



CHT
SMART CHEMISTRY
WITH CHARACTER.

FELOSAN FOX-LF
THE SMART DETERGENT

FELOSAN FOX-LF

Modified fatty alcohol ethoxylates with anionic comb polymers

The washing power of a detergent depends on its chemical composition and most of all on the concentration of the detergent molecules in the washing bath.

During the washing process, that means when the soiling particles are separated, and oil is emulsified, the surfactant molecules accumulate on the textile. The hydrophobic molecule parts of the detergent enclose the soil or oil particles, which are also hydrophobic, in so-called micelles, remove them from the fabric, and in the ideal case, they keep them dispersed or emulsified in the treatment bath.

The micelle formation depends on the concentration. Micelles can only be formed if there is a sufficient quantity of surfactant molecules in the bath. The more micelles are formed, usually the more soil and oil are removed from the textile.

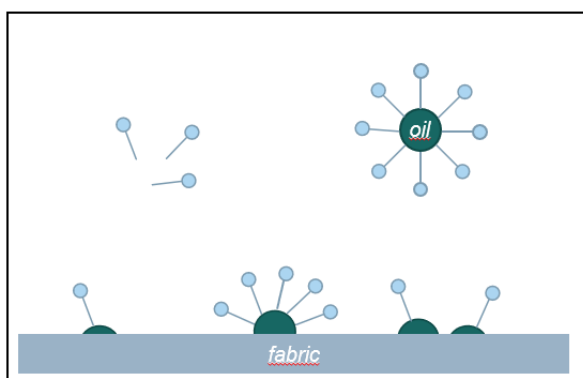
Patented detergent of CHT !

Combining **modified surfactant components with innovative, patented special polymers**, CHT succeeded in developing a new generation of detergents.

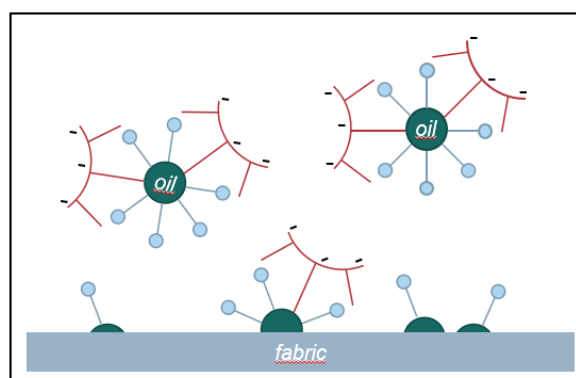
The special polymers are integrated into the surfactant micelles and give the following effects:

- ▶ Increase of the effective surfactant concentration by reduction of the critical concentration of micelle formation (CMC)
- ▶ Increase of the effectiveness of washing and cleaning baths of at least 20% compared to conventional detergents.
- ▶ Stabilization of the separated soiling by steric and electrostatic effects.
- ▶ Increase of the emulsion stability of oils/fats/waxes and finishes.
- ▶ Improvement of the hydrophilic effect on the fabric.

Soil removal with standard detergents



Improved soil removal with FELOSAN FOX-LF with the same surfactant concentration





Product properties

Application fields

- ▶ FELOSAN FOX-LF has an excellent washing effect and give a high rate of soil removal.
- ▶ Due to its high emulsifying power FELOSAN FOX-LF is very well suitable on materials containing elastane.
- ▶ FELOSAN FOX-LF is very low foaming so that it can be applied on washing machines and discontinuous dyeing machines with high turbulences.
- ▶ FELOSAN FOX-LF can be applied on automatic dosing units.
- ▶ FELOSAN FOX-LF is easily biodegradable and APEO free.

Application recommendation

Discontinuous pretreatment

Desizing	0.5 – 1.5 g/l
Caustic scouring	0.5 – 1.5 g/l
Peroxide bleach	0.5 – 1.5 g/l
Washing	0.5 – 2.0 g/l
Washing of elastomer blends	1.0 – 2.0 g/l

Continuous pretreatment

Desizing	3.0 – 4.0 g/l
Caustic scouring	3.0 – 8.0 g/l
Peroxide bleach	3.0 – 8.0 g/l
Washing	1.0 – 5.0 g/l
Washing of elastomer blends	2.0 – 5.0 g/l

FELOSAN FOX-LF and hydrophilicity !

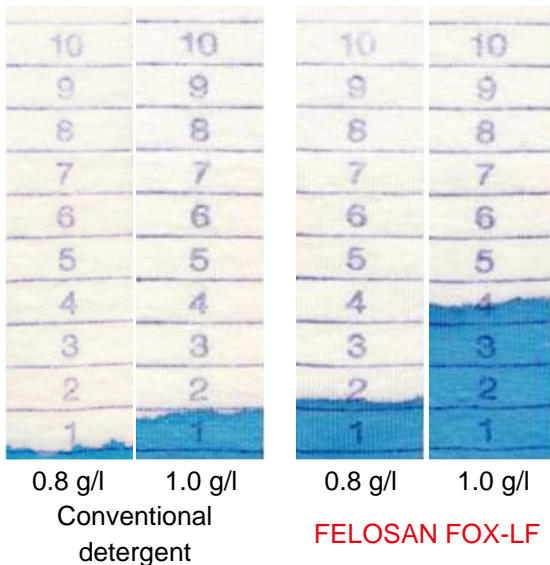
FELOSAN FOX-LF improves the hydrophilic effect on the fabric

Peroxide bleach on 100 % CO knit fabric on JET

Recipe peroxide bleaching

Detergent / FELOSAN FOX-LF	0.8 g/l
Stabilizer	0.5 g/l
NaOH 50 %	2.0 g/l
H2O2 35 %	3.0 g/l

LR: 1:10, bleaching at 98 °C for 30 min, rinse hot and cold + neutralization



- Increase of washing effectiveness of at least 20 %

FELOSAN FOX-LF and dispersing!

