

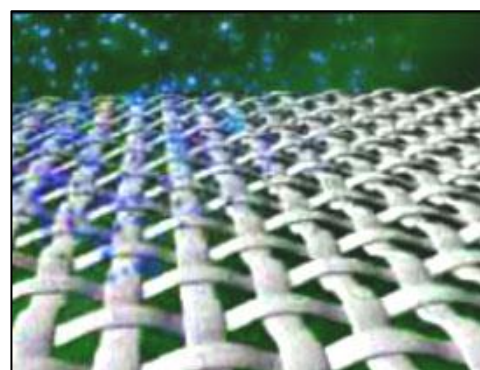


SOIL RELEASE FINISH – CONCLUDING PART

REF: TT/ FEBRUARY 2020 / WK 2

Factors influencing Soiling

- Moisture regain of the fiber is the most important factor that influences soiling.
- Electrostatic charge is also an important factor which influences soiling.
- Fabric construction, yarn count, twist and the cross section of the fiber influence soiling. Smaller the denier, greater is the tendency to soil. A circular cross sectional fiber retains less soil than one with an irregular cross section.
- Fabric with protruding fibers assists soiling. Loosely woven and open knitted fabrics are more prone to soiling than closely woven fabrics but removal of soil from loosely woven fabrics is easy.
- Fabrics made from filament yarn do not get soiled as fast as those made from spun yarns.
- Particle size of Soil - The smaller the size of the soil particles, greater is the soil retention by the fabric.



Mechanism and Performance of Soil Release Finish

Flouro carbon polymers are commonly used for soil release finish. These polymers have the property of being hydrophobic and oleophobic in air and hydrophilic and oil-releasing in water i.e. during the laundering process. This finish imparts a fabric protector that enables the fabric to repel spills when in contact. After immersion in the wash bath, the hydrophilic blocks can swell and actually reverse the interfacial characteristics of the surface, yielding the hydrophilic surface necessary for easy oily soil release during washing. The detergent used during washing can easily penetrate inside the fabric and enhance the soil release.

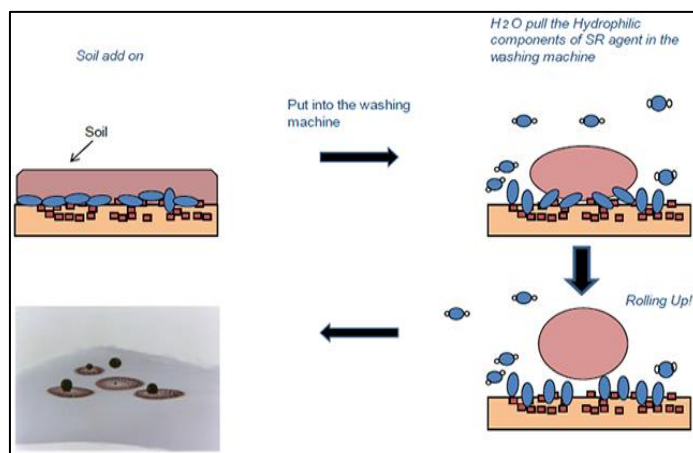


Fig 1.1 – Mechanism of Soil Release

The performance of a soil-release finish depends upon its ability to provide a hydrophilic surface during the laundering process. Therefore any material deposited on the fiber surface that would reduce this necessary hydrophilicity should be avoided. Softeners, lubricants and other products that modify surface properties of a fiber should go through trials before being used with fabrics treated with soil-release finishes.

Properties achieved by soil release

Soil Release finished garments permit better wear ability, allows relatively easy removal of oil borne stains from permanent press garments. It resists redepositing of soil when laundering and helps in making fabric more absorbent. Along with these it provides greater comfort in hot weather and improves anti-static properties.

Wishing you a great week ahead!

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