

The TenCate Tecashield® collection is a range of inherently heat- and flame-resistant fabrics.

MI 9180 – 180 g/m² (Millenia Light™)

Inherently heat- and flame-resistant fabric

Outer shell

59/39/2% para-aramid/PBO/Static-Control™

TenCate Tecashield® - MI 9180 (Millenia Light™) is an inherently heat- and flame-resistant fabric with a plain, ripstop construction. Millenia Light™ complies with Öko-Tex Standard 100. The fabric's unique composition of para-aramid and PBO fibres makes it extremely durable and strong.

Outstanding value – Suitable for application in the outer shell of turnout gear for firefighters. Complies with EN 469: 2005.

Outstanding comfort – The lightest outer shell fabric available. Protects against heat stress and allows for longer working hours.

Premium thermal performance – Exhibits exceptional strength retention after exposure to heat as well as excellent flame resistance.

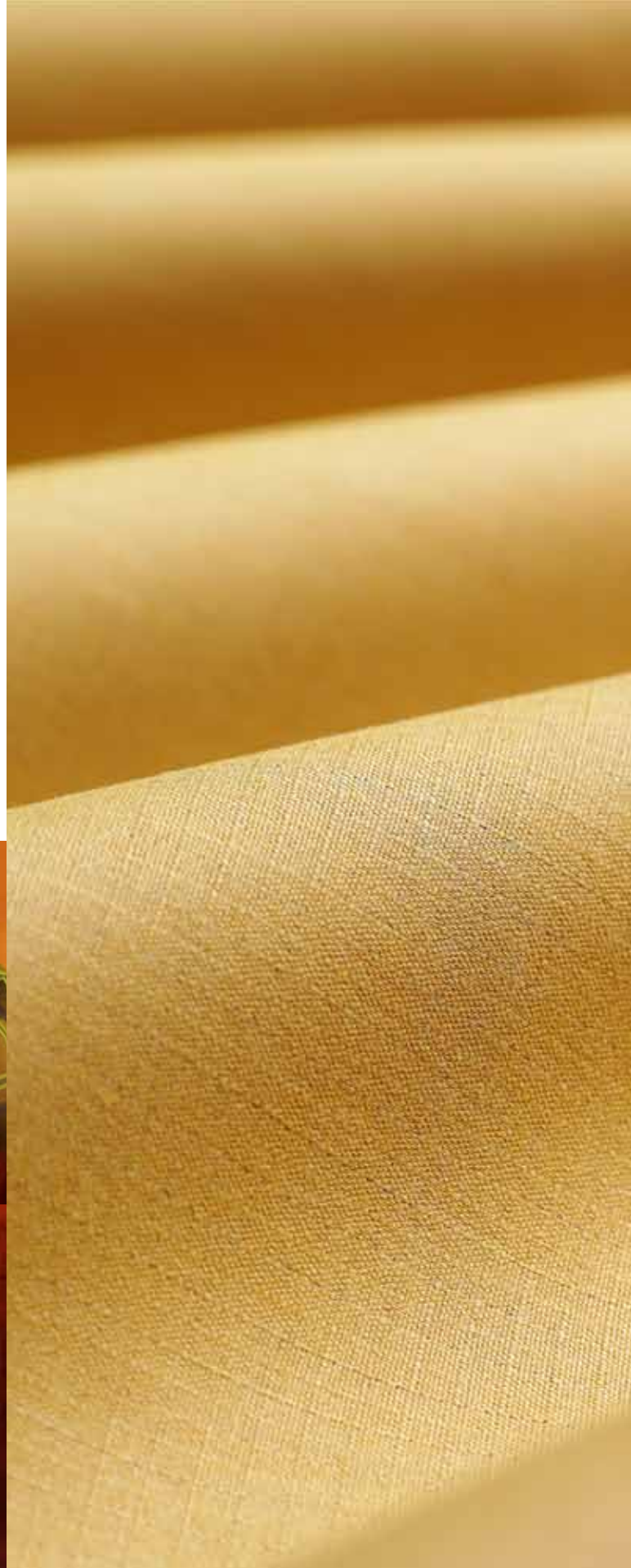
Anti-static for explosion risk protection – TenCate Static-Control™ is a core conductive filament yarn (complies with EN 1149-5: 2008, testmethod EN 1149-3: 2004).

Superior tear and tensile strength – Provides outstanding resistance to cuts and punctures.

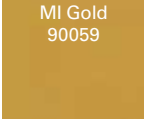




Unbeatable durability – Can continually withstand the toughest challenges due to unequalled durability and wear life.

Limited chemical protection – Protects against splashes, thanks to Super Shelltite™ finish.

