



# TECHNICAL DATA SHEET

First Source Worldwide, LLC *Your First Source for quality chemicals and colorants.*

## Sora PLUS LDE

: a universal lubricating agent crease inhibitor with emulsifying properties for textile finishing in rope dyeing machines.

Rev. 2/12/16

<b>Chemical Nature</b>	Fatty alcohol ethoxylate, phosphoric acid ester, partly neutralized, in water or solvent	
<b>Characteristics</b>	pH:	Approx. 7
	Physical Form:	Colorless, turbid liquid

### Properties

Protects the fabric surface, improves the running properties, and prevents the formation of running creases, wrinkles, compression marks, and chafe marks. The improved fabric slip promotes displacement of the material. These properties also allow greater loading of the dyeing machines and/or a higher rope speed.

Through its strong emulsifying effect it prevents the deposition of fiber impurities such as spinning oils, dye dust deposits, oils, waxes, and grease. As a result, it is possible to prevent spots on the fabric which are normally caused by these substances.

It prevents problems caused by water-hardening substances, heavy metals, and cotton pectin residues. The product also improves the effect of dispersing agents in the disperse dyeing of polyester fibers. Compatible with anionic and nonionic dyeing auxiliaries at the usual application rate. Under the dyeing conditions normally used, the product is stable to any changes in pH and resistant to electrolytes and hard water. Can also be applied at temperatures of up to 275°F.

In the processing of synthetic fibers, allows a combined scouring and dyeing process to be applied, providing process and cost optimization.

The above properties make Sora PLUS LDE very suitable for dyeing fabrics containing elastane.

In practice white goods made from polyamide and elastane blends have an especially strong tendency to yellowing at higher setting temperatures. The addition of Sora PLUS LDE during drying prevents this over a sustained period and preserves the fabric whiteness at a high level.

The product property data merely provides an indication of how the product is to be used. They do not constitute the agreed quality of the product, nor are they the object of regular quality control tests.



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## Properties, ctd.

Other product benefits include:

- ✓ Low foaming improves the running properties and minimizes friction damage
- ✓ Reduces the yellowing of spinning preparations and winding oils during the thermofixation of synthetic fibers and blends with elastane fibers
- ✓ High process security and higher process speed

Density (70°F):

Approx. 1.1 g/cm<sup>3</sup>

Water Solubility:

Soluble (60°F)

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## Application

The dosage amounts must be determined empirically in preliminary experiments. Comparative tests should be carried out to optimize the drying conditions.

The appropriate amount of Sora PLUS LDE is added in dilute form to the treatment bath. It is proved advantageous to run the goods for approximately 10 minutes to ensure the lubricating agent is evenly distributed over the fabric. The other dyeing auxiliaries and dyes are then added.

Sora PLUS LDE is to be used in all treatment stages carried out in the rope dyeing machine.

### Recommendations:

Dosing: 2 – 4 g/l Sora PLUS LDE

*For cellulose fibers and blends as well as polyester, polyamide, CA, CTA, and blends. Cotton articles and sized goods are not suitable for these combined procedures due to their high impurity content.*

A combined scouring and dyeing process can often be used on synthetic fibers. Preliminary trials are recommended to determine whether this process is appropriate for the fabric properties and the machines used.

Before dyeing the goods, they should be rinsed for 5 – 10 minutes in a bath of water at no more than 105°F. The required amount of pre-diluted product is then added to a fresh dye bath and mixed thoroughly for 5 – 10 minutes to ensure a homogeneous solution before adding all the other auxiliaries and the dyes. Finally, the desired dyeing process is carried out.



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## Application, ctd.

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In a series of practical trials, the yellowing of synthetic fibers was prevented to a large extent by applying Sora PLUS LDE during the drying of the untreated material.

The following is an example of a recipe for treating nylon/elastane (80/20) that has provided outstanding results under practical conditions:

*Substrate: Nylon/Elastane knitwear*

Application Rate: 50 g/l Sora PLUS LDE  
Application: Padding  
Conditions: 80% Pick-up and  
Drying at 325 °F for 1 minute  
Yellowing test 375°F, 45 seconds

Results: **NO Yellowing detectable**

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## Storage

If properly stored the product can be stored in the original sealed containers at temperatures between 40 – 90°F for at least 12 months. Opened containers should be used up as soon as possible. After use the containers should be properly sealed.

Should be protected from temperatures below 40°F and above 90°F.

