

4-in-1 Multi-Functional (Water, Oil-Repellent, Soil and Wrinkle-Resistant) Finishing

四合一多功能(防水、防油、防污及防皺)整理技術

4 in 1 multi-care finishing technology can realize the water/oil/soil repellency and wrinkle-free treatment of textiles in one step. Multi-care finishing is a new technology which introduces “elastic crosslinking” to the Lotus Nano repellent system. Elastic crosslinking can not only bring wrinkle-recovery function to the textiles, but also minimize the strength-loss. Moreover, crosslinking effect can remarkably improve the wash fastness of Lotus Nano repellent functions to achieve excellent and durable multi-functional properties.

4合1多重防護整理技術，指的是一步法實現織物防水、防油、防污、防皺的多功能整理技術，簡稱四防整理。四防整理技術是在荷葉納米三防體系中引入「彈性交聯」的一項新技術，彈性交聯不僅能使織物皺紋自動回復，同時將強力損傷降至最低。另外，交聯作用亦能顯著提高織物荷葉納米防護功能的水洗牢度，賦予織物持久卓越的多重防護功能。



Application 應用

A dip-pad-cure process is preferable for the application of 4 in 1 multiprotective finishing agent with the following conditions for reference only: one dip and one pad with solution pick-up about 50-60%, then cured at 160°C for 1.5 min (if lightweight cotton) or 175°C for 1.5 min (if heavy cotton).

4合1多重防護整理技術適用於常規織物浸軋方法及設備，一浸一軋(帶液率50-60%)，焙烘溫度：薄棉，160°C × 1.5分鐘；厚棉，175°C × 1.5分鐘。

Technological Breakthrough 技術突破

- Excellent water / oil repellency, soil resistancy and wrinkle-free treatment of textiles in one step, simple operation process and lower energy consumption.
- Durable treatment with excellent multi-care properties.
- Provide good wrinkle-recovery functions to the fabrics with ultralow strength-loss.
- Applicable to cellulosic fibers, such as cotton, linen, viscose and their intertextures, the treated fabrics have steady form, very soft handle and good breathability.
- Applicable to white textiles, can maintain the original shade and whiteness.
- A water-based environment friendly system, non-toxic, nonflammable, non-corrosive.
- 高效一步法實現織物的防水、防油、防污、防皺多重防護整理。工序簡單，能耗低。
- 賦予織物持久卓越的防水、防油、防污、防皺性能。
- 賦予織物優異的防皺功能而不顯著降低織物的強度。
- 適用於纖維素纖維織物，棉、麻、粘膠及其混紡織物，整理後的織物形態穩定，手感柔軟，透氣性佳。
- 適用於白色織物，對織物的色光和白度影響不大。
- 水性環保體系，無毒，不易燃，無腐蝕性。

Licensing Details 獲取專利

A non-exclusive licence covers the fabrication and application of Nanotechnology based 4 in 1 chemicals applied on textiles with water, oil-repellent, soil resistant and wrinkle-free properties.

四合一多功能(防水、防油、防污及防皺)納米整理技術的整備及應用的非獨家專利授權許可。

Green and Durable Flame Retardant Finishing

環保及耐久防火整理技術

The product is an efficient reactive phosphorous and nitrogen containing flame retardant for textile fabrics. The treated fabric can achieve best overall flame protection with superior durability against repeated home laundering, tested by various international flame retardant standards, such as NFPA701, BS EN14878, BS5867-2, US 16CFR part 1610. The treatment has minimal impact to the mechanical property of the fabrics. Based on green chemistry idea, the treatment is formaldehyde and halogen free.

本產品是一種適用於紡織品的高效、反應型磷氮阻燃劑。基於綠色化學理念，此阻燃劑不含甲醛和鹵素。賦予處理後織物卓越的耐久阻燃性能。經過多次的普通家庭洗滌，仍能通過NFPA701，BS EN14878，BS5867-2，US 16CFR part 1610等各種阻燃性能測試。經此阻燃劑整理後，不會影響織物的機械性能



Application 應用

Adopt two steps. Dip and pad component A firstly, dry at 100-120°C; Then dip and pad component B, roll and batch for 48hour.

採用兩步法；先浸軋A組，在100-120°C烘乾，接著浸軋B組，最後上卷堆置48小時。

Technological Breakthrough 技術突破

- High effective flame retardancy with small amount.
- Outstanding flame resistance even after 25-30 standard home laundering cycles.
- No formaldehyde released, the treated fabrics do not irritate the skin.
- No halides included, it is environment friendly.
- Good compatibility with other treatments, permitting the creation of multifunctional garment.
- Energy-saving, low high temperature curing.
- 用量少，高效的阻燃效果。
- 優異的耐洗性，可以達到25-30次家庭洗滌。
- 無甲醛釋放，對皮膚沒有刺激性。
- 不含鹵素，符合保護環境原則。
- 具備良好的兼容性，可以和其它的整理劑混合使用，獲得多功能整理效果。
- 不需要高溫固化，節省能源。

Licensing Details 獲取專利

- A non-exclusive licence covers the fabrication and application a nano flame retardancy system.
- 納米阻燃整理技術的整備及應用的非獨家專利授權許可。

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