Due to comb polymers FELOSAN FOX-LF shows an outstanding dispersing power which facilitates the removal of all kind of dust and dirt.

Determination of the dispersing power

Detergent / FELOSAN FOX-LF	1.0 g/l
Active carbon	2.0 g/l

1 min LR: 1:20, wash at 60 °C for 30 min, rinse 60 °C / 40 °C / 2 x cold

FELOSAN FOX-LF and synthetics !

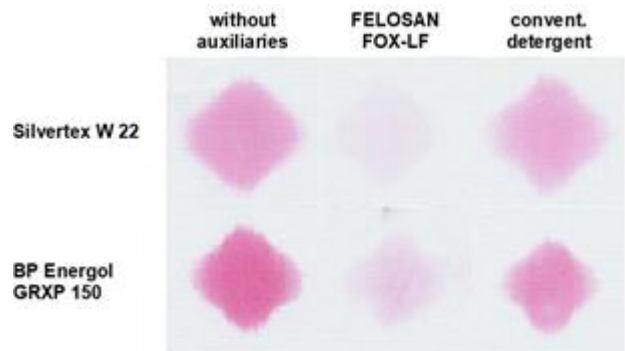
Beside its excellent washing power on cotton material FELOSAN FOX-LF has very high oil emulsifying capacity on synthetic fibres like PES and PA.

Oil emulsifying capacity on PES fabric

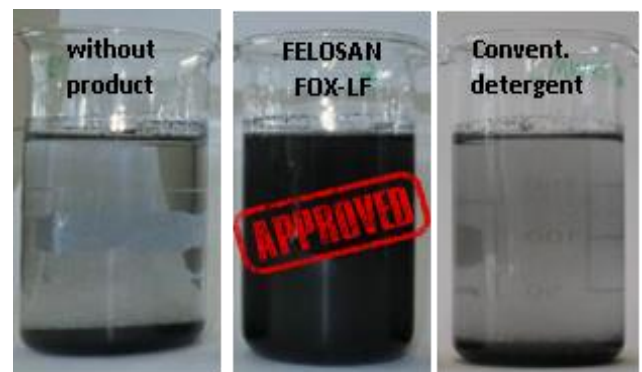
Washing recipe

Detergent / FELOSAN FOX-LF	3.0 g/l
Soda ash	1.0 g/l

LR: 1:20, wash at 60 °C for 30 min, rinse 60 °C / 40 °C / 2 x cold



- FELOSAN RG-N consists of synergetic mixture of detergents which enables outstanding absorbency and capillarity on the fabric after the pretreatment process.

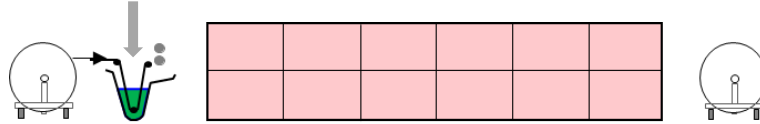


FELOSAN FOX-LF in heatsetting!

FELOSAN FOX-LF prevents yellowing of CO/EL material during the heatsetting process.

Application: Pad Dry fixation

3 – 7 g/l FELOSAN FOX-LF
Pick-up: 70 % (slight overflow)



Without product

With FELOSAN FOX-LF



- ▶ **Less yellowing of CO/EL fabric after heatsetting and efficient silicone oil removal in subsequent scouring**

FELOSAN FOX-LF and reactivities!

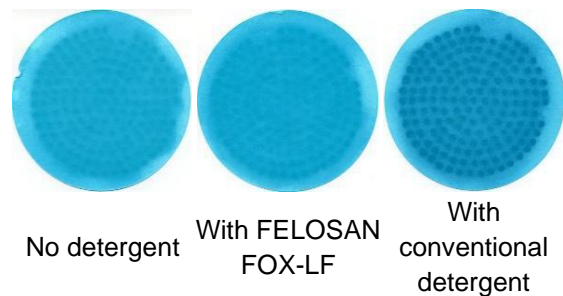
FELOSAN FOX-LF contains anionic comb polymers. Those comb polymers facilitate a proper removal of the nonionic residuals, before causing a negative effect in dyeing.

Filter test with TURQUOISE V-G CONC

Salt	70.0 g/l
BEZAKTIV TURQUOISE V-G CONC	1.25 g/l
Soda ash	20.0 g/l
Detergent / FELOSAN FOX-LF	0.10 g/l

Process:

Prepare 200 ml, treat 15 min at 50 °C,
then filtration



- ▶ **Easier wash off prior to sensitive shades like turquoise**



CHT

SMART CHEMISTRY
WITH CHARACTER.

CHT Germany GmbH | Technical Service | Textile Auxiliary Solutions | Pretreatment
Tel +49 7071 154-233 | www.cht.com | pretreatment@cht.com

www.cht.com