



SEVENTIN YEL | PEF | PHT | N-50

Maximum performance fibre protection products
with a wide range of applications



Features and Benefits of Seventin YEL

- ✓ Clear, yellow liquid
- ✓ pH approx. 3
- ✓ Easily soluble in cold water
- ✓ Resistant to acids and alkaline in commercial concentrations
- ✓ Compatible with anionic and non-ionic products
- ✓ Odourless
- ✓ Biodegradable
- ✓ APEO-free
- ✓ Can be used in the padding and in discontinuous process

Application of Seventin YEL

Analysis

Examination of phenolic yellowing according to DIN EN ISO 105-X18

The specimen is placed in a phenol-impregnated test paper, sandwiched between two glass plates and wrapped with a phenol-free film. After 16 hours at 50 °C, the specimen is cooled in the film. The yellowing of the specimen is immediately compared to a grey scale after unpacking.



Areas of application

Seventin YEL is used on polyamide to prevent yellowing of the product caused by phenols during storage.

Packaging materials often contain phenolic antioxidants which prevent packaging from deteriorating. However, these phenols are volatile and can be easily absorbed by textiles, resulting in the yellowing of the fabric.

With **Seventin YEL** it is possible to prevent the absorption of the phenols and to prevent yellowing of textiles. Therefore, it maintains maximum degrees of whiteness in optically brightened products and prevents hue shift in pastel shades.

Seventin YEL can be used in padding and discontinuous processes and on continuous installations, e.g. used in production line equipment, as it does not develop a disturbing smell, even in hot baths.

Seventin YEL is biodegradable.

Application

Instructions for making solutions

Seventin YEL is easily soluble in cold water, but can also be added directly to the application liquid. Care should be taken with respect to the compatibility of any optical brightener or dye used in acidic application liquid.

Quantities

Discontinuous process

2,0 – 4,0 g/l **Seventin YEL**
Adjust to pH 3.0 with citric acid
Liquor ratio 1:20
Treat for 30 min. at 98 °C
rinse at 50 °C
cold rinse

Padding process

10,0 – 40,0 g/l **Seventin YEL**
Adjust to pH 3.0 with citric acid
padding,
dry at 110 – 120 °C

Continuous process for strip production

10,0 – 60,0 g/l **Seventin YEL**
Adjust to pH 3.0 with citric acid
padding,
2 – 3 min saturated steam

The pH of the final finished product is, depending on the amount used, between pH 6 – 7. **Seventin YEL** blocks the amino end groups in the polyamide, thus preventing the addition of phenols and therefore prevents yellowing of materials, even within a weakly acidic-neutral pH range.

It should be noted that finishing with a cationic softener adversely affects the tendency of the material to yellow. This is not related to the effectiveness of the product.

Composition

Preparation of alkyl aryl sulphonates

Ionogenic characteristics

Anionic

Features and Benefits of Seventin PEF liquid

- ✓ Colourless to yellowish, viscous liquid with alkaline reaction
- ✓ Density approx. 1.1 g/cm³
- ✓ No stable stock solutions
- ✓ Resistant to bleach and dyeing chemicals in use-related application concentrations
- ✓ Compatible with surfactants and optical brighteners
- ✓ Excellent fibre protection even at high treatment temperatures
- ✓ Easy dosage

Composition

Organic nitrogen compounds

Ionogenic characteristics

Not surface active



Areas of application

Seventin PEF liquid is used as a fibre protection agent for polyamide and elastane in hydrogen peroxide bleaching, in hydrofixing and in dyeing. The product protects these fibres against oxidative damage at high treatment temperatures and subsequently prevents loss of strength.

Pure polyamide is rarely bleached with hydrogen peroxide. Cotton/polyamide blends, on the other hand, must be bleached for proper removal of seed coat residues, optimum whiteness and required hydrophilicity. **Seventin PEF liquid** plays an important role as a fibre protection agent against the loss of tensile strength of polyamide and elastane fibres.

In elastane fibres, elasticity properties are maintained despite treatment in an alkaline bleaching bath.

This liquid product can be distinguished from powdered formulations by the following properties:

- no complicated dissolving necessary and therefore easier handling
- no dust and therefore no exposure for employees
- can be used with dosing systems

Application

Instructions for making solutions

Seventin PEF liquid should be pre-emulsified with approx. ten times the amount of cold water to the suspension and then added to the application liquid.

