

**BLACK COMBAT BOOT
(REF. ML 300 DDR)**

TECHNICAL SPECIFICATION

**NATO STOCKS NR : 8430270056548
CE ENISO 20347:2004 O1 HRO A E FO**



1-SUBJECT

This specification covers the technical specifications, control and test methods of Black combat boot – style ref. ML 300 DDR.

The following NATO Stock Numbers (NSN) is covered by this specification:

NATO STOKS NR. 8430270056543

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

2- SPECIFICATIONS

A. GENERAL

This boot is designed according to the field conditions. All materials provide comfort and flexibility.

Full grain, good quality cow leather in black colour and free from defects like cracks, rotten, burnt, scorched etc. Split leather is never advised for uppers.

Padded collar for comfort and secure fit.

Eyelets are resistant against rust

Supported toe and back heel

Sweat absorber , anti-bacterial, anti-static sock insert (inlay sole)

Direct injection double density rubber sole durable against very tough conditions, hot and/or cold environments.

Electrical resistance, Antistatic footwear to minimize electrostatic build up to avoid the risk of spark ignition.

Size range is between 39 – 48 French Sizing / 6 – 13 British Sizing

Sole design : Panama – Plastic last : 100DIN

Standards : NATO and European (ENISO 20347:2004 O1 HRO A E FO)

B. TECHNICAL SPECIFICATION

UPPER LEATHER :

Upper Material :	Full grain genuine Cow leather
Colour :	Black
Thickness :	1.8 mm (minimum)
Breaking strength :	20 N/mm ² (minimum)
Tearing strength :	140 N (minimum)
pH :	3,2 (minimum)
Water Absorbtion :	No Penetration before 60 mins (minimum)
And Penetration	Water Absorbtion 30% (maximum) Water Penetration: 2g (maximum)

Oil : 2.5 – 9 % (Between)
Ash : 4.5 % (maximum)
Chrome : 2.5 – 7.5 % (between)

TONGUE & COLLAR LEATHER :

Material : Full grain Calf leather
Colour : Black
Thickness : 0.9 mm (minimum)
Breaking strength : 2 kg/mm² (minimum)
Tearing strength : 2.5 kgf (minimum)
pH : 3 (minimum)

LINING :

Property : Breathable, sweat absorber, anti-bacterial
Material : Non-Woven polyamide textile
Abrasion : Dry 25600 revs (minimum)
Wet 12800 revs (minimum)
Tearing strength : Warp : 2.5 kgf (minimum)
Weft : 2.5 kgf (minimum)

LASTING INSOLE BOARD :

Property : Anti-static, anti-bacteriel, sweat absorber
Material : Non-woven bonded fibre board
Thickness : 2,0 mm (minimum)
Cracking angle : 90 degree (minimum)

SUPPORTS :

Toe cap support : Thermoplastic fibre board
Thickness : 1,8 mm (minimum)
Stiffener support : Leather Fibre board
Thickness : 1,6 mm (minimum)
Ankle Support : 6mm, 65 density PU foam

ACCESSORIES AND OTHERS :

Eyelets (holes) : 9 pairs per boot
Rustproof
Sewing thread: Polyester or Polyamide
Breaking strength : 30N (minimum)

Laces: Polyester or Polyamide
Flat-Round shape
Breaking strength : 500 N (minimum)
Length: According to the boot

Inlay Sole (Footbed) : Anti-static, sweat absorber, anti-bacterial, removable
Material : Non-woven textile coated felt
Antistaticness: 0,1 mOhm – 1000 mOhm (between)
Water absorbtion : 35% (minimum)

SOLE :

Property :

- Direct Injection and Moulded : It provides durability and resistance against sole-upper separation
- Double density rubber (DDR) : Midlayer provides cushioning and comfort as well as flexibility.
- High performance
- Heat Insulation (HI) and Cold Insulation (CI): It minimizes the effects of hot and cold surfaces to the feet hence keeping it warm during winter and cool during summer
- Anti-staticness (A) : It provides to minimize electrostatic build up to avoid the risk of spark ignition.
- Energy Absorbing Heel (E) : It provides comfort when jumping walking, running , etc. by absorbing downward force in excess of a body weight. It is to absorb a minimum energy level 20 joules to take the shock out of the heel area
- 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 up to 300 °C degree (HRO)

Material : Rubber in double layer (DDR)
midsole layer (expanded) and outsole layer (compact)

Hardness : Outsole layer: 65 ± 7 Shore A

Density : Outsole 1.15 (-\+) 0.1
Insole 0.80 max

Slip resistance : EN 13287 SRC heel :min 0.13, flat min 0.18

Flexing resistance : Cut growth 4 mm after 30.000 cycles (maximum)

Abrasion resistance : Density > 0,9 : volume loss 150 mm³ (maximum)

Tearing strength : 8 kN/m (minimum)

Energy absorbtion (E) : 20 joules (minimum)

Electrical resistance (A) : 0.1 mΩ (minimum) – 1000 mΩ (maximum)

Upper / outsole bonding: 4 N/mm (minimum),
unless tearing of sole then minimum of 3.0 N/mm

Interlayer Bondding : 4 N/mm (minimum
unless tearing of sole then minimum of 3.0 N/mm

Heat resistance (HRO): No melting or crack after contact at 300 °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 Turkish Standard Institute (TSE) and by SATRA International Notified Body in UK.

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.

Product is in accordance with NATO standards.

Product is in accordance with European Standards called ISO EN 20347:2004 and marked with **CE** label (If required)

P0001	:	Manufacturer reference
CE 0312	:	SATRA Notified Body reference
EN ISO 20347:2004	:	Number of European standard of occupational footwear for professional use
O1	:	Type of classification
HRO FO A E	:	Additional property code
G15-01	:	Product group identification
42 (8)	:	Size EUR (UK)
09 / 2008	:	Date of manufacture

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

LABELLING:

CE label is stitched inside tongue and each pair bears this CE marking (If required). Each inner box bears a label sticker, which shows product name and size of the boot. Each outer box bears a label sticker, which shows product name, size of the boot and quantity pairs inside box.

PACKAGING:

Each pair of boot is packed separately in tough cardboard box (inner box). Then one set will be packed together.

10 pairs of boots are packed in a ripped cardboard box (outer box). This quantity can be changed according to customer requirement.

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