



Defender™ M

MILITARY & POLICE

The TenCate Defender™ M collection is a range of inherently heat- and flame-resistant fabrics.

DM 9210 – 210 g/m²

Proven to be the best inherent FR fabric for operational uniforms

For many years, TenCate has been known for its patented top-level fabric, TenCate Defender™ M. This proven fabric has been supplied to millions of soldiers and police officers worldwide, protecting them in conflict zones. The unique inherent heat- and flame-resistant properties of TenCate Defender™ M help to protect against severe burn injuries from IEDs, blasts and fuel. The fabric has been engineered with Lenzing FR® fibres, making it the most comfortable combat fabric in terms of breathability, moisture absorption and evaporation. This makes TenCate Defender™ M the best defence and tactical fabric around – one that simply cannot be ignored.

Superior thermal protection – Protects against heat and flame (complies with EN ISO 11612 A1,A2,B1,C1: 2008).

Highly comfortable – Lightweight, breathable and excellent moisture absorption.

Extremely durable – Excellent resistance to wear, tear and fading are combined to provide a long useful garment life. The flame-resistant properties are built in and cannot be washed out.

Long-lasting looks – The fabric has been thoroughly tested for its protective properties and has been submitted to an extensive range of washing and durability tests at independent testing institutes.

Outstanding value – Suitable for application in protective clothing for naval forces, ground forces, air forces, special forces and law enforcement. This military combat fabric is already worn by the United States Army and United States Marine Corps.

Flashover protection – Tested at 4 seconds in a sea of flames at a temperature of 800°C, TenCate Defender™ M - DM 9210 shows, by far, the best results of all available inherently FR fabrics in its weight class (Instrumented mannequin test - ISO 13506: 2008).

Limited chemical protection – Protects against splashes, thanks to Hydro-Tec, an innovative nanotechnology finish (complies with EN 13034, type 6: 2005).



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Technical data	TenCate Defender™ M	Test method
Quality	DM 9210	
Width	163 cm (+2/-1 cm)	ISO 22198: 2006
Weight	210 g/m ² (± 5%)	ISO 3801: 1977
Composition	64/24/10/2% Lenzing FR®/para-aramid/ polyamid/anti-static	
Construction	Ripstop plain	
Available finishes	Hydro-Tec™	
Tensile strength	900 N x 800 N (±10%)	ISO 13934-1: 1999
Tear strength	35 N x 35 N (±10%)	ISO 13937-2: 2000
Abrasion resistance on Martindale	50.000 @ 12 kPa	ISO 12947-2: 2002
Air permeability	> 120 L/m ² /s @ 100 Pa	ISO 9237: 1995
Dimensional stability	± 3%	ISO 5077: 2007
Heat resistance 180°C	± 5% shrinkage. Does not melt or self ignite	ISO 17493: 2000
Washing symbols		
PPE requirements*		
Certification		
	Industrial flame & heat hazards	EN ISO 11612 A1,A2,B1,C1: 2008
	Anti-static for explosion risk	EN 1149-5: 2008, EN 1149-3: 2004
	Liquid chemicals**	EN 13034, type 6: 2005

Camouflage

TenCate is one of the few companies worldwide capable of providing any printed camouflage pattern according to defence ministry specifications.

Optional Uni-colours

E.g. Olive green, Tan and Coyote Brown.

Instrumented mannequin test	Flashover exposure [83.9 kW/m ² ; 4 seconds exposure; 60 seconds evaluation time]	
ISO 13506: 2008	TenCate Defender™ M****, 210 g/m ²	Aramid fabric, 215 g/m ²
Burn degree (2 nd + 3 rd)	31%	49%
3 rd degree	8%	30%
Heat transferred	343 kJ	411 kJ
Jacket length shrinkage	0%	16%
Trousers length shrinkage	4%	23%

* Copyright symbols: NEN, Delft (Netherlands)

** Hydro-Tec finish only



Member of the E.T.S.A.



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

Q1-2015 Please check our website for the latest product information.



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