

TECHNICAL INFORMATION

Fadex® F liquid conc.

Fadex® F liq c

Highly efficient UV absorber to process polyester textile goods selected for the automotive industry.

- improves the hot lightfastness of polyester dyeings with disperse dyes for the automotive industry which already have good lightfastness
- reduces fiber damage due to photochemical degradation
- has a very good dispersion stability and is therefore particularly suitable for exhaust dyeing
- has little self-color and therefore has virtually no influence on the shade of dyeings
- improves the light fastness of disperse dyes in general
- improves the light fastness of dispersed dyes submitted to the test of the automotive industry (Foron® AS dyes)

Properties

Appearance	white yellowish, aqueous dispersion
Chemical character	benzotriazol derivative
Ionic character	anionic
Viscosity	< =300mPa.s
PH (commercial goods)	5.5 – 6.0
Dilutability	dilutable in any proportion with cold water
Storage stability	good, Fadex® F liq c freezes at –3°C, but is fully effective again after thawing and the dispersion is

perfect after stirring up. As with all liquid dispersions, **Fadex® F liq c.** should be stirred well before removal from the container

Stability to

- Hardness forming salts good
- acids good

Compatibility with anionic and non-ionic products

good with usual products when dyeing PES fibres

Foaming behavior

low foaming

Eco-toxicological data

See Safety Data Sheet

2. Application

2.1. Scope of application

Fadex® F liq c is especially suitable for the exhaust dyeing process.

Fadex® F liq c exhausts rapidly and completely on all PES fibers under HT conditions.

Fadex® F liq c has very high dispersion stability and is therefore highly suitable for dyeing in Cross wound package and beam dyeing machines and in jets with powerful pumps.

Fadex® F liq c may lose part of its action in subsequent heat treatments due to sublimation. Such treatments should be carried out at the lowest possible temperature and the shortest possible time. Any possible loss of product can be compensated by increasing the amount of **Fadex® F liq c.**

Fadex® F liq c can be also applied in printing and continuous processes where fixation is carried out under thermosol and superheated steam conditions. In these processes special attention must be paid to the sublimation of the product and of the dyes.

2.2. Exhaust process

Fadex® F liq c is applied together with the dyes at the beginning.

Fadex® F liq c can be applied in the presence of carriers although this is not recommended because carrier residues on the good may impair the lightfastness properties.

Example of recipe

- x % Disperse dyes
- 1.2-2.5 % **Fadex® F liq c**
- 1 - 2 g/l Opticid® PSD liq (pH 4,5 – 5)
- 0.5 – 2.0 g/l Lyocol® RDN liq or Lyocol® PRDN liq

heat to 130°C and dye for 30-60 min at 130°C
the heating rate and dyeing time depend on the dyes, their concentration
for high lightfastness properties a reduction clearing is recommended.

2.3. Continuous processes

Fadex® F liq c is applicable in the pad thermosol process. As it sublimates at high thermosol temperatures pre trials should be carried out. Sublimation can be compensated for by increasing the amount of **Fadex® F liq c**

Sample recipe

x g/l Disperse dye
15-30 g/l **Fadex® F liq c**
10-30 g/l Solidokoll® V liq
pH 4-5 with Opticid® PSD liq

- pad at 60-80% pickup
- dry at 110-130°C
- thermosol at 190-210°C

The fixation temperature and time depend on the amount of dye applied.

- Reduction clearing

For good lightfastness all dyeing should be reduction cleared, rinsed thoroughly warm and cold and neutralized.

2.4. Printing

In printing the same limitations apply as in continuous dyeing.

Sample recipe

x g stock paste
y g Disperse dye
10 g Lyocol® BC liq
5-10 g Lyogen® CN liq
20-30 g **Fadex® F liq c**
10 g Opticid® PSD liq 1:2 dilution (pH adjustment)
Z g Water
1000g

- dry at 110°C
- fix with superheated steam for 6 min at 180°C

Reduction cleaning :

rinse cold

wash at 40°C with 1 g/l Eganal® DFT liq

wash at 50°C with 1 g/l Eganal® DFT liq

reduction clearing at 70°C with

1 g/l Eganal® DFT liq

4 g/l Soda ash

- 2 g/l Na-Dithionite
- rinse cold and neutralize.

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