



flame resistant yarn



Wearing well when it's hot as *hell*

What is it?

Lucifero® is a flame-resistant fibre containing a flame-retardant polymer polyester. The fabrics produced using this fibre pass the most stringent flame resistant tests set down by international laws and boast a marked reduction in fire risk by forming a primary barrier to the fire and slowing its spread. In addition, when in contact with a fire already in progress, the fabric releases no dangerous fumes and

tends to self extinguish. Most importantly, Lucifero® maintains the characteristics of reliability and workability typical to polyester throughout the processing stages, rendering the fabric resistant to abrasions and easy to clean.

How is the flame-resistance achieved?

The flame-retardant properties of Lucifero® are achieved through a modification in the

molecular chain.

This process occurs when a phosphorous-based retarding agent is added to the raw material in the polymerisation stage. This is a polymer variation and allows:

- An increase in temperature and in the percentage necessary for combustion (see table)
- The formation of non-combustible volatile elements as well as oxidation inhibitors.

Level of Oxygen Index in principle textiles

L.O.I	5	10	15	20	25	30	35
Polypropylene							
Acrylic							
Cotton							
Polyamide							
Polyester							
Wool							
FR Viscose							
FR Cotton							
FR Wool							
LUCIFERO®							
Modacrylic							

L.O.I. measures the percentage of oxygen necessary in the air to cause combustion. Fibres with an L.O.I. of more than 25% are considered flame-resistant.

Reliability over time

In contrast to flame-retardant properties achieved through superficial treatment of textiles in the finishing stage, it is important to underline that the performance of fabrics produced with Lucifero® is intrinsic in the fabric itself and remains constant over

time, resisting general wear and tear or maintenance through washing, ironing, brushing, etc.

Appeal and safety

We know that nowadays when buying articles, much attention is paid to colour, brand and appearance

rather than to the safety levels offered to the buyer. However, it is important today to guarantee the safety of the workforce and consumers. In the articles produced using this fibre, appearance and safety go hand in hand.



- INCREASES THE TEMPERATURE AND THE OXYGEN LEVEL NECESSARY FOR COMBUSTION
- PERMITS THE FORMATION OF NON-COMBUSTIBLE VOLATILE ELEMENTS

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