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## Note

Refer to the Safety Data Sheet (SDS) for appropriate safe handling instructions. No known harmful effects when **Sora PLUS LDE** is used in an appropriate manner and for the purpose intended. Carefully observe the precautionary measures and hygienic protection needed when working with chemicals.

The information in this publication is based on our knowledge and experience. Do not assume a legal guarantee on certain properties or suitability for a particular application. Because of the many influences that may occur during handling and use of our products, do not release the processor or handler to perform their own investigations and tests. Everyone who receives our products will be responsible for observing patent rights as well as existing laws and regulations.

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# TECHNICAL DATA SHEET

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## Sora Scour LF-MD

: a low-foaming wetting agent and detergent with an emulsifying and extractive action for use in all pretreatment processes to mobilize and remove the impurities present in cotton; APEO-free.

Rev. 2/12/16

<b>Chemical Nature</b>	APEO-free mixture of sequestrents and surfactants, silicone-free	
<b>Characteristics</b>	pH (1:10):	~1.5 – 2.0 (10 g/l in water)
	Physical Form:	Liquid

### Properties

#### Viscosity

Approx. 120 cps (Brookfield spindle3) at 75°F

#### Density

Approx. 1.017 g/cm<sup>3</sup>

Forms homogeneous mixtures with alkalis at concentrations of up to 300 g/l NaOH (50%) at room temperature. The bath needs to be stirred at alkali concentrations higher than 100 g/l NaOH (50%) and/or at higher temperatures in order to maintain its stability and homogeneity.

### Application

Sora Scour LF-MD is a multi-functional, low foaming detergent and wetting agent, APEO-free, with emulsifying and extractive action for use in pretreatment of cellulose and cellulose blends with synthetic or spandex.

#### Jets and Package:

##### Alkaline Boil-Off, Cotton:

Liquor ratio:	1:8
Sora Scour LF-MD:	0.5 – 1.0% owg
NaOH 100%:	1.0 – 3.0% owg
Temperature:	190 – 225°F
Time:	30 – 45 min



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## Application, ctd.

### Bleaching for Dyeing, Cotton:

Liquor ratio:	1:8
Sora Scour LF-MD:	0.5 – 1.0% owg
Sora Stabilizer CP:	1.0% owg
NaOH 50%:	1.0 – 3.0% owg
H <sub>2</sub> O <sub>2</sub> 50%:	2.0 – 4.0% owg
Temperature:	205 – 230°F
Time:	30 – 60 min

NOTE: When scouring or bleaching heavily soiled cotton or cotton containing high amounts of metals the addition of Soralon XT-PBS at 1.0% owg will improve absorbency and degree of whiteness. Soralon XT-PBS also stabilizes the hydrogen peroxide. The amount of stabilizer can be reduced or eliminated.

## Continuous Dyeing:

### Washing:

Sora Scour LF-MD:	1 – 3 ml/l
Soda Ash:	0.25 – 2 g/l
Temperature:	160 – 205°F

### Boiling-off:

NaOH 50%:	60 – 100 g/l
Sora Scour LF-MD:	3 – 5 ml/l
Impregnation Temp:	65 – 175°F
Liquor Pick-up:	approx. 100% for CO approx. 70% for PES/CO
Steaming Temp:	approx. 212°F
Steaming Time:	15 – 20 min (ex. Combination steamer, J-box)

### Bleaching with Hydrogen Peroxide:

*For bleaching fabrics that have been desized and given an alkaline pretreatment.*

Sora Scour LF-MD:	2 – 14 ml/l
Soralon CP:	8 – 12 ml/l
H <sub>2</sub> O <sub>2</sub> :	15 – 35 ml/l
NaOH 50%:	8 – 10 g/l
Impregnation Temp:	60 – 100°F
Liquor Pick-up:	approx. 100% for CO approx. 70% for PES/CO
Steaming Temp:	approx. 212°F
Steaming Time:	15 – 20 min (ex. Combination steamer, J-box)



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## Application, ctd.

Scouring:

Sora Scour LF-MD: 1 g/kg

Soralon XT-PBS: 1 g/kg

Temperature: 195 – 205°F

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## Storage

This product can be kept in the original sealed container at temperatures between 0 – 40°C for at least 12 months. Partly used containers should be kept tightly sealed and used up as soon as possible.

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## Note

Refer to the Safety Data Sheet (SDS) for appropriate and safe handling instructions. No known harmful effects when **Sora Scour LF-MD** is used in an appropriate manner and for the purpose intended. Carefully observe the precautionary measures and hygienic protection needed when working with chemicals.

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