



|                                 |                               |
|---------------------------------|-------------------------------|
| <b>Quality</b>                  | <b>FLAMESHIELD 280</b>        |
| <b>Fabric Weight</b>            | 280gsm                        |
| <b>Composition</b>              | Cotton 100%                   |
| <b>Useable Width</b>            | 150cm                         |
| <b>Nominal Length</b>           | 100cm                         |
| <b>Weave</b>                    | 3/1 twill                     |
| <b>Ends And Picks Per 2.5cm</b> | 101 X 48 Nominal              |
| <b>Thread Count</b>             | 16's X 12's Ne (27 X 20's Nm) |
| <b>Application</b>              | FR Workwear                   |
| <b>Washing Instructions</b>     |                               |



Do not bleach, do not boil, do not use soap based products only detergents

## Summary

Flameshield 280 is a lightweight version of our 3111PB. used for workwear its hardwearing properties and breathability make it ideal for medium/heavy industrial wear. It is certified to EN ISO 11612 & EN ISO 14116. EN 20471 in HV yellow only.

## Key Features

- Chemical flame retardant
- Excellent protection against fire, heat & welding
- 100% cotton for comfort, softness & moisture control
- Excellent colour retention (colour fastness)
- Excellent wash shrinkage
- Robust shade consistency
- Tested to industrial laundry 50 washes at 75°C. See certificates for specific details
- EN 61482-1-1 (ATPV value 10.3cal/cm<sup>2</sup>) American calorie rating





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## Physical Properties

|                                                            | <b>Warp</b> | <b>Weft</b> |
|------------------------------------------------------------|-------------|-------------|
| Tensile Strength: (BS EN ISO 13934-1:1999)                 | 950 N       | 600 N       |
| Tear Strength: Mean of Maxima (BS EN ISO 13937-3:2000)     | 35 N        | 40 N        |
| Washing Shrinkage (max): (ISO 15797 after 5 washes @ 75°C) | 3%          | 3%          |
| Heat Shrinkage (max): (DEF STAN 83-65/4 160°C)             | N/A         | N/A         |
| Tear Strength: Mean of Mean (BS EN ISO 13937-3:2000)       | 27 N        | 30 N        |
| Abrasion Resistance: (12kPa) (BS EN ISO 12947-2:1999)      | 20,000 rubs |             |
| Pilling Resistance: (BS EN ISO 12945-2:2001)               | N/A         |             |

## Colour Fastness

|                                                           | <b>Pale</b> | <b>Mid</b> | <b>Dark</b> |
|-----------------------------------------------------------|-------------|------------|-------------|
| <b>Wash Fastness</b> BS EN ISO 105-C06: Method E2S (95°C) |             |            |             |
| Colour Change                                             | 4-5         | 4          | 4           |
| Stain on Polyester                                        | 4           | 3-4        | 3           |
| Stain on Cotton                                           | 4           | 3-4        | 2-3         |
| <b>Dry Clean Fastness</b> BS EN ISO D01                   |             |            |             |
| Colour Change                                             | 4-5         | 4          | 4           |
| <b>Perspiration Fastness</b> BS EN 105-E04: Acid/Alkali   |             |            |             |
| Colour Change                                             | 4-5         | 4-5        | 4-5         |
| Staining                                                  | 4           | 3-4        | 3           |
| <b>Rub Fastness</b> BS EN ISO 105-X12:1995                |             |            |             |
| Wet                                                       | 3-4         | 3          | 2           |
| Dry                                                       | 4-5         | 4          | 3-4         |
| <b>Light Fastness</b> BS EN 20105/ISO 105-B02             |             |            |             |
| Light Fastness                                            | 4           | 4          | 4           |

These values are for guidance only, some colours will be better others worse. Please contact your Carrington representative for specific shade details.

~~Please consult Carrington for specific values.~~

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## Other Properties

|                                                     |
|-----------------------------------------------------|
| <b>Flame retardant</b>                              |
| EN ISO 11612 2008 A1 & A2, B1, C1, E1 & F1          |
| EN ISO 14116 2008 3/501/75                          |
| <b>High-visibility</b>                              |
| EN 20471 Yellow                                     |
| <b>Electric arc</b>                                 |
| EN ISO 11611 2007 Class 1                           |
| EN 61482-1-1 (ATVP value 10.3 cal/cm <sup>2</sup> ) |

The data quoted is based upon specific materials and tested by sources believed to be reliable and Carrington make no guarantee, express or implied as to use, handling or possession of its products.  
N.B. Although there may be small differences between the British Standard and the ISO test method quoted, they are the same in all major respects.

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## Colours



Orange 48122



Royal 48130



Navy 48179



High Vis Yellow 602

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