | 1 | 3.5 | 4 | 4 | 2 | 2 | 2 |

Note: All treatments also contained 10% Riachem Reactant CFL, a DMDHU resin (44% solids) and was catalyzed with 1.5% Intex Catalyst 58. 0.5% Tergitol® 15-S-15 a nonionic surfactant supplied by Dow Chemical, was used to improve pad bath compatibility.

Data above indicates that Magnasoft SRS-70 textile softener provides superior softness along with almost no loss in soil release properties. Magnasoft SRS-70 textile softener provides durable softness to the fabric, since fabric treated with it retained most of the initial softness even after five washings.

Patent Status

Standard copy to come

Product Safety, Handling and Storage

Standard copy to come

Limitations

Standard copy to come

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