TECHNICAL TUESDAYS

WATER REPELLENT FINISH – PART III

REF: TT/ MAY 2018 / WK 4

Fluorine Free Sustainable Water Repellents

Fluorine-free water repellents are based on raw materials which neither during production nor during the application contain or release any environmentally critical substances such as PFOA (Perfluorooctanoic acid). The impregnation is produced on a fluorine-free polymer base.

Properties of Fluorine Free Water Repellents

- Free from fluorine and APEO
- Highly water-repellent
- Breathable and wash fast
- Suited for sportswear textiles, outdoor articles and rainwear
- Support the sustainability
- Environmentally friendly

Evaluation of water repellent finished textiles

For end uses such as outerwear and rainwear, passing the rain test is required. For technical outerwear, more severe tests than the rain test may be required such as Bundessmann and Hydrostatic pressure test.

Test Method	Procedure
Spray Test (AATCC TM 22)	Finished fabric is held at 45 deg angle and sprayed with 250 ml of water. The wetting pattern is noted.
Impact Penetration Test (AATCC TM 42)	A weighed piece of blotter paper is placed under the fabric. The weight gain by the fabric after 500ml of water is sprayed on it is recorded.
Rain Test (AATCC TM 35)	Finished fabric is backed by a blotter paper and sprayed with water under constant hydrostatic pressure for 5 min. The weight gained by the paper is recorded.
Bundesmann Rain Shower Test (ISO 9865/DIN 53888)	Four finished fabric samples are subjected to simulated rain for 10 min. The fabrics are placed on the inclined cup and are in motion. The sides of the fabrics are not being wet. Amount of water passing through the fabric decides the water repellency.

To be continued…

Wishing you a great week ahead!

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