

TECHNICAL SHEET



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|---------------------------|---|
| Article: | B0473 METATARSAL |
| Norm: | UNI EN ISO 20345:2011 |
| Safety Class: | S3 M SRC |
| Footwear height: | Mod. B, H 113 mm (≥113 mm; Rif. EN 20345-5.2.2) |
| Width: | 11 |
| Construction: | STROBEL; PU/GUM SOLE |
| Cleaning and maintenance: | Use only soft brushes and water. Do not use substances like alcohol, thinners, gasoline, oil or any other chemicals. Keep the footwear, dry and clean, in a proper place at room temperature. |
| Suggested fields: | Mechanic, Construction, light industry, services, shipbuildings, big plants, handicraft. |

| Entirefootwear: components | | | | |
|----------------------------|---|--|--|--|
| Component | Description | Value | Norm Requirements | EN 20345 |
| Steel Toe-cap | Impact resistance (200 J) • Free height after impact | 15 mm | ≥ 14 mm | 5.3.2.3 |
| | Compression resistance (15 kN) • Free height after compression | 15,5 mm | ≥ 14 mm | 5.3.2.4 |
| Sole (SRC) | Slip resistance • SRA – sole (entire sole) • SRA – heel (angle of 7°) • SRB – sole (entire sole) • SRB – heel (angle of 7°) | 0,40 0,38 0,18 0,15 | ≥ 0,32 ≥ 0,28 ≥ 0,18 ≥ 0,13 | 5.3.5.4 5.3.5.4 5.3.5.4 5.3.5.4 |
| Steel sheet (P) | Puncture resistance | 1200 N | ≥ 1100 N | 6.2.1.1.2 |
| Footbed (A) | Antistatic properties • Electrical resistance | Dry: 5,84 x 10 ⁸ Ω Humid: 1,28 x 10 ⁸ Ω | ≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω ≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω | 6.2.2.2 6.2.2.2 |
| Sole/upper | Thermal insulation | | | |
| Heat (HI) | • Insole temperature increase | N/A | ≤ 22°C | 6.2.3.1 |
| Cold (CI) | • Insole temperature decrease | N/A | ≤ 10°C | 6.2.3.2 |
| Heel (E) | Shock-absorption in the heel region | 36 J | ≥ 20 J | 6.2.4 |
| (WR) | Water resistance (water absorption) | N/A | ≤ 3 cm ² | 6.2.5 |
| (M) | Metatarsal protection | 40,50 mm | ≥ 40 mm | 6.2.6 |

| Upper | | | | |
|------------|--------------------------|--------------------------|----------------------------|----------|
| Component | Description | Value | Norm requirements | EN 20345 |
| Full grain | Tear resistance | 195 N | ≥ 120 N | 5.4.3 |
| | Traction resistance | N/A | ≥ 15 N/mm ² | 5.4.4 |
| | Water steam permeability | 2,2 mg/cm ² h | ≥ 0,8 mg/cm ² h | 5.4.6 |
| | pH value | 4,1 | ≥ 3,2 | 5.4.7 |
| | Chromium VI | Not detected | Not detectable | 5.4.9 |
| | Water passed | 0,2 g | ≤ 0.2 g | 6.3 |
| | Water absorption | 8% | ≤ 30% | 6.3 |

| Lining | | | | |
|-------------------|---------------------|--|-----------------------------|-----------------|
| Component | Description | Value | Norm Requirements | EN 20345 |
| 3D Hi tech Fabric | Tear Resistance | 30 N | ≥ 15 N | 5.5.1 |
| | Abrasion resistance | <ul style="list-style-type: none"> Dry: the surface shows no holes Humid: the surface shows no holes | No holes till 51.200 cycles | 5.5.2 |
| | Water steam release | 7,2 mg/cm ² h | No holes till 25.600 cycles | 5.5.2 |
| | pH value | N/A | ≥ 2,0 mg/cm ² h | 5.5.3 |
| | Chromium VI | N/A | Not detectable | 5.5.4 |
| | | | | Not detectable |

| Insole | | | | |
|------------------|--|------------------------|-----------------------------|-----------------|
| Component | Description | Value | Norm requirements | EN 20345 |
| TNT | Thickness | 2 mm | ≥ 2,0 mm | 5.7.1 |
| | pH value | N/A | Not detectable | 5.7.2 |
| | Water absorption | 121 mg/cm ² | ≥ 70 mg/cm ² | 5.7.3 |
| | Water release | 97% | ≥ 80 % | 5.7.3 |
| | Abrasion resistance (after 400 cycles) | No damage | Damage ≤ to norms reference | 5.7.4.1 |
| | Chromium VI | N/A | Not detectable | 5.7.5 |

| Removable footbed | | | | |
|--|---------------------|--------------|--|-----------------|
| Component | Description | Value | Norm requirements | EN 20345 |
| Anatomical, breathable textile and expanded polymer material | Thickness | 3,5±0,5 mm | N/A | 5.7.1 |
| | pH value | N/A | Not detectable | 5.7.2 |
| | Water absorption | Permeable | Permeable or ≥ 70mg/cm ² | 5.7.3 |
| | Water release | Permeable | Permeable or ≥ 80% | 5.7.3 |
| | Abrasion resistance | No damage | Dry: no holes till 25600 cycles humid: no holes till 12800 | 5.7.4.2 |
| | Chromium VI | N/A | Not detectable | 5.7.5 |

| Sole | | | | |
|-------------------------------------|---|--------------------|--|-----------------|
| Component | Description | Value | Norm requirements | EN 20345 |
| PU Midsole; | Sole thickness without profiles | 10 mm | ≥ 4 mm | 5.8.1.1 |
| | Profile height | 4 mm | ≥ 2,5 mm | 5.8.1.3 |
| | Tear resistance | 5,5 kN/m | ≥ 5 kN/m | 5.8.2 |
| TPU SKIN Outsole (High density TPU) | Abrasion resistance <ul style="list-style-type: none"> Relative volume loss | 38 mm ³ | ≤ 250 mm ³ | 5.8.3 |
| | Flexion resistance <ul style="list-style-type: none"> Notches increase after 30.000 cycles | 2,5 mm | ≤ 4 mm | 5.8.4 |
| | Hydrolysis <ul style="list-style-type: none"> Notches increase after 150.00 cycles | 3,5 mm | ≤ 6mm | 5.8.5 |
| | Outsole-Midsole detachment | N/A | ≤ 4 N/mm; (*) ≤ 3 N/mm with sole ripping | 5.8.6 |
| | (HRO) (Contact heat resistance 300°C) | N/A | No damage (melting, breaking) | 6.4.1 |
| | (FO) Fuel resistance (volume variations) | 0,5 % | ≤ 12% | 6.4.2 |

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