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# Permanent Water-Repellent Finishing with

A large, stylized illustration of a green frog, facing forward. The frog's body is composed of various shades of green and blue. It has large, circular eyes with blue irises and black pupils. The frog's mouth is open, showing a white interior. The frog's legs are also stylized, with blue and green segments. The overall design is modern and graphic.

<sup>®</sup> Phobotex

In the textile industry of today a great deal of thought is devoted to the subject of chemical finishing. This is in no small measure attributable to the fact that traditional non-fast finishes may be replaced by fast, durable effects. Only the creation of special technical application products has made this possible. In this respect also the burden of progress is for ever shifting from the finishing department of the textile plant to the laboratories of the manufacturers of dyestuffs and technical application products. The pattern of consumption has likewise undergone far-reaching changes, as the demands today are for easy-care textiles and higher fastness properties, not only of dyeings but also of finishes. It has therefore become one of the prime objects of the chemical industry to develop products and processes which comply with the present demands for fastness and easy-care properties in textiles.

Numerous examples of the contribution made by the chemical industry to textile finishing may be cited. The following article deals in particular with water-repellent finishes.

The following demands are made on a high-quality water-repellent finish on raincoats:

- High water-repellency
- Very good resistance to repeated laundering
- Odourless finish
- Pleasantly soft-to-firm handle
- Good sewability of the material
- No change in air permeability

The stability of impregnating baths is an important factor for finishers as it prevents the formation of deposits on the padding bowls and guarantees an evenly applied finish.

CIBA's Phobotex brands fulfil the above conditions most effectively. These important products were first displayed to a wide public at the Swiss Trade Fair ten years ago. Today Phobotex-finished articles are encountered all over the world.



Phobotex finishes are fast to laundering at the boil and impart water-repellency to cellulosic textiles. In practice raincoats made from 100% cotton or cotton/synthetic fibre blends are hardly ever laundered at the boil. This degree of fastness is however a welcome guarantee of durable water-repellency, which is maintained even after repeated laundering at lower temperatures. Fig. 1 shows a drop of water greatly magnified on a piece of material that has been treated with Phobotex, washed at the boil and rinsed. The droplet is repelled by the material.

Fig. 2 shows a drop of water on similar material which has been treated with a non-fast water repellent, washed at the boil and well rinsed. The droplet is no longer repelled by the material but spreads over it and is absorbed.

Phobotex finishing is carried out on very simple equipment which is also normally used for crease-resistant finishing. The process therefore gives rise to no technical or organizational difficulties at a finishing plant. A fuller, firmer or softer handle may be obtained at will by choice of the correct Phobotex brand.

Phobotex finishing is not restricted solely to raincoats. It is equally suitable for high-quality water-repellent finishes on cotton and staple viscose garments – gabardine and corduroy for instance – and on filament viscose materials. Linings are also finished with Phobotex. In many cases it is used as a component in the production of chintz and imitation silk finishes on account of the softness that it imparts. The improved sewability of goods treated with Phobotex is especially merited.

Equally noteworthy is the use of Phobotex-finished uniforms in the civil and military sectors where high standards of quality are usually demanded. The material used for the uniform of Swiss postal officials is given a Phobotex water-repellent finish.