Quantities

Hydrogen peroxide bleaching

Discontinuous	0,2 – 0,7 %	Seventin PEF liquid according to the weight of goods
Cold pad batch bleaching	0,2 – 0,5 %	Seventin PEF liquid according to the weight of goods

Dyeing	0,1 – 0,4 g/l	Seventin PEF liquid
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Hydrofixing	0,1 – 0,4 g/l	Seventin PEF liquid
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Features and Benefits of Seventin PHT

- ✓ Light yellow, clear liquid
- ✓ pH value approx. 9.5
- ✓ Density approx. 1.1 g/cm³
- ✓ Can be diluted with water at any ratio
- ✓ Resistant to acids and alkalis in commercial concentrations
- ✓ Hard water resistant
- ✓ Highest degrees of whiteness and brilliant shades are retained even after heat processing
- ✓ Wash resistant
- ✓ APEO-free

Composition

Preparation of fatty alcohol ethoxylates and organic nitrogen compounds

Ionogenic characteristics

Non-ionic

Areas of application

Seventin PHT is a fibre protecting agent for protection against yellowing due to thermal treatments, such as drying, fixing or moulding, of polyamide and its mixtures.

By using **Seventin PHT**, it is possible to maintain the highest levels of whiteness and brilliant colour shades without the necessity of an additional bleaching process after thermal treatment.

Seventin PHT prevents the oxidation of the free amino end groups by heat and subsequently has a positive influence on colour yield. Brilliant, reproducible dye results are achieved.

Seventin PHT permanently binds to fibres and can therefore be used before dyeing.

Seventin PHT can also be used for polyester/spandex blends.

Application

Instructions for making solutions

Seventin PHT is easily soluble in cold water, but can also be added directly to the application liquid.

Quantities

Padding process	10,0 – 30,0 g/l	Seventin PHT
	– Padding – Drying	

Features and Benefits of Seventin N-50

- ✓ **Brown liquid with a slightly acidic reaction**
- ✓ **Density approx. 1.3 g/cm³**
- ✓ **Can be diluted as required with cold to warm water**
- ✓ **Resistant to acids, alkaline and electrolytes in use-related application concentrations**
- ✓ **HT-resistant**
- ✓ **Environmentally friendly – biodegradable**

Composition

Preparation of protein degradation products

Ionogenic characteristics

Anionic

Areas of application

Seventin N-50 is used as a highly effective wool protection agent wherever there is a risk of damage during wet finishing e.g. when dyeing with 1:2 metal complex dyes, in the HT dyeing of wool/polyester or with the levelling, nuancing or whitening of dyes.

The use of **Seventin N-50** reduces degradation in terms of strength and elasticity, improves spinning and winding properties, and reduces the loss of wool.

Application

Instructions for making solutions

Dilute the product with one to two times the amount of cold to warm water and then add to the application liquid. The timing of the addition is important.

When dyeing with 1:2 metal complex dyes, **Seventin N-50** must be added as the first component. When using **Seventin N-50** under HT conditions in wool/polyester dyeing, the wool protection agent should be added close to the cooking temperature.

1. As a fibre-protecting agent

When dyeing with 1:2 metal complex dyes, 2 – 3% **Seventin N-50** should be used.

When dyeing wool/polyester under HT conditions, 1 – 3% **Seventin N-50** should be used according to the wool content.

2. For levelling, nuancing and whitening stains

2 – 4% **Seventin N-50** based on the wool content.



Storage

Seventin YEL: When stored properly in closed original containers, the product can be stored for at least 6 months. With prolonged storage, the product solidifies below 0 °C and this can cause irreversible damage. Usability should be checked before use.

Seventin PEF: With prolonged storage, the product may solidify below 0 °C. After thawing and thorough stirring, the product is fully usable again. When stored properly in closed original containers below 50 °C, the product can be stored for at least 6 months. Storage at higher temperatures can cause irreversible damage. Usability should be checked before use. Protect from direct sunlight.

Seventin PHT: When stored properly in closed original containers below 40 °C, the product can be stored for at least 6 months. Storage at higher temperatures can cause product discolouration. Protect from direct sunlight. The product may solidify with prolonged storage below 0 °C. After thawing and thorough stirring, the product is fully usable again.

Seventin N-50: When stored properly in closed original containers, the product can be stored for at least 6 months.

Further instructions for safe handling can be found in the safety data sheet!

The written information and recommendations on our products are based on extensive research and correspond to our current practical experience of textile finishing. These are to be considered as non-binding advice – also with respect to third party property rights and foreign laws – and do not exempt users from testing the product and procedures for suitability for their own operations. In particular, we assume no liability if used for purposes not expressly stated in writing by us. We reserve the right to make technical changes during product development. In the event of damage, we refer to our General Terms and Conditions of Sale and Delivery, Section 7.

