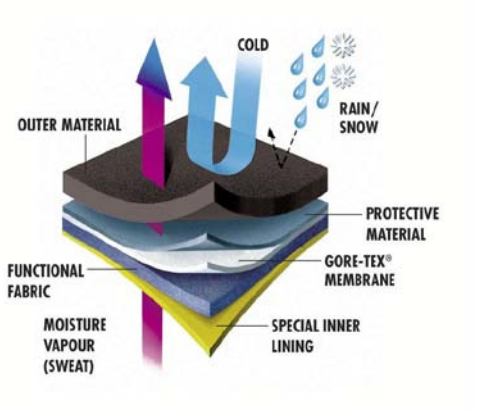
GORETEX COLD WEATHER BOOT
(REF. GT310 GTX)

TECHNICAL SPECIFICATION

NATO STOCKS NO . 8430270089890

ENISO 20347:2004 SB O2



GORETEX WATERPROOF AND BREATHABLE LINING

NO WATER PENETRATION AT 500.000 STEPS IN WATER

1-SUBJECT

This specification covers the technical specifications, control and test methods of Goretex Cold Weather Boot – style ref.GT310 GTX

All tests are made in accordance with the Europian Norm ENISO 20344:2004 and the product is complying with the Europian Norm ENISO 20347:2004

Nato Stock Number :8430270089890

The footwear shall be completely impermeable to liquids and entirely (100%) permeable to water vapour in order to ensure the necessary comfort while in use even in extreme conditions.

2- SPECIFICATIONS

A. GENERAL

All materials provide comfort and flexibility.
Padded collar and tongue for comfort.
Light weight
Sole : “Direct vulcanized and moulded”, “Rubber ” sole durable against tough environments.
Upper : Water resistant leather and 100% waterproof and breathable, climate control GORETEX lining (made in Germany)
Size range is between 38 – 48 French Sizing / 5 – 13 British Sizing
Standards : EN ISO 20347:2004 – O2 and NATO Specs

Water resistance of the footwear	according to standard	EN ISO 20345-6.2.5
Ergonomics	according to standard	EN ISO 20345-5.1

B. TECHNICAL SPECIFICATION

UPPER LEATHER :

Upper Material : Full grain genuine Cow leather
Colour : Black
Thickness : 2,0 mm (minimum)

Tear strength of the material of the upper	$\geq$ 120 N	EN ISO 20345-5.4.3
Tensile strength of the material of the upper	$\geq$ 15 N/mm^2	EN ISO 20345-5.4.4

Dynamic water resistance: Absorption of water after 60':	time for penetration of water ≥ 60 min. ≥ 30%; penetration of water between 60' and 90' no greater than 0.2 gr.	EN ISO 20345-6.3.1
Permeability of the upper to water vapour	≥ 4.0 mg/cm^{2}h	EN ISO 20345-5.4.6
Water vapour coefficient of the upper	≥ 15 mg/cm^2	EN ISO 20345-5.4.6
pH (only for leather upper)	> 3.2	EN ISO 20345-5.4.7

TONGUE LEATHER :

Upper Material : Full grain Calf leather
Colour : Black
Thickness : 1.0 mm (minimum)

Tear strength of the Tongue material	≥ 30 N	EN ISO 20345-5.5.1
pH (only for leather upper)	> 3.2	EN ISO 20345-5.4.7

LINING :

Property : Boot upper will be lined completely with Climate Control GORETEX (made in Germany), 100% waterproof and breathable
High wicking capacity
Material : External side which is touching foot, 80 % ± 10 PA , 20 % ± 10 PES featuring high abrasion resistance
Middle layer : Functional non-woven, 100 %PES
Waterproof membrane in expanded polytetrafluoroethylene (PTFE)
Internal side which is touching leather, knit , 100 % PA
Martindale abrasion face (movements) : Dry : min.200.000 ,
Wet : min.50.000 (EN 20344 .2OO4, 6.12)