Fig. 1

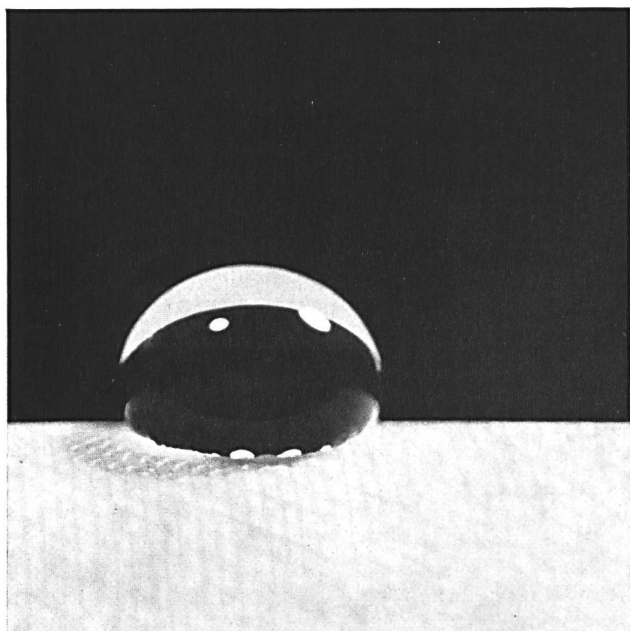


Fig. 2

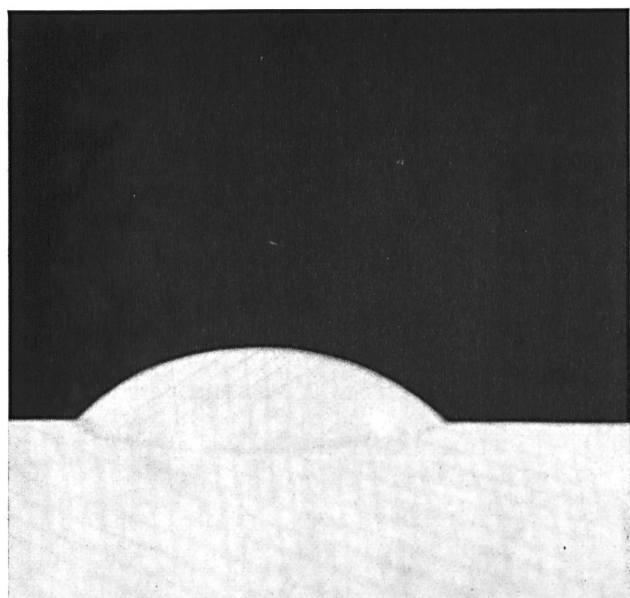


Photo Walter Studer, Berne

Ski-jacket with a Phobotex finish, as worn by Swiss postal officials.



Attention was drawn to the Phobotex label at the internationally attended "Settimana dell'Impermeabile" (Raincoat Week) which took place in Florence from 6th-10th February 1964.

The following illustrations, placed at our disposal by Hausamann Textil AG, bear witness of the multiplicity of materials made of cotton, cotton/polyester and polyamide that are today finished with Phobotex (Fig. 4: Man's raincoat, 100% cotton; Fig. 5: Lady's raincoat, 100% cotton).

An original method of advertising the water-repellent finishes obtainable with CIBA products before a large audience was tried out at Lyons in 1963 with the aid of the ®Eidophor wide-screen projection equipment. The Eidophor system of Gretag AG, a subsidiary of CIBA, allows for the projection of colour TV programmes on to a screen 25 sq. m in area. Until now the method has been used principally for experimental lectures and scientific meetings. The large screen is equally well suited, however, to the transmission of fashion shows from narrow attics, makeshift studios, private rooms, and even from the open air to large halls where details are made visible

to every visitor and technical commentaries may be included. In Lyons the water-repellent effect of a polyamide raincoat impregnated with Phobotex was demonstrated as a live transmission by a mannequin under a rain shower.

The Phobotex brands have been selected here as typical examples of CIBA's specialities for textile finishing. This article would not be complete without mentioning some of CIBA's other pace-making achievements in the textile-finishing field. These include the development of the ®Lyofix brands for the production of wash-fast chintz, embossed and stiff finishes, the durably rot-proof and mildew-resistant ®Arigal finish for cellulosic textiles, which is promoted throughout the world under the Arigal label, and certain ®Uvitex fluorescent brighteners for polyester fibres possessing the surprisingly high light-fastness properties of vat dyes.

Photo Max Roth, Zurich  
Man's raincoat made from 100% cotton with a Phobotex finish.



Photo Max Roth, Zurich  
Lady's raincoat made from 100% cotton with a Phobotex finish.





Until now Italy is the only country to distribute durably water-repellent textiles carrying CIBA's Phobotex label. The hitherto world-wide success of the Phobotex brands is thus even more remarkable. A group of Italian finishers and garment manufacturers were the first to express the particular desire for a general Phobotex label to increase the impact of their sales promotional activity. The Italian experiment showed gratifying results and the idea of the Phobotex label is becoming of increasing interest in other countries. It may be assumed from the inquiries received that there is a genuine need for a Phobotex label on an international basis.

The face of the Phobotex label bears as a symbol a frog in blue and green with a drop of water running off its front, the trade name PHOBOTEX (in Italy FOBOTEX) and the CIBA inscription.

On the reverse side the durable water-repellent properties and the reduced tendency to soiling are described along with the instructions for laundering and dry cleaning. Up to the present time the trade-mark has been registered in Switzerland and internationally (states of the Madrid agreement). The trade name Phobotex is protected in most countries. The label is issued only on fulfilment of the conditions prescribed in the contract.

Dr. K. Trutmann

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