



Specialist Garments for Specialist Applications

CARE & MAINTENANCE OF PROBAN® TREATED GARMENTS

What is Proban® ?

Proban® is a chemical additive and process that is applied to fabrics made of cellulosic type fibres (such as cotton) to provide flame retardancy. During the **Proban®** process, an inert cross-linked polymer is formed. This polymer is embedded within the individual fibres and is insoluble. It can not be removed by washing and can only be removed by mechanical abrasion or rendered ineffective through incorrect laundering (see below).

What is meant by "flame retardant" ?

"**Flame Retardant**" means that the fabric will self-extinguish upon removal from a flame source. This compares to untreated cotton that would continue to burn and to polyester/cotton which burns/melts/sticks at a very rapid rate. When exposed to a flame, **Proban®** treated fabrics will still char and burn however when removed from the flame source, the fabric self-extinguishes.

How does the fabric self-extinguish ?

At the point where a **Proban®** treated fabric is exposed to flame, the fabric forms a localised char that acts as an insulating layer. Upon removal from the flame source, the **Proban®** fabric will not continue to burn outside of this localised char area, nor does it continue to smoulder or exhibit after-glow effects.

How long will a Proban® garment remain flame retardant ?

Proban® fabrics meet the minimum standards set out in EN 531:1995 (50 washes @ 75°C). Each batch of **Proban®** treated fabrics are independently tested to this Standard and are certified by **Rhodia Consumer Specialties Limited**, the producers of the **Proban®** chemical, to maintain its flame retardant characteristics for 50 washes providing the correct laundering instructions are followed. However, numerous independent tests have shown **Proban®** treated garments still pass this flammability test after 100 to 150 washes. Conversely, garments can fail flammability tests after just a few washes if they are not laundered correctly.

What situations are garments made from Proban® fabric best suited ?

Garments manufactured from **Proban®** treated fabrics are best suited for situations where there is a risk of being exposed to flame for a short duration (such as a flash fire) and

the garments will be worn for an extended period of time and thus comfort is a consideration. Examples of this include wildland fire fighting garments and general workwear in the chemical, electrical, oil, gas and petrochemical industries. Suitable grades of **Proban®** fabric can be used in garments for ferrous metal foundries, welding and flame cut applications.

What situations are garments made from Proban® fabric not suited ?

Garments made from **Proban®** treated fabrics should not be worn in environments where they could be exposed to acids, strong reducing agents and/or oxidizing chemicals. Unless a specific finish has been applied to the **Proban®** treated fabric, it should not be viewed as specific personal protective clothing in any chemical environment (consult with your nearest S&H office if unsure). Nor are they suited for white molten metals such as zinc, aluminum and magnesium where such molten metals will stick to the fabric.

What are the do's and don'ts when laundering Proban® garments ?

The DO'S:

- Proban® treated articles can be washed in any conventional washing machine
- COLD or WARM wash for both whites and colours (temperature not to exceed 60°C)
- Wash programme used should be for non-colour fast articles
- Only SYNTHETIC detergents should be used e.g. Bio-zet Castle, Cold Power Drive, Dynamo FAB, OMO Radiant, Spree or Surf
- For heavily stained or soiled articles a short pre-soak (up to two hours) may be useful
- Regular washing will help prevent soiling build up
- Garments may be tumble dried (take care not to over-dry as excessive shrinkage may occur)
- Garments may be dry-cleaned

The DON'TS:

- DON'T wash **Proban®** garments in traditional soap based powders e.g. Lux, Velvet, Advance. These soap powders can form flammable deposits, which may adversely affect the flame retardant performance of the fabric.
- DON'T use hypochlorite based bleaches. Bleaches such as Domestos, White King (and all supermarket blends) attack the **Proban®** finish and can lead to the flame retardancy becoming ineffective.

For more information about **Proban®**, please visit the official Rhodia Consumer Specialties Ltd website, www.rhodia-proban.com or contact your nearest **S&H Clothing** office.