

Outer shell: GE 9205 – 205 g/m<sup>2</sup>

## Best-performing PBI®-based outer shell on the market

TenCate has made innovative steps in the development of PBI® based fabrics. TenCate Gemini XTL™ combines the proven performance of PBI® fibres with the advanced engineering expertise of TenCate. The thermal resistance of PBI® and para-aramid fibres is reinforced with a high-strength grid. This is a patented technology of TenCate, resulting in the best performing PBI® based fabric available in the market.

**Advanced engineering to achieve best performing products** – TenCate Gemini XTL™ features a patented high tech grid to improve strength and abrasion resistance, and to eliminate puckering after laundering.

**Best score on durability** – Considerably better abrasion resistance than other PBI® based fabrics.

**Superior tear and tensile strength** – Initial and after multiple washes.

**Excellent thermal protection** – Strong and flexible before and after thermal exposure.

**Global standards** – Certified to EN 469: 2005 and As/NZS 4967: 2009.

These fabrics are made by TenCate Protective Fabrics, the largest supplier of FR fabrics in the world.



Technical data	TenCate Gemini XTL™	Test method	Standard colours
Quality	GE 9205		 <p>GE Gold 89312</p> <p>The colour above is a standard colour and available with a minimum order length of 100 metres. The colour shown is of reference only.</p>
Width	156 cm (+2/-1cm)	ISO 22198: 2006	
Weight	205 g/m <sup>2</sup> (± 5%)	ISO 3801: 1977	
Composition	Para-aramid/PBI®/Static-Control™		
Construction	Modified plain		
Protection	Outer shell for turnout gear		
Available finishes	Hydro-Tec™		
PPE* requirements			
Washing symbols			
Certificering			
	Firefighting	EN 469: 2005 and As/NZS 4967: 2009	<p>* Copyright symbols: NEN, Delft (Netherlands)</p> <p>** After pre-treatment (five wash/dry cycles according to EN ISO 6330: 2012. Procedure 6N (60°C) with tumble drying (Procedure F) (max. 70 °C outlet temperature).</p> <p>*** As received</p>
	Anti-static for explosion risk	EN 1149-5: 2008, EN 1149-3: 2004	
	General requirements	EN 340: 2004	

**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	ISO 14116: 2008 Index 3: No flaming to edge - No hole formation - No flaming or molten debris - Mean afterflame ≤ 2s - Afterglow not to spread	ISO 14116: 2008 Index 3: No flaming to edge - No hole formation - No flaming or molten debris - No afterflame - No afterglow	PASS**
6.4 Residual strength	EN ISO 6942: 2002 Method A at 10 kW/m <sup>2</sup>	Tensile strength (ISO 13934-1) of outer material ≥ 450N	Warp: 2300 N Weft: 2700 N	PASS**
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 Annex D	≥ 450 N	Warp: 2900 N Weft: 2800 N	PASS***
6.7 Tear strength	EN ISO 13937-2: 2000	≥ 25 N	Warp: 420 N Weft: 400 N	PASS***
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**

**Sunlight/UV Exposure Advisory:** Prolonged sunlight and UV exposure can be damaging to aramid and PBI® fibers. Both natural (undyed) and dyed aramid and PBI® fibers will fade or change color with exposure to sunlight or other UV sources. The thermal performance is not affected, but long term or repeated exposures will cause the fabric to gradually weaken. Garments should be stored so that they are protected from sunlight, including windows and bay doors, to maximize wear life. TenCate Protective Fabrics offers no warranties, implied or otherwise, for color change or fabric damage due to UV exposure.



**TenCate Protective Fabrics**

TenCate is the world's No. 1 producer of protective fabrics for the manufacturing of safety wear. We supply garment-makers with an extensive range of top-quality and technologically advanced fabrics.

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. Gemini XTL is a trademark of Ten Cate Protect bv. Ten Cate Protect bv is a subsidiary of Royal Ten Cate nv.



TEN CATE PROTECT BV  
TenCate Protective Fabrics  
P.O. Box 186  
7440 AD Nijverdal  
The Netherlands  
Tel. +31 (0)548 633922  
Fax +31 (0)548 633256  
E-mail: protectivefabrics@tencate.com

[www.tencateprotectivefabrics.com](http://www.tencateprotectivefabrics.com)