REPELLAN® TC-6
Oil- and water repellent agent

REPELLAN TC-6 is recommended for durable water and oil repellent treatment of fabrics made from pure cotton, their blends and polyester or polyamide.

Product Features

- imparts an excellent water repellent effect
- produces excellent oil repellent properties
- based on C-6 fluorocarbon chemistry
- prevents the penetration of oil and water based materials (e.g. sauce, coffee, wine, ink)
- gives an excellent water resistance
- is wash and dry cleaning resistant

Composition

perfluoro acrylic copolymer in water

Typical Properties

• Ionic nature	cationic
• Appearance	white to beige
• Consistency	liquid
• pH-value	3.0 - 5.0
• Density (20 °C)	approx. 1.1 g/cm³
• Compatibility	REPELLAN TC-6 is compatible with cationic and nonionic auxiliaries. Compatibility with other auxiliaries should be established in advance before application. The stain repellent effects can be reduced when used with other finishing agents such as silicone softeners or (re)wetting agents. In order to avoid such problems, preliminary tests are recommended.

Application

• Equipment	padding units, spraying devices, foam applicators
• Operation	finishing
• Dissolving method	Miscible with cold water at any ratio.
• Pretreatment of fabrics	Residues of alkali, sizing agents, spin finishes/ lubricants,detergents and unfixed dyestuffs as well as carriers can have a negative influence on the hydrophobic/ oleophobic performance.
• Quantities of application	For good wash and dry cleaning resistant stain repellent effects, 1 - 4 % REPELLAN TC-6, calculated on the weight of goods, is required, depending on the end use of the fabric.

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- Extender

To obtain the optimal wash durable hydrophobic effects on cellulosic substrates, REPELLAN HY-N or REPELLAN XL-N as an extender is recommended .

- Drying/curing

Sufficient curing is important for stain repellent effects, and especially for the wash and dry cleaning resistance. The curing should be carried out under the following conditions:

a) drying: 110 - 120 °C
curing: 2 - 3 minutes at 150 °C

b) rapid-curing: 30 - 60 seconds at 180 - 170 °C

- Guide recipes

Padding process

Cotton raincoat popline and cotton military articles

30 - 50 g/l REPELLAN TC-6
5 - 10 g/l REPELLAN XL-N
15 - 20 g/l REPELLAN HY-N
40 - 60 g/l STABITEX ETR
8 - 12 g/l magnesium chloride

pH-value: < 5.5
application: dry/wet
liquor pick-up: 70 %
drying: 110 °C
curing: 3 minutes at 160 °C

Polyester/cotton raincoat popline (65/35)

30 - 40 g/l REPELLAN TC
30 g/l STABITEX ETR
6 g/l magnesium chloride

pH-value: < 5.5
application: dry/wet
liquor pick-up: 65 %
drying: 110 °C
curing: 3 minutes at 160 °C

Polyester or polyamide windbreaker cloth

20 - 40 g/l REPELLAN TC-6

pH-value: < 5.5
application: dry/wet
liquor pick-up: 50 %
shock curing: 30 seconds at 170 - 180 °C

Upholstery fabric of cotton or cotton blends

40 - 50 g/l REPELLAN TC-6

pH-value:	< 5.5
application:	dry/wet
liquor pick-up:	70 %
drying:	110 °C
curing:	2 minutes at 150 - 170 °C

Wool and wool blends

30 - 40 g/l REPELLAN TC-6
and - if wetting agent is necessary you have to use non rewetting types like e.g. Isopropanole (1 – 5g/l).

pH-value:	< 5.5
application:	dry/wet
liquor pick-up:	60 %
drying:	110 °C
curing:	2 minutes at 150 - 160 °C

Pre impregnating of light fabrics before coating

10 - 20 g/l REPELLAN TC-6

pH-value:	< 5.5
application:	dry/wet
liquor pick-up:	60 %
drying:	110 °C
curing:	after conditions depend on the coating method

- **Exhaust method**

For wool,wool blends and for garments, the exhaust method is recommended.

The stain repellent products can be applied directly after scouring or dyeing without intermediate drying. After the last rinsing bath the fabric should be acidified with acetic acid.

Equipment:	for wool and wool blends:	winch beck, jig
	for garment:	washing machine

3 % REPELLAN TC-6	(on weight of fabric)
1 % REPELLAN HY-N	(on weight of fabric)

pH-value:	4.5
liquor ratio:	1:5 - 1:10
time:	20 minutes

temperature: 30 - 40 °C

Optimizing of the effects after exhaust process is finished:

pH-value: adjust to 6.5
time: 15 minutes
temperature: 30 - 40 °C

hydroextraction
drying: 110 °C
curing: 2 - 3 minutes at 150 - 140 °C

Foam or spray application

Due to the various application fields and specific nature of these finishes, please consult our technical department for additional information.

Handling and Storage

- Storage — at least 6 months
- Storage and transport — not lower than 0°C, not higher than 40°C
- Further remarks — References to measures in case of accidents and fires as well as further information about ecology, toxicology, transport and storage are given in the separate Material Safety Data Sheet.

The indications given herein correspond to practical experiences. Owing to the differences in local conditions they cannot claim to be complete, so that any liabilities - also with a view to claims of third parties - are excluded.

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