
Technical Information**Rayosan C pa****Rayosan® C Paste**

Fibre-reactive UV absorber for cellulosic and polyamide fibres

- reacts as a UV absorber with the hydroxyl groups of cellulosic fibres and the amino groups of polyamide fibres
- produces lightfast and washfast absorption effects with respect to UV rays
- is suitable for application by exhaust as well as continuous methods.

1 Properties

Appearance	white, viscous liquid
Chemical character	heterocyclic compound
Ionic character	anionic
Density at 20°C	approx. 1.25
pH (undiluted)	approx. 6
Storage stability	at least 6 months at 20-25°C (higher storage temperatures may lower the product's effectiveness)
Stability of solutions to	
● hard water, salts, acids	good
● alkalis	good, acts as a catalyst
Compatibility with	
● anionic and nonionic products	good
● cationic products	precipitation is possible
Foaming tendency	none
Ecotoxicological data	see Safety Data Sheet.

2 Mode of action

Rayosan C Paste is a reactive UV absorber with maximum effect in the UV-B region. The product reacts with the hydroxyl groups of cellulosic fibres and with the free amino groups of polyamide fibres in the manner of a reactive dye. After treatment with **Rayosan C Paste** the permeability of textiles by UV rays is greatly reduced.

3 Scope of application

Rayosan C Paste can be applied on all types of cellulosic and polyamide fibres in all forms (yarn, woven fabrics, knitwear). The product may affect the dyeing behaviour of treated fibres. Especially when the product is applied in high concentrations the colour yield of anionic dyes (reactive, direct and acid types) may be reduced. In the case of dyed textiles (in medium to dark shades) it is recommended to apply **Rayosan C Paste** *after* dyeing. Since the product absorbs UV rays in the UV-B region, it has little or no influence on fluorescent brighteners. It does not change the shade of dyed textiles.

4 Fastness properties

Thanks to its covalent bond to the cellulosic and the polyamide fibre, **Rayosan C Paste** exhibits high stability. The UV absorbing property of textiles treated with this product remains unchanged after repeated launderings (ISO 105 E2S, 95°C, 5 times), after a chlorine wash (M&S C37) and after 200 h exposure (xenon lamp). The fastness properties of dyed goods (wash and lightfastness) are not affected by a treatment with **Rayosan C Paste**.

5 Application

5.1 Methods of application

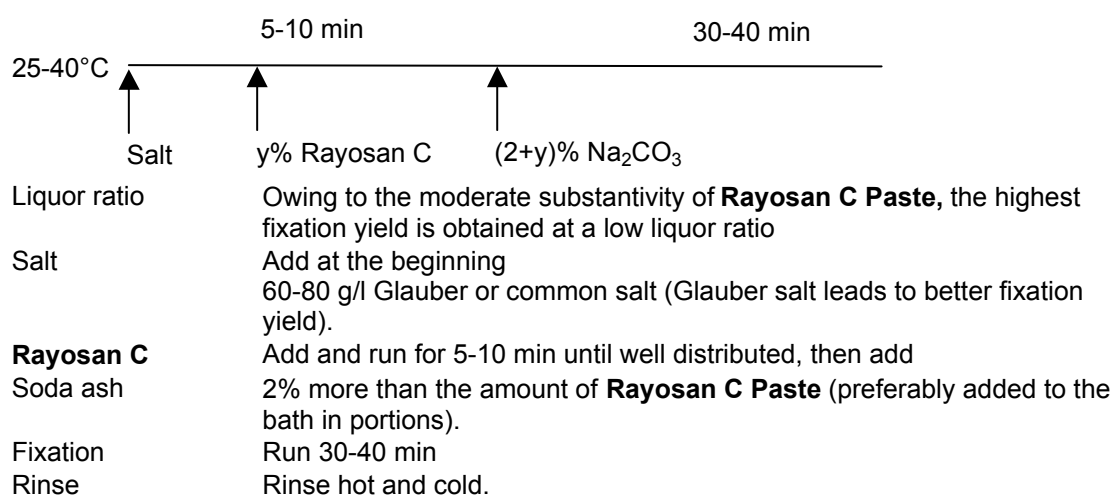
Rayosan C Paste can be applied on cellulosic and polyamide fibres by normal exhaust and padding processes.

5.2 Amounts applied

As a rule, 1 - 4% **Rayosan C Paste**. The highest amount applies to full white articles and the lowest to deep-dyed articles.

5.3 Application methods for cellulosic fibres

5.3.1 Exhaust method (isothermic)



- Fluorescent brightening can be carried out straight after rinsing (removal of the majority of electrolyte).
- **Rayosan C Paste** can be applied together with reactive dyes. The **Drimarene® K dyes** are the most suitable reactive dyes because they exhibit similar reactivity to **Rayosan C Paste**. The addition of **Drimagen® ER or E2R Liquid** ensures perfect levelness of the dyeing.

- **Pad batch**

After mixing, **Rayosan C Paste** becomes reactive. As far as possible the padliqur temperature should be 20-25°C, but it can be somewhat higher for reasons of climate. For optimum padliqur stability (i.e. to avoid premature hydrolysis of the product) the alkali and the **Rayosan C Paste** solutions should be prepared separately and after cooling to the padliqur temperature, fed into the padder via a mixing device.

- **Pad thermofix**

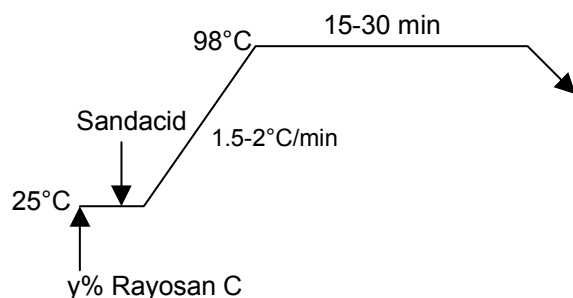
Sodium bicarbonate ensures good padliquor stability. With soda ash a mixing device is necessary. An addition of 50-80 g/l urea to the padliquor leads to better fixation yield and is recommended when using **Rayosan C Paste** in concentrations of 30 g/l and over.

- **Pad steam**

Pad	60-80% pickup
Steam	30-45 s at 100-102°C (saturated steam)
Rinse	hot then cold

5.4 Application methods for polyamide fibres

5.4.1 Exhaust method



Set bath with	y % Rayosan C Paste at pH 4 (or below) <i>or better</i> with pH shifting from the neutral to acid region with 1-2 ml/l Sandacid* VVA/VS Liquid .
Raise	from room temperature to 98°C at 1.5-2°C/min so as to ensure uniform uptake and good distribution of the product
Fixation	15-30 min at 98°C
Rinse	hot then cold.

5.4.2 Continuous method (pad steam)

Padliquor	y g/l Rayosan C Paste
	20 g/l salt (common or Glauber)
Pad	60-80% pickup
Steam	5-7 min at 100-102°C (saturated steam)
Rinse	hot then cold.

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The information and recommendations presented here were compiled with the utmost care, but cannot be extended to cover every possible case.

They are intended to serve as non-binding guidelines and must be adapted to the prevailing conditions.