Perspiration fastness	≥ 3	(EN ISO 105-E04)
Rub fastness	≥ 3	(EN ISO 105-X12)
Thermal insulation (Rct): (10 ^{3} m^2 K/ W) :	> 55	(DIN EN 31092; ISO 11092)
Vapour permeability (m^2 Pa/ W) :	< 25	(DIN EN 31092; ISO 11092)
Resitance to water penetration (mbar)	> 5000	(DIN EN 20811)

LASTING INSOLE BOARD :

Property : Anti-static, anti-bacterial, sweat absorber
Material : Non-woven bonded fibre board

Thickness of the insole	≥ 2.0 mm	EN ISO 20345-5.7.1
Water absorption of the insole desorption	≥ 70 mg/cm^2 > 80%	EN ISO 20345-5.7.3
Abrasion resistance of the insole after 400 cycles	No tearing visible	UNI EN ISO 20345-5.7.4.1

ACCESSORIES AND OTHERS :

Sewing thread: The yarns shall be in polyester or polyamide (non-wicking)

Inlay Sole : Anti-static, sweat absorber, anti-bacterial, removable , washable
(Sock insert) Micro fiber coated opencell PU

Lace : Polyester or polyamide (non-wicking)
Length and colour is according to the boot

Hooks : Rust proof, easy roller, easy lock and easy fastener

SOLE :

Property : Direct vulcanized and Moulded : It provides durability and resistance against sole-upper separation
Rubber : High durability
High performance
Anti-staticness (A) : It provides to minimize electrostatic build up to avoid the risk of spark ignition.
Hydrolysis resistance: It provides durability on sole against very humidity, hot and cold weather conditions and longer self life for products at international storage terms
Oil resistant outsole (FO): The sole will not swell or become brittle and crack when worn in harsh industrial environments
Slip resistant outsole
Heat resistant outsole up to 300 ^{0}C degree (HRO)

Material :	Rubber
Outsole density :	1,15 gr /cm 3 (± 0,2 tolerance)
Hardness :	Outer layer: 65 ± 8 Shore A
Slip resistance :	Co-efficient of friction 0.28 heel – 0.32 flat (minimum)
Flexing resistance :	Cut growth 4 mm after 30.000 cycles (maximum)
Abrasion resistance :	volume loss 130 mm3 (maximum)
Tearing strength :	8 kN/m (minimum)
Energy absorbtion (E) :	20 joules (minimum)
Electrical resistance (A) **:**	100 kΩ (minimum) – 1000 mΩ (maximum)
Upper / outsole bonding:	4 newton/mm (minimum) if the sole material tear during the test , the result will be min.3 N /mm

Interlayer bond strength:	4 newton/mm (minimum)) if the sole material tear during the test , the result will be min.3 N /mm
Heat resistance (HRO):	No melting or crack after contact at 300 ^{0}C for 60 sec.

3 – QUALITY ASSURANCE

All raw materials before production and all finished products after production are being tested in our laboratory which has been accredited by SATRA International Notified Body in UK and by Turkish Standard Institute (TSE) .
It is supported by the implementation of ISO 9001:2000 Quality System Certificate and membership of SATRA (international laboratory in U.K.) to audit and test the product.

Each pair of boot has a customer information leaflet which is put in inner boxes. This leaflet includes information about product, standard and product care.

4 - LABELLING AND PACKAGING

The single boot in each box separated by tissue paper or polypropylene paper to prevent them from coming into contact.

Each pair of footwear is packed in a box with handle in corrugated cardboard inner boxes. The inner boxes shall be placed in outer boxes made of double wall cardboard having, with 10 pairs in each outer box.

On one side of the inner box the indications below is printed on a sticker with clearly visible characters.

- exact name, reference and/or article of the product contained;
- size details of the product contained;

The outer boxes shall be closed and sealed with adhesive tape on all the flaps.
On one side of the outer boxes the indications below is printed on a sticker with clearly visible characters.

- name of the supplier company (if required);
- exact name, reference and/or article of the product contained;
- quantity of the product contained;
- size details of the product contained;

Final packaging shall maintain enough protection to prevent any damage of goods under normal shipment and handling conditions.