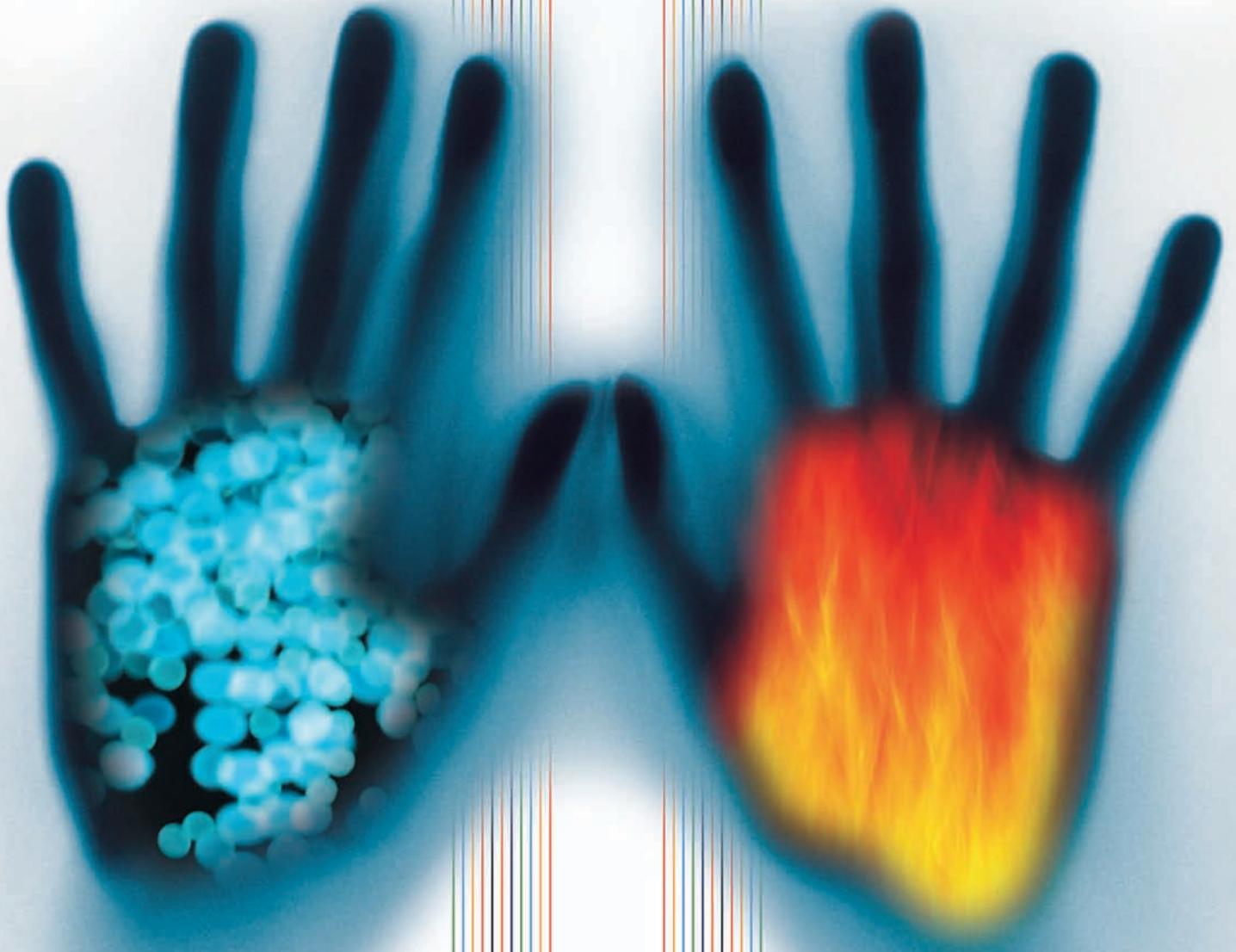


GUARDyarn



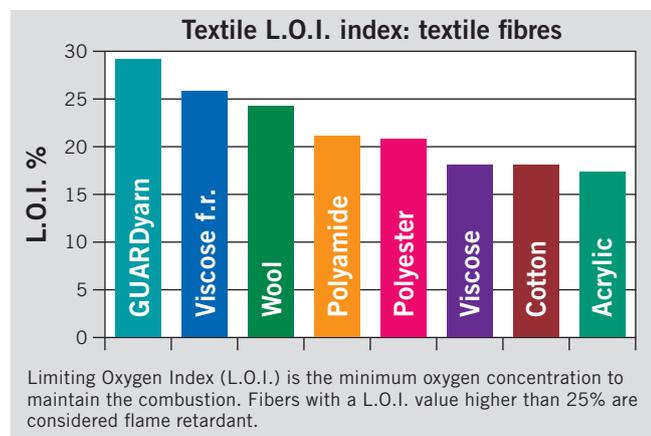
*Antifiame and
antibacterial polyester*



colours & yarns for weaving

Thanks to its characteristics, **GUARDYARN** fits into the product range dedicated to protection. **GUARDYARN** is a 100% polyester continuous filament yarn that combines bacteriostatic and flame retardant properties. Suitable for any end use in which high protective characteristics are required (furnishing, apparel, automotive, technical applications), **GUARDYARN** is produced using different technologies and is available flat, false twist fixed and air textured.

The wide range of counts, the possibility to have the product both in natural version and package dyed, the reliability and the easy workability typical of polyester yarns complete the profile of this multifunctional high level product.



GUARDYARN AND BACTERIA

Different types of non-pathogenic organisms (bacteria) abound on our skin and progressively cause the fabrics we wear and we get in contact with to deteriorate. Such deterioration is evidenced by bad odours, pigmentation, discolouring and changes in the physical mechanical properties of the fabrics.

There are two possible ways of handling the bacteria on the fabrics:

Destruction / Elimination --> bactericide fabrics

Inhibition of their growth --> bacteriostatic fabrics

In both cases the result is achieved by utilizing an active principle (anti-microbial agent) specific for the microbial population that needs to be controlled.

From the textile point of view there are two basic types of product:

- **Intrinsic anti-microbial fibre:** the addition of the active principle is made during polymerization or pre-extrusion;
- **Treated anti-microbial fibre:** the addition of the active principle is made in the post-spinning phases.

GUARDYARN acquires permanent bacteriostatic properties, thank to the addition of the active principle during the spinning process, properties that remain unaltered even after many washes, wet or dry cleaning, but also after contact with the most common chemical agents. **GUARDYARN** is a polyester yarn with high hygienic and bacteriostatic properties, which make the fabric pleasant and fresh when in contact with the skin and inhibit the formation of bacterial colonies, hence preventing bad odours.

GUARDYARN AND FLAMES

STOPFIRE is the brand-name for the Sinterama range of flame retardant yarns, having fire-retardant and self-extinguishing properties. The technology used for producing STOPFIRE has been applied to the **GUARDYARN**, to obtain a product that not only gives excellent bacteriostatic properties but also a high quality resistance to fire and self-extinguishment. Chemically, **GUARDYARN** contains a phosphorous compound additive that gives it intrinsic flame retardant properties, without any presence of halogenous products. Physically, **GUARDYARN** has the following characteristics in relation to its flame retardant properties:

Density	g. cm 3	1,38
Softening point	°C	230-245
Melting point	°C	250-255
Moisture regain at 20°C - 65% UR	%	0,4
Thermal conductivity	Cal. cm.-1 sec.-1 °C-1	2,10-4,00
Specific heat	Cal. g.-1°C-1	0,32
Limit Oxygen Index	%	> 30

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