



® RUCO-GUARD AFR6

COMPOSITION

C₆ fluorocarbon resin, cationic
Free of perfluorooctanoic acid (PFOA*), perfluorooctane sulfonic acid (PFOS*) and alkylphenol ethoxylate (APEO)

USES

Ecologically optimised agent for the water, oil and soil-repellent finishing of fabrics made from cellulosic fibres or their blends with synthetic fibres; confers resistance to washing and dry cleaning

PROPERTIES

- Confers resistance to aqueous and oily soilings
- Resistant to washing
- Resistant to dry cleaning
- Confers a full handle
- Not suitable for optically brightened white goods
- No high curing temperatures necessary
- Usually highly compatible with many N-methylol compounds
- Compatible with additives
- Readily diluted with cold water
- Liquor preparation with soft water recommended
- Non-flammable
- Free of flammable solvents

TECHNICAL DATA

- Beige emulsion
- Specific gravity at 20 °C ca. 1.06 g/cm³
- pH value ca. 2 – 5

APPLICATION

RUCO-GUARD AFR6 can be used alone or in combination with other finishing agents for the permanent water, oil and soil-repellent finishing of textile goods made from cellulosic fibres or blends with synthetics. Before adding **RUCO-GUARD AFR6**, the pH of the liquor should be adjusted with 1 ml/l acetic acid (60 %).

In general, the shear resistance of finishing liquors with perfluorinated compounds is limited. There should therefore be as little liquor turbulence as possible.

Prolonged stirring with high-speed impellers produces a creamy foam due to the shearing influence on the emulsion. Such breaking of emulsion components must be avoided. Accumulated foam on the surface of the liquor has to be removed.

The material to be finished has to be thoroughly pretreated and to be free of surfaceactive residues.

Permanent water and stain repellency

To achieve an excellent permanent stain-repellent finish against oil-based, fatty and aqueous soilings with a simultaneous water-repellent effect on CO and its blends with synthetic fibres, we recommend;

20 – 40 g/l	RUCO-GUARD AFR6
wet pick-up	60 - 80 %

drying	under usual conditions
curing	2 min at 140 °C
	1 min at 160 °C

Select curing conditions which will ensure the article is fully cured, ready for further processing.

In case of low curing temperatures

Fluctuations of the curing temperature and time are largely offset by the high reactivity of **RUCO-GUARD AFR6**. At the same time, the curing temperature and time can be reduced.

With white goods or pastel-coloured articles curing temperatures of 150° C/2 min are sufficient. Higher temperatures may cause yellowing.

In case of penetration problems

In case of penetration problems, we recommend to add

10 - 20 g/l **RUCOWET FN**

to the finishing liquor to ensure a good and uniform liquor pick-up. The wetting agent has to be added before the other liquor components.

It is not recommended to use hydrophobic or softening agents on the basis of silicone in combination with this product, since the stain-repellent effect in particular against oily soilings is reduced.

The product can be combined with many resin finishing agents to obtain easy-care effects. In particular, we recommend the low-formaldehyde type **RUCON FAN**.

RUCO-GUARD AFR6 is compatible with many cationic or non-ionic finishing agents.

Their suitability has to be established in pretrials.

Influence of nitrogen oxides and UV-light on optically brightened, FC-finished white goods

During production, storage and sale textiles can be exposed to damaging influences from the environment. Damaging influences are, amongst other things, UV and heat radiation, nitrogen oxides, ozone, etc. With optically brightened white goods and pale shades one or several damaging influences in connection with insufficient fastness properties of optical brighteners and/or dyestuffs applied on the textile can cause a partial deterioration of the degree of whiteness and/or colour changes on the textile. Especially a high application quantity/add-on of **RUCO-GUARD AFR6** can intensify this effect. Hence pretrials are recommended to identify any weaknesses of the optical brightener/dyestuff.

Alternatively **RUCO-GUARD AFC6** can be recommended which does not create these problems.

Remark

When preparing the liquor and batching off the product, the usual safety measures when handling chemicals (eye and skin protection) are to be observed.

INFORMATION ON SPRAYING APPLICATION

During the spraying of textile auxiliaries aerosols arise. They may be a potential danger for man. Therefore spray in closed installations only, or else discharge optimally and provide for

good room ventilation to avoid spreading of the aerosols in the work environment. Do not breathe in aerosols!

STORAGE

The product is sensitive to frost and heat and must not be stored at temperatures below 0 °C or above 40 °C. Irreparable damage is possible. In the case of suspected frost or heat damage, the usability of the product has to be checked before processing.

There can be slight sedimentations in the drum/container during storage, however, this does not impair the performance of the product. A mixing of the sediment is, therefore, not necessary.

ATTENTION

The above recommendations are based on comprehensive studies and experience made in practical finishing. They are, however, without liability regarding property rights of third parties and foreign laws. The user should test for himself whether the product and the application are suited for his very special purposes.

We are, above all, not liable for fields and methods of application which have not been put down by us in writing.

Advice for marking regulations and protective measures can be taken from the respective safety data sheet.

*) For producing fluorocarbon polymers, RUDOLF GmbH uses monomers from a process in which, as intended, no perfluorooctanesulphonic acid (PFOS) arises as a by-product.

No PFOA-containing products are used for manufacturing **RUCO-GUARD AFR6**. However, as mobile fluorine compounds have been used for years, PFOA, PFOS and other PFTs are ubiquitous and detectable.

Please visit

<http://www.rudolf.de/company/environment/pfos-pfoa-information.htm>
for further information.