Ultraphor® SFG
Liquid

Optical brightener for polyester fibers and their blends
Nature
Stilbene dye in water/solvent

Physical form
Yellowish liquid with a characteristic odor

Shelf life
Ultraphor SFG Liquid can be kept in the original sealed containers at temperatures between 0 and 35 °C for up to 24 months. Partly used containers should be kept properly closed and used up as soon as possible.

Ultraphor SFG Liquid must be protected from temperatures below 0 °C.

As with all dispersions, the contents of the container should be thoroughly homogenized by stirring before withdrawing product.

Note on safe handling, storage, disposal and ecology
Before using the product for the first time, please note the information given in the current Safety Data Sheet.

Properties

Product specification
Tolerances for test characteristics are given in the product specification.

pH (20 °C)
Approx. 8.0 (measured on the undiluted product)

Solubility in water
Dispersible

Stability of liquors
Stable in reductive and hydrogen peroxide bleaching liquors.

Light fastness rating
5 – 6 on PES material

Degree of whiteness
The degree of whiteness is not affected in the pH 2.0 – 12.0 range.

Application

Ultraphor SFG Liquid is used in the textile sector as an optical brightener for polyester fibers and their blends. It is less suitable for brightening CA, CTA and PA.

The very good fixation properties of Ultraphor SFG Liquid are equivalent to those of optical brighteners that can be fixed at low temperatures.
Application recommendations

Brightener solutions and goods that have been padded with brightener and dried but not yet fixed must be protected from light.

The fixation conditions depend on the fabric construction. Tightly woven, relatively heavy qualities require longer fixation times or higher fixation temperatures than lightweight, open materials.

Application conditions and rates (guideline values)

The following recipes are provided only as a guide. In view of the many effects that may occur under plant conditions, it is essential to carry out preliminary trials to optimize the parameters, especially the application rates.

Optical brightening under dyeing conditions

HT process

0.1 – 1.25 % Ultraphor SFG Liquid

1 g/l Setamol® WS

pH 4.5 – 5.5 with acetic acid

Liquor ratio: 5:1 – 20:1

Initial temperature: 50 – 60 °C

Heat up to 130 °C in 30 min

15 – 30 min at 130 °C

Dry

The addition of Setamol WS is particularly necessary in the optical brightening of wound packages.

Thermosol process

1 – 15 g/l Ultraphor SFG Liquid

Liquor pickup: approx. 65 %

Dry

Thermofixation at 170 – 190 °C

Time: 30 – 15 s

Combined optical brightening and finishing/resin finishing

Ultraphor SFG Liquid, together with the appropriate additives such as Fixapret® and Siligen® products, can also be applied and fixed under resin finishing and other finishing conditions. We recommend adding approx. 0.5 g/l Kieralon JET-B Conc., prediluted with water, to the finishing recipes.

Typical application:

Single-stage brightening and resin finishing of shirting fabric (PES/CO 65/35):

Application rate (guideline value):

Approx. 1 – 12 g/l Ultraphor SFG Liquid

pH 4.5 – 5.5 with acetic acid

Liquor pickup: approx. 60 – 70 %
Dry
Fixing and curing: approx. 45 s at 170 °C
or 3.5 – 4.0 min at 150 °C

We recommend adjusting alkaline goods to a slightly acid pH before one-step finishing and brightening.

**Fastness properties**

The fastness data below apply to PES brightened to an optimum degree of whiteness and refer to the change in the white effect.

- **Light (Xenotest®)**
  - DIN 54004: 5 – 6
- **Washing, 40°C**
  - DIN 54014: 5
- **Washing, 60°C**
  - DIN 54010: 5
- **Sea water**
  - DIN 54007: 5
- **Perspiration**
  - DIN 54020:
    - alkaline: 5
    - acid: 5
- **Dry cleaning**
  - DIN 54024: 5
- **Dry-heat pleating and dry-heat setting**
  - DIN 54060:
    - 180°C: 5
    - 210°C: 4 – 5
- **Nitrogen oxides**
  - DIN 54025: 5

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When using this product, the information and advice given in our Safety Data Sheet should be observed. Due attention should also be given to the precautions necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights, etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. Responsibility for compliance with textile dealers' requirements rests with the textile processor.