Technical Data Sheet

Shield F6-01

High Performance Repellent

High performance oil, water and alcohol repellent finish for all fibres.

Use

- Main application area are technical textiles made of synthetic fibres and their blends, especially polyester.
- Can also be used on cotton and polyamide

Characteristics	Benefits
• Excellent high performance oil repellency	• Excellent protection against oil-based stains Oil based stains do not penetrate easily into the fabric. Stains can be spot cleaned away.
• Excellent water repellency	• Superb protection against rain. Good protection against water-based stains
• Excellent durability to laundering and dry cleaning	• High protection levels are maintained throughout the garment lifecycle.
• Laundry air dry (LAD) capable	• The performance can be re-established after washing without the need for heat treatment (ironing or tumble-drying).
• Low temperature curing	• possible to treat sensitive articles such as polypropylene or articles with thermomigration problems.
• Ecologically-friendly	• Does not contain detectable amounts of PFOA and PFOS.*

*** Content of PFOA is less than limit of detection (5ppb).**

Properties

Chemical constitution:	Dispersion of a fluoropolymer
Ionic character:	Slightly cationic
pH:	4.5 -6.5
Flash point:	> 100^{o}C
Physical form:	Off-white to pale yellow dispersion
Solubility:	Miscible with water in all proportions.
Storage stability:	Stable for 1 year when properly stored in closed containers at 20°C. The product is sensitive to cold below 5°C and above 40°C.
Ecology/toxicology:	The usual hygiene and safety rules for handling chemicals should be observed in storage, handling and use. The product must not be swallowed.
	For further information on **Shield F6-01**, especially particulars regarding safety when handling, toxicological and ecological data – please consult our product specific safety data sheet.
Compatibility:	**Shield F6-01** can be used together with most products commonly encountered in high-grade finishing.
	Preliminary trials are advisable before using the product with other products.

Application

The product can be applied by padding, foaming and spray process.

Mixing/diluting

Dilute Shield F6-01 with roughly an equal amount of cold water and add it to the bath containing acetic acid. If used together with cellulose crosslinking agents, fillers, additives, etc., these products must be prediluted; Shield F6-01 should be added last.

Required amount

10–60 g/l **Shield F6-01**

Application

pH of the prepared bath: between 4.0 and 5.0
Padding with a liquor pick-up of approx. 40–80 %, depending on the fiber
Bath temperature: about 20 °C

Drying at 110–130 °C
Curing for 3 min at 150 °C on curing machine or
Rapid curing process at 170 °C, 30–40 sec (stenter)

If combined with cellulose crosslinking agents the details described in the respective technical data sheets are valid.

Suggested recipes

a) Recipe for synthetic fibers

Shield F6-01	10 – 50 g/l
non-fugitive wetting agent	2 – 5 g/l
acetic acid 60%	1 ml/l

b) Recipe for cotton and cotton/polyester blends

Shield F6-01	20 – 60 g/l
Shield Extender FCD	5 - 15 g/l
reactive resin	30 – 40 g/l
metal salt catalyst	9 -12 g/l
non-fugitive wetting agent	2 – 5 g/l

Notes

In the case of articles produced with disperse, reactive and naphthol dyes we recommend checking the wet and crock fastness properties.

Spray application (not product specific)
After many years of analysis of epidemiological studies we suspect that aerosols are generated through the spraying technique that potentially may be hazardous to health.

For this reason spray application can only be safely conducted if sufficient ventilation equipment is installed at the product application site which will prevent spreading of the aerosols into the workplace. A further possibility would be to carry out the spraying application in a closed system.

ATTENTION
Our technical data sheets provide directions for the application possibilities of our products. Any influence on dyes, prints and their fastness properties, degree of whiteness, fabric properties, handle, non-slip, seam resistance and material strength, ageing resistance, odor of finished fabric etc. are under the user's own responsibility. Due to the many different textile variations we are not able to submit a general recommendation. Our recommendations are in line with our present state of knowledge and do not provide any guarantee. Therefore initial internal bulk trials are absolutely necessary and are at user's sole responsibility.
The manufacturer is not liable for damages due to improper application or application against our explicit recommendations.

Statutory provisions and standard regulations must be observed when handling processing agents. For additional detailed information please refer to the product specific safety data sheet.

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Please note that products may differ from country to country. If you have any queries, kindly contact Beyond Surface Technologies AG.
Further information at web site: http://www.beyondst.com.

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