Lutexal® Thickener F-RP

Synthetic thickener for printing cotton and viscose rayon with reactive dyes
Chemical nature  
Acrylic copolymer.

Physical form  
White viscous liquid.

Shelf life  
The shelf-life of Lutexal® Thickener F-RP in the original sealed containers is at least 12 months at temperatures between 5°C and 40°C. Once the containers have been opened, their contents should be used up as rapidly as possible, and the containers should be tightly re-closed after each withdrawal.

If the product is frozen by accident, thaw out by placing the container in warm water while mixing thoroughly.

Properties

Lutexal® Thickener F-RP is a synthetic thickener for reactive printing. It is a liquid form product that can be readily strewn into water and swells rapidly under normal mixing conditions.

pH  
Ca. 6-8 (5g/l in water)

Density (20 °C)  
Ca. 1.1 g/cm³.

Ionicity  
anionic

Solubility  
Miscible with water in all proportions.

Colour yield  
The great advantage of Lutexal® Thickener F-RP over natural thickeners is that its colour yield is significantly higher.

Preservatives  
Lutexal® Thickener F-RP in the form of its original, or stock thickenings and print pastes prepared from it, does not require a preservative to attain a very long shelf life.

Application

Print pastes with outstanding flow characteristics can be easily produced with Lutexal® Thickener F-RP.

Very good levelness and sharply defined contours can be achieved on goods that are difficult to print.

Increase in viscosity  
Lutexal® Thickener F-RP allows the viscosity to be corrected very easily to conform to the conditions under which the print paste is applied.

The viscosity is increased by strewning in Lutexal® Thickener F-RP, but the paste must be thoroughly stirred afterwards.

Electrolyte stability  
The electrolyte stability of thickenings prepared with Lutexal® Thickener F-RP is very high. The only case in which the stock thickening obtained from the recipe below does not have sufficient viscosity arisen if large amounts of black and navy blue dyes are used.

Under these circumstances, additional thickening with Lutexal® Thickener F-RP is necessary. The amount to be added depends on the dye concentration and lies between 5 – 20 g/kg.
Swelling

Lutexal® Thickener F-RP can be very readily incorporated by stirring and does not require an extra swelling time to develop its full efficiency.

Typical recipes

The recipes given below were prepared with drinking water of medium hardness.

Stock thickening

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>... g</td>
</tr>
<tr>
<td>Helizarin Oxidant</td>
<td>10 g</td>
</tr>
<tr>
<td>Urea</td>
<td>100 – 180 g</td>
</tr>
<tr>
<td>Soda ash</td>
<td>25 g</td>
</tr>
<tr>
<td>Defoamer TC ECO</td>
<td>2 g</td>
</tr>
<tr>
<td>Lutexal® Thickener F-RP</td>
<td>40 – 60 g</td>
</tr>
</tbody>
</table>

1000 g
Viscosity ca. 80 – 100 dPa.s
(Measured with the Haake VT 02 Viscotester)

Printing paste

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive dye for printing</td>
<td>... g</td>
</tr>
<tr>
<td>Stock thickening</td>
<td>700 – 900 g</td>
</tr>
<tr>
<td>Water</td>
<td>... g</td>
</tr>
</tbody>
</table>

1000 g

Mixtures with alginates

Lutexal® Thickener F-RP can be used by itself or in mixtures with an alginate. The latter are particularly recommended for flatbed screen printing because the reliably prevent marking-off by the frame.

Even if large amounts of dyes are present, the viscosity of a mixture of Lutexal® Thickener F-RP and an alginate remains stable.

Stock thickening

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
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<tr>
<td>Helizarin Oxidant</td>
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<td>Soda ash</td>
<td>25 g</td>
</tr>
<tr>
<td>Defoamer TC ECO</td>
<td>2 g</td>
</tr>
<tr>
<td>Lutexal® Thickener F-RP</td>
<td>30 – 50 g</td>
</tr>
</tbody>
</table>

1000 g
Viscosity ca. 80 – 100 dPa.s
(Measured with the Haake VT 02 Viscotester)

Mineral spirit substitute

Lutexal® Thickener F-RP is also a suitable substitute for mineral spirit in printing with emulsion thickeners.

The brilliance, levelness and, in particular, depth of shade required of an emulsion thickening are attained by a mixture of Lutexal® Thickener F-RP and an alginate.

Fixation

As usual for reactive dyes.

Washing

First, intensive wash in warm water at 50°C with water exchange, then in hot (preferably boiling) water, and finally rinse with cold water.

If the water is too hard, the washing-out properties can be improved by adding Calgon T New (BK Ladenburg GmbH)
Safety

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. Any spillage on the floor must be removed, because in the presence of water there is the danger of slippage.

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, pro-portions, 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 the requirements of the downstream textile market rests with the textile processor.