COFRA®
BORN TO WORK

# PRODUCT SHEET

# SERVIUS S1 ESD SRC

| | |
|---|---|
| **Prod. Ref.** | 10190-000 |
| **Safety cat.** | S1 ESD SRC |
| **Range of sizes** | 36 - 47 |
| **Weight (Sz. 8)** | 470 g |
| **Shape** | A |
| **Width** | 11 |

**Description:** White **ECOLORICA®** sandal, **Sany-Dry®** lining, anti-shock, slipping resistant, with low electrical resistance (ESD).

**Plus:** Footwear completely free from metal parts. Handwash with water and neutral soap to max 40°C. **COFRA SOFT ESD**, footbed made of scented PU, anatomic, soft and comfortable with low electric resistance; the shape of the bottom part guarantees impact energy absorption (shock absorber) and high grip; the upper part absorbs moisture and keeps the foot dry. High electrical conductibility. Stability of the conductive capability for extended period. Adjustable velcro.

**Suggested uses:** footwear for microelectronic industries. Recommendable in **ATEX** environments.

**Care and maintenance:** Clean after each use and dry off away from direct heat; treat the leather with a suitable shoe-polish. Avoid contact with aggressive chemicals or extreme temperature. Avoid immersion in sea water, lime water or cement mixed with water.

**Recommendation:** It is always necessary to wear socks made of natural fibers i.e. wool or cotton, because they provide the best performance with electrical conductivity. Avoid introducing any foreign body between foot and footbed of the footwear (i.e. insoles or similar items not equipped by the manufacturer), as they could make void the electrical properties the footwear have been conceived for. Do not undervalue the effect of ageing and contamination of the footwear: during time their electrical resistance can be subjected to alterations. It is always important to check the electrical properties of footwear through the use of special testing devices in electrostatic protected area (EPA), according to the European standard CEI EN 61340-5-1.

## MATERIALS / ACCESSORIES

| | | Clause EN ISO 20345:2011 |
|---|---|---|
| **Complete shoe** | **E.S.D. features** | CEI EN 61340-5-1 / 61340-4-3 |
| | **Toe cap:** non metallic **TOP RETURN** toe cap, impact resistant until 200 J | 5.3.2.3 |
| | and compression resistant until 1500 kg | 5.3.2.4 |
| | **Energy absorption system:** polyurethane low density and heel profile | 6.2.4 |
| **Upper** | **ECOLORICA®**, colour white<br>thickness 1,6 mm | 5.4.6 |
| **Quarter lining** | **Sany-Dry®**, breathable, antibacterial, abrasion resistant, colour white<br>thickness 1,2 mm | 5.5.3 |
| **Insole** | Conductive, absorbent, abrasion and flaking resistant | 5.7.4.1 |
| **Sole** | Dual-density polyurethane, with low electric resistance, directly injected in the upper: | 5.8.3 |
| | Outsole: white, high density, slipping resistant, abrasion resistant and hydrocarbons resistant, | 5.8.4 / 5.8.6 |
| | Midsole: white, low density, comfortable and anti-shock | 6.4.2 |
| | Adherence coefficient of the sole | 5.3.5 |

## SAFETY TECHNICAL SPECIFICATIONS

| Description | Unit | Cofra result | Requirement |
|---|---|---|---|
| Electric resistance of footwear to the ground | MΩ | **16** | 0.75 - 35 |
| Outsole superficial electric resistance | MΩ | **85** | N/A |
| Crosswise outsole electric resistance | MΩ | **35** | < 100 |
| Shock resistant (free high after shock) | mm | **14,2** | ≥ 14 |
| Compression resistance (free high after compression) | mm | **14** | ≥ 14 |
| Shock absorption | J | **> 28** | ≥ 20 |
| Water vapour permeability | mg/cmq h | **> 1,5** | ≥ 0,8 |
| Permeability coefficient | mg/cmq | **> 15** | > 15 |
| Water vapour permeability | mg/cmq h | **> 6,7** | ≥ 2 |
| Permeability coefficient | mg/cmq | **> 54,1** | ≥ 20 |
| Abrasion resistance | cycle | **> 400** | ≥ 400 |
| Abrasion resistance (lost volume) | $mm^3$ | **85** | ≤ 150 |
| Flexing resistance (cut increase) | mm | **2,5** | ≤ 4 |
| Interlayer bond strength | N/mm | **> 5** | ≥ 4 |
| Hydrocarbons resistance (ΔV = volume increase) | % | **+ 0,4** | ≤ 12 |
| SRA : ceramic + detergent solution – flat | | **0,40** | ≥ 0,32 |
| SRA : ceramic + detergent solution – heel (contact angle 7°) | | **0,38** | ≥ 0,28 |
| SRB : steel + glycerol – flat | | **0,18** | ≥ 0,18 |
| SRB : steel + glycerol – heel (contact angle 7°) | | **0,15** | ≥ 0,13 |

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