



## TECHNICAL SHEET ART. APOLLO

**Description** High shoe in smooth grain leather water-repellent, black color, with quick release and metatarsal protection, black colour, 100% polyester lining, non-metallic insole lining HRP INSOLE, Light & Soft insole, antistatic and breathable, bi-component sole (rubber-polyurethane) abrasion resistant, oil resistant, antistatic and heat resistant

**Suggested sectors of usage** Steel industries/Foundries, mechanical industry, naval industry, mineral industry

**Care and maintenance** Clean periodically the outsole and the upper with non aggressive substances which could compromise quality, safety and durability of the shoe, do not dry close to direct heat source



Class: S3 M HRO SRC  
 Sizes: 38-48  
 Instep: 12  
 Weight(±10%):700 gr. (\*)

| Complete shoe                                                                                                                                                                   | Norm    | Description                                               | Unit               | FTG result | EN ISO 20345 requirements |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------------------|--------------------|------------|---------------------------|
| <b>Toe cap:</b> Top Composite toe cap, impact resistant 200 J                                                                                                                   | 5.3.2.3 | Impact resistance                                         | mm                 | 15,0       | >= 14                     |
|                                                                                                                                                                                 | 5.3.2.4 | Compression resistance                                    | mm                 | 14,5       | >= 14                     |
| <b>Midsole:</b> non metallic HRP Insole with high tenacity fibres layers, ceramized and treated with plasma                                                                     | 6.2.1.1 | Perforation resistance                                    | N                  | 1.100      | >= 1.100                  |
| <b>Antistatic footwear:</b> dissipation capacity of the electrostatic charge                                                                                                    | 6.2.2.2 | Electric resistance                                       |                    |            |                           |
|                                                                                                                                                                                 |         | - Wet                                                     | Mohm               | 75,6       | >= 0,1                    |
|                                                                                                                                                                                 |         | - Dry                                                     | Mohm               | 233        | <= 1000                   |
| <b>Capacity of energy absorption in the heel area</b>                                                                                                                           | 6.2.4   | Energy absorption in the heel area                        | J                  | 35,0       | >= 20                     |
| <b>Upper:</b> smooth grain leather water-repellent, black color, thickness 2,0 mm                                                                                               | 5.4.6   | Water vapour permeability                                 | mg/cmq h           | 1,0        | >= 0,8                    |
|                                                                                                                                                                                 |         | Coefficient of permeability                               | mg/cmq             | 16,8       | >= 15                     |
|                                                                                                                                                                                 | 5.4.3   | Tearing Strength                                          | N                  | 199        | >= 120                    |
| <b>Vamp lining:</b> non woven textile for toe cap, grey color                                                                                                                   | 5.5.3   | Water vapour permeability                                 | mg/cmq h           | 3,4        | >= 2                      |
|                                                                                                                                                                                 |         | Coefficient of permeability                               | mg/cmq             | 30,2       | >= 20                     |
|                                                                                                                                                                                 | 5.5.1   | Tearing Strength                                          | N                  | 30         | >= 15                     |
|                                                                                                                                                                                 | 5.5.2   | Abrasion resistance (dry)                                 | cycles             | no rupture | 25.600                    |
|                                                                                                                                                                                 |         | Abrasion resistance (wet)                                 | cycles             | no rupture | 12.800                    |
| <b>Quarter lining:</b> 100% honeycomb finished polyester, breathable, abrasion resistant, red colour                                                                            | 5.5.3   | Water vapour permeability                                 | mg/cmq h           | 6,8        | >= 2                      |
|                                                                                                                                                                                 |         | Coefficient of permeability                               | mg/cmq             | 54,4       | >= 20                     |
|                                                                                                                                                                                 | 5.5.1   | Tearing Strength                                          | N                  | 25         | >= 15                     |
|                                                                                                                                                                                 | 5.5.2   | Abrasion resistance (dry)                                 | cycles             | no rupture | 51.200                    |
|                                                                                                                                                                                 |         | Abrasion resistance (wet)                                 | cycles             | no rupture | 25.600                    |
| <b>Insole lining:</b> textile anti perforation midsole HRP Insole                                                                                                               | 5.7.3   | Water Absorption                                          | Mg/cm <sup>2</sup> | 78         | >= 70                     |
|                                                                                                                                                                                 |         | Ability to release water                                  |                    | 99%        | >= 80%                    |
| <b>Sole:</b> nitril rubber outsole applied to a polyurethane midsole with low density and completely injected; abrasion resistant, oil resistant, antistatic and heat resistant | 5.8.2   | Tearing Strength                                          | kN/m               | 8,4        | >= 8                      |
|                                                                                                                                                                                 | 5.8.3   | Abrasion resistance                                       | mm <sup>3</sup>    | 137        | <= 150                    |
|                                                                                                                                                                                 | 5.8.4   | Bending resistance                                        | mm                 | 2,0        | <= 4                      |
|                                                                                                                                                                                 | 6.4.2   | Hydrolysis                                                | %                  | 5%         | <= 12%                    |
|                                                                                                                                                                                 | 5.11    | Hydrocarbons resistance (volume increase)                 | flat               | 0,45       | >= 0,32                   |
|                                                                                                                                                                                 |         | Slip resistance on ceramic floor with water and detergent | inclined           | 0,32       | >= 0,28                   |
|                                                                                                                                                                                 |         |                                                           | flat               | 0,22       | >= 0,18                   |
|                                                                                                                                                                                 |         | Slip resistance on steel floor with glycerine             | inclined           | 0,13       | >= 0,13                   |

Azo dye free: no presence of azo dye forbidden by normative 1907/2006/CE Attachment XVII (method UNI EN 14362-1:2012 + 14362-3:2012 – Textile)

(\*) = Indicative weight that refers to ½ pair in size 42