BLACK BOOT

(REF. ATTP 1098 BLACK
PU / PU SOLE)

TECHNICAL SPECIFICATION

CE ENISO 20347 :2004-01 O1 FO ORO HRO

NATO STOCKS NR : 8430270168975

1-SUBJECT

This specification covers the technical specifications, control and test methods of Black Boot, High Leg – style ref. ATTP 1098 Black (Polyurethane / Polyurethane sole) The following NATO Stock Numbers (NSN) is covered by this specification:
NATO STOKS NR. 8430270168975

The Requirement

• ***Comfort***: The most important requirement in any is for it to be comfortable. However, comfort is dependent on a number of things

• ***Fit:*** The boot must fit properly so that it grips the heel but allows freedom for the toes to move

• ***Shock Absorbency:*** The boot sole must be effective in absorbing shocks to minimise damage to the ankle and lower legs.

• ***Spring:*** The design of the boot should help to return energy to the foot to aid walking and running

• ***Security:*** It must lace effectively to hold the foot in place. If the foot slips inside the boot, it will cause blistering

• ***Breathability:*** The boot must allow the foot to breathe and for the sweat to escape. The foot can produce litres of sweat and if it is trapped, it will make the foot wet, causing blistering because the skin becomes soft and fungal infections. Therefore the quality of the materials used is most important as good materials give good breathability

• ***Waterproofness:*** The boot must keep the foot dry. Cold wet feet will make you feel uncomfortable and will lower your morale

• ***Grip:*** The boot must provide grip to stop you slipping in muddy ground to stop the foot slipping

• ***Support:*** The boot must be flexible to allow good movement but also must give good ankle support for when you are carrying heavy loads Protection. The boot should protect the foot from sharp objects, acids and oils

• ***Durability:*** Boots must be durable. Once the boots have worn in and are comfortable, the policemen want to keep those boots for some time

• ***Effectiveness***: The boots should remain effective over a range of temperatures, climate and ground conditions

2- SPECIFICATIONS

GENERAL PROPERTIES

- This boot is designed according to the field conditions. All materials provide comfort and flexibility for multi functional usage and operational conditions.
- Full grain, good quality, soft cow leather in black colour. Leather is free of appeared defects, shrinkage, stains or break..
- Very Light Weight
- Padded collar and tongue for comfort
- Size range is between 36 – 48 Continental Sizing / 3 – 13 British Sizing
- Breathable lining
- Flexible points for ankle at front and back
- The zipper on side for Easy fastening (Wear and Move)
- Eyelets / hooks are rustproof, corrosion resistant
- Sweat absorber , anti-bacterial, anti-static, removable, washable sock insert (inlay sole/footbed)
- Direct injection double density polyurethane / polyurethane sole durable against
- Hydrolysis in very hot and humidity environment. Special sole chemicals provide
- Long shelf life
- Slip resistance outsole according to EU norm EN 13287
- Oil Resistant outsole
- Boot has anti-static property and shock absorber heel for more comfort in usage
- Standards : The boot will comply with NATO standards
- The boot is complying with European Norms ENISO20347 O1.
- Testing to the standard ENISO 20347:2004 (+A1;2007) in the category O1
- Boot may have a CE label defining the above standard and category

TECHNICAL SPECIFICATION

UPPER LEATHER :

Upper Material :	***Split leather is forbidden to use for uppers***
	Chrome 6 is strictly forbidden
	AZO free (causing cancer)
	Full grain, good quality, soft Cow leather
Colour :	Black
Thickness :	1.8 mm (minimum)
Oil:	min. 4 %
Ash :	4 – 7 %
Chrome:	min. 3 %
Elongation at break:	35-80 %
Water absorption:	max. 20%

Tear strength of the material of the upper	≥ 2 Kgf	EN ISO 20344 - 6.3
Tensile strength of the material of the upper	≥ 2 Kg/mm^2	EN ISO 20345- 5.4.4
pH (only for leather upper)	≥ 3.2	EN ISO 20344-6.9

OUTER / CANVAS :

Material :	Polyamide Textile
Colour :	Black
Property :	High abrasion resistance
Abrasion :	Dry - 25600 revs (minimum)
	Wet - 12800 revs (minimum)
Tearing strength :	Warp : 14 kgf (minimum)
	Weft : 14 kgf (minimum)
Water Repellency :	4 (minimum)
Colour Fastness :	4 (minimum)

LINING :

Property :	Breathable, sweat absorber, anti-bacterial
Material :	Polyamide woven textile

Tear strength of the lining	≥ 2.5 Kgf	EN ISO 20345- 5.5.1
Abrasion resistance	> 25,600 dry cycles > 12,800 wet cycles	EN ISO 20345- 5.5.2

LASTING INSOLE BOARD :

Property :	Anti-static, anti-bacteriel, sweat absorber
Material :	Bonded fibre board
Thickness :	2,5 mm (minimum)
Cracking angle :	90 degree (minimum)

SUPPORTS :

Toe cap support :	Thermoplastic fibre board
Thickness :	1,8 mm (minimum)
Ankle (stiffener) support :	Thermoplastic fibre board
Thickness :	1,6 mm (minimum)
Collar Support :	6mm, 65 density PU foam
Tongue Support :	10mm, middle density sponge

ACCESSORIES AND OTHERS :

Eyelets (holes), hook :	7 pairs per boot Rustproof Black colour
Zipper :	Rough plastic (YKK Brand)
Zipper Puller Cover :	Cow full grain leather in black colour Fixed by polyamide or polyester velcro (YKK)
Sewing thread:	Polyester or Polyamide
Laces:	Polyester or Polyamide Round shape (wick inside) Length: According to the boot
Inlay Sole (Footbed) (1) :	Non-woven textile coated felt – Anti-static, sweat absorber, anti-bacterial
Inlay Sole (Footbed) (2) :	Micro fiber coated opencell PU – Anti-static, sweat absorber, anti-bacterial

The boot has two different types of detachable footbeds (inlay soles). It provides more comfort and good fitting for foot inside boot. By this way, fitting of foot can be adjusted personally by using one of the inlay sole or both two at the same time.

SOLE :

- Direct Injection and Moulded : It provides durability and resistance against sole-upper separation
- Midsole : Polyurethane, Expanded midlayer provides cushining and comfort as well as flexibility, lighter weight and insulation against hot.

- Outsole: Polyurethane, Compact outlayer provides durability, good abrasion resistance

- High performance and flexibility

- Lighter weight

- Anti-staticness (A) : İt 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 our 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

Hardness :	Outer layer: 65 ± 8 Shore A
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) EN 20344:2004 , 5.14
Electrical resistance (A) :	100 kΩ (minimum) – 1000 mΩ (maximum) EN 20344:2004 , 5.14
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 contact resistance :	Resistant up to 100 ^{0}C

3 – QUALITY ASSURANCE

All raw materials before production and all finished products after production are being tested in our inhouse laboratory TEKNOTEKS which has been accredited by SATRA International Notified Body in UK and by TURKAK Turkish Accreditation Agency .
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 according to NATO standards.
Product is according to European Standards and marked with CE label.

CE

P0001	:	Manufacturer reference
EN ISO20347:2004 (+A1;2007)	:	Reference of European standard
O1	:	Type of classification
G550-01	:	Product group identification
0321	:	Notified Body No (SATRA)

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.