

## Magnasoft™ HWS Hydrophilic Textile Softener

### Magnasoft\* HWS

#### Description

Magnasoft HWS hydrophilic softener is a novel epoxy polyether terpolymer that provides hydrophilicity and a soft full hand when applied to a variety of knit and woven fabrics. Magnasoft HWS hydrophilic softener has been demonstrated to provide excellent softness with virtually no yellowing when applied to natural and synthetic fibers such as cotton and polyester. Magnasoft HWS hydrophilic softener imparts instant rewetting character to fabrics, and does not interfere with the soil release properties of fabrics that are treated with fluorocarbon soil release agents.

Dilutions of Magnasoft HWS hydrophilic softener are extremely shear stable and are suitable for use in Jet dye and EVAC systems. Fabrics treated with Magnasoft HWS hydrophilic softener can often be redyed unlike many traditional silicone softeners.

#### Key Features and Benefits

- Imparts excellent softness to all types of fabrics
- Safe and easy to use on difficult to rework fabrics
- Dilutions are extremely shear stable
- Provides instant rewetting properties to fabrics
- Does not contribute to fabric yellowing
- Will not interfere with the soil release properties of fabrics that are treated with fluorocarbon soil release agents
- Easily diluted with water
- Water dilutions have excellent compatibility with finishing baths

**Typical Physical Properties**

Appearance	Clear, slightly yellowish liquid
Viscosity at 25°C, cPs	3300
Specific Gravity, 25/25°C	1.0
Solubility in Water	Dispersible
Ionic Nature	Nonionic
Percent Actives, %	100

**Processing Recommendations****Recommended Method for Preparing an Aqueous Dispersion of Magnasoft HWS Hydrophilic Softener**

To prepare stable aqueous dispersions of Magnasoft HWS hydrophilic softener, slowly pour the silicone into the vortex of the total water (preferably tepid) while mixing at ~400 rpm.

**Viscosity of Magnasoft HWS hydrophilic softener when diluted in water**

	Viscosity (cPs)
15% in Water	340
20% in Water	490

**Recommended Method for Preparing a Clear Concentrate of Magnasoft HWS Hydrophilic Softener****1. Emulsion Concentrate Formulation**

Magnasoft HWS Hydrophilic Softener	70
Iconol TDA-6 <sup>(1)</sup> Surfactant	1.4
Iconol TDA-10 <sup>(1)</sup> Surfactant	2.8
Water	25.8

(1) BASF Corporation

## Preparation

1. Premix Magnasoft HWS hydrophilic softener and mix with moderate speed for at least three minutes.
2. Increase stirring speed to generate a small vortex and slowly add water at a rate that allows the water to be incorporated. Mix for an additional ten minutes. The resulting concentrate is a clear dilutable liquid with excellent stability.

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**Table 1: Magnasoft HWS Hydrophilic Softener Performance Results on 100% Cotton Knit (1% BOWF)**

	Magnasoft HWS hydrophilic softener	Competitive Product	Untreated
Softness <sup>(1)</sup>	5.3	4.0	2
Wettability (s)	<1	<1	<1
Whiteness (initial)	79.45	—	82.35
Whiteness (scorched)	57.60	—	58.64

(1) Softness was rated by a hand panel of 5 people. 6 = very soft, 1 = harsh.

**Table 2: Magnasoft HWS Hydrophilic Softener Performance Results on 100% Cotton Terry Cloth (1% BOWF)**

	Magnasoft HWS hydrophilic softener	Competitive Product	Untreated
Softness <sup>(1)</sup>	5.5	4.0	2
Wettability (s)	1	1	<1
Whiteness (initial)	62.6	—	59.12
Whiteness (scorched)	49.88	—	43.87

(1) Softness was rated by a hand panel of 5 people. 6 = very soft, 1 = harsh.

**Table 3: Magnasoft HWS Hydrophilic Softener Performance Results on 65/35 PE/Cotton Print Cloth (1% BOWF)**

	Magnasoft HWS hydrophilic softener	Competitive Product	Untreated
Softness <sup>(1)</sup>	5.3	4	2
Wettability (s)	6.6	5.0	33.2
Whiteness (initial)	91.9	—	91.27
Whiteness (scorched)	79.16	—	79.81

(1) Softness was rated by a hand panel of 5 people. 6 = very soft, 1 = harsh.

### Patent Status

Standard copy to come

### Product Safety, Handling and Storage

Standard copy to come

### Limitations

Standard copy to come

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