TENCATE
Defender™ M

MILITARY & POLICE

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

DP 9180 with Hydro-Control™ – 230 g/m²

New laminated FR-fabrics for comfortable and waterproof operational uniforms

TenCate Defender™ M fabrics with Hydro-Control™ provide protection against wind and rain, with excellent moisture regulating and breathable properties. With this new development, TenCate is able to supply a protective and comfortable solution for every layer in a complete clothing system. The fabrics are engineered based on the unique features of TenCate Defender™ M.

Excellent foul weather protection – The Hydro-Control™ laminate offers excellent waterproofness with a remarkably low water vapour resistance. This enhances sweat evaporation which contributes to greater comfort. (complies with EN 343, class 3: 2003).
Soft and supple – Without compromising on protection, ensuring maximum wearability.
Superior thermal protection – The fabrics offer very good inherent FR protection against burn injuries from IED's, blasts and fuels.
Highly durable – The ePTFE/PU BI-component moisture barrier is high-temperature resistant and durable due to the PU-layer.
Cooler, dryer and more comfortable – It provides superior breathability, with unbeatable moisture regulating properties.
Anti-static is built in – Protecting against the risk of an explosion. The fabric continuously discharges to the ambient air, thanks to the TenCate Static-Control™ fibre that is 'gridlocked' into it.
Cost-effective – Long life-cycle and attractive pricing.
Environmental friendly – TenCate Defender™ M fabrics contain Lenzing FR® fibres, which are produced eco-friendly.
Clothing system solutions – Based on TenCate Defender™ M's patented blend of fibres, TenCate has engineered numerous woven, knitted and laminated fabrics. This means we can offer fabrics for complete garment systems with the highest level of safety and comfort.

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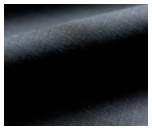
Technical data	TenCate Defender™ M	Test method
Quality	**DP 9180 with Hydro-Control™**	
Width	150 cm (+2/-1 cm)	ISO 22198: 2006
Weight	230 g/m² (±5%)	ISO 3801: 1977
Composition	59/29/10/2% Lenzing FR®/aramid/ polyamid/Static-Control™ + ePTFE/ PU BI-component membrane	
Construction	2/1 twill	
Available finishes	Hydro-Control™	
Tensile strength	800 N x 600 N	ISO 13934-1: 1999
Abrasion resistance on Martindale	80.000@12kPa	ISO 12947-2: 1999
Dimensional stability	± 3%***	ISO 5077: 2007
Colour fastness to light	≥7*	ISO 105 - B02: 1994
Water vapour resistance	R_{et} <7 m²Pa/W	ISO 31092:1993
Heat resistance 180°C	± 5% shrinkage	ISO 17493: 2000
Recommended tape	TenCate - TP 3 (The quality level of our TenCate Defender™ M with Hydro-Control™ fabric) is only guaranteed by using this tape for the sealing of the garment.	
Washing symbols	60	
PPE requirements**		
Certification		
	Foul weather***	EN 343, class 3: 2004
	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
	Resistance to penetration by liquids	BS 7971-10, clause 5.13
	General requirements ***	EN ISO 13688: 2013; EN 340: 2003

* Tested on specific shade
** Copyright symbols: NEN, Delft (Netherlands)
*** After pre-treatment (according to ISO 6330, 1 wash procedure 2a (60 °C) and 1 tumble drying (procedure E) (max. 50 °C outlet temperature).

Available colours



TenCate Defender™ M - DP 9180 with Hydro - Control™ is available in the shades black and dark blue.

MADE IN EUROPE TENCATE

Lenzing FR® THE HEAT PROTECTION FIBER

CSR Performance Ladder BUREAU VERITAS Certification

ISO 9001 ISO 14001 BUREAU VERITAS Certification

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.

TENCATE
materials that make a difference

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