Complete system – TenCate is able to supply all the components of the firefighters turnout gear: outer shell, moisture barrier, thermal barrier, thermal liner, reinforcement and cuffs.



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Technical data	TenCate Tecashield®	Test method	Standard colours
Quality	MI 9180 (Millenia Light™)		 <p>The colours above are standard colours and available with a minimum order length of 100 metres. The colours shown are a reference only.</p> <p>* Copyright symbols: NEN, Delft (Netherlands)</p> <p>** After pre-treatment (five wash/dry cycles according to EN ISO 6330: 2000. Procedure 2A (60°C) with tumble drying (Procedure E) (max. 70 °C outlet temperature).</p> <p>*** As received</p>
Width	163 cm (+2/-1 cm)	ISO 3801: 1978	
Weight	180 g/m ² (± 5%)	ISO 3932: 1980	
Composition	59/39/2% para-aramid/PBO/Static-Control™		
Threads/cm	28 x 19 (± 1/cm)		
Yarn count	Ne 34/2 x Ne 34/2		
Construction	1/1 plain, ripstop		
Protection	Outer shell for turnout gear		
Available finishes	Super Shelltite™		
PPE* requirements			
Washing symbols			
Certification			
	Firefighting	EN 469: 2005	
	Anti-static for explosion risk	EN 1149-5: 2008, EN 1149-3: 2004	
	Öko-Tex Standard 100, class III		

Summary of results EN 469: 2005																
Property	Test method	EN 469: 2005 requirements	Results obtained	PASS												
6.1 Flame spread	EN ISO 15025: 2002 Procedure A	EN 533 index 3: No flaming to edge - No hole formation - No flaming or molton debris - Mean afterflame ≤ 2s - Afterglow not to spread	EN 533 index 3: No flaming to edge - No hole formation - No flaming or molton debris - No afterflame - No afterglow	PASS**												
6.4 Residual change	EN ISO 6942: 2002 Method A at 10 kW/m ²	Tensile strength (ISO 13934-1) of outer material ≥ 450N (All specimens)	<table border="1"> <tr> <td>Spec.</td> <td>Warp:</td> <td>Weft:</td> </tr> <tr> <td>1</td> <td>2183 N</td> <td>1652 N</td> </tr> <tr> <td>2</td> <td>2066 N</td> <td>1853 N</td> </tr> <tr> <td>3</td> <td>2157 N</td> <td>1885 N</td> </tr> </table>	Spec.	Warp:	Weft:	1	2183 N	1652 N	2	2066 N	1853 N	3	2157 N	1885 N	PASS**
Spec.	Warp:	Weft:														
1	2183 N	1652 N														
2	2066 N	1853 N														
3	2157 N	1885 N														
6.5 Heat resistance	ISO 17493: 2000 at 180 °C	Materials shall not ignite or melt Shrinkage ≤ 5%	Material did not ignite or melt. Max. Shrinkage: 0.1%	PASS***												
6.6 Tensile strength	EN ISO 13934-1: 1999	≥ 450 N	<table border="1"> <tr> <td>Warp:</td> <td>Weft:</td> </tr> <tr> <td>2571 N</td> <td>2073 N</td> </tr> </table>	Warp:	Weft:	2571 N	2073 N	PASS***								
Warp:	Weft:															
2571 N	2073 N															
6.7 Tear strength	EN ISO 13937-2: 2000	≥ 25 N	<table border="1"> <tr> <td>Warp:</td> <td>Weft:</td> </tr> <tr> <td>219.6 N</td> <td>207.7 N</td> </tr> </table>	Warp:	Weft:	219.6 N	207.7 N	PASS***								
Warp:	Weft:															
219.6 N	207.7 N															
6.8 Surface wetting	EN 24920: 1992	Spray rating ≥ 4 (based on lowest result)	Spray rating = 4	PASS**												
6.9 Dimensional change	ISO 5077: 2007	Max ± 3% (= shrinkage)	< 3%	PASS**												



TenCate Protective Fabrics

TenCate Protective Fabrics consists of three companies: TenCate Protective Fabrics EMEA, TenCate Protective Fabrics Americas and TenCate Protective Fabrics Asia. We develop and produce the most comprehensive range of proven, high-performance fabrics used to make protective clothing.

Our fabrics become lifesaving garments for firefighters, industrial workers, military personnel and other professionals working under hazardous conditions in danger zones around the world.

We work closely with our customers, end-users, fibre and chemical manufacturers and independent laboratories. As a result, TenCate Protective Fabrics is the one source the world looks to for leadership in knowledge of materials, consistent product quality, and a proven commitment to service excellence.

TenCate is a trademark of Royal Ten Cate nv. Tecashield is a trademark of Ten Cate Protect bv. Ten Cate Protect bv is a subsidiary of Royal Ten Cate nv.



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