



USA Symbols

Static dissipative footwear (SD)



Protective non metallic toecap - Impact (I), compression (C)



Protective steel toecap - Impact (I), compression (C)



Puncture resistant non metallic midsole (PR)



Puncture resistant steel midsole (PR)

Table of additional requirements for special applications with appropriate symbols for marking.



| Requirement | Symbols |
|-----------------------------------------------------------------------------|------------|
| Penetration resistance | P |
| Electrical properties: Antistatic footwear | A |
| Resistance to inimical environments: Cold insulation of sole complex | CI |
| Energy absorption of seat region | E |
| Water resistant | WR |
| Metatarsal protection | M |
| Water penetration and absorption | WRU |
| Resistance to hot contact | HRO |
| Resistance to fuel oil | FO |

 Whole Footwear

 Upper

 Outsole

Safety footwear can be recognised by the following standard:



EN ISO 20345:2011
This international standard specifies basic and additional (optional) requirements for safety footwear used for general purposes. It includes, for example, mechanical risks, slip resistance, thermal risks, ergonomic behaviour.

The classification system used to identify the protection provided by the footwear is listed:

| Category | Additional requirements |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SB | The presence of a safety toecap providing protection against impact injury to the toes caused by falling objects. Level of protection provided is 200 joules. Prevention of compression injury to the toes if trapped under a heavy object. Level of this protection is 15kN. |
| SBP | As SB standard plus penetration resistance. |
| S1 | As SB standard plus closed seat region, antistatic properties, resistance to fuel oil and energy absorption of seat region. |
| S1P | As S1 standard plus penetration resistance. |
| S2 | As S1 standard plus water penetration and water absorption resistance. |
| S3 | As S2 standard plus cleated outsole and penetration resistance. |
| S4 | 200 joule toecap protection. All rubber or all polymeric footwear with antistatic properties. Resistance to fuel oil, energy absorption of seat region and closed seat region. |
| S5 | As S4 standard plus cleated outsole and penetration resistance. |

EN ISO 20347:2012

The International Standard specifies basic and additional (optional) requirements for occupational footwear that is not exposed to any mechanical risks (impact or compression).

| Category | Additional requirements |
|-----------|-------------------------------------------------------------------------------|
| 0B | Conforms to the basic requirements set out by the standard EN ISO 20347: 2012 |
| 01 | Closed seat region, antistatic properties, energy absorption of seat region |
| 02 | As 01 plus: Water penetration and absorption |
| 03 | As 02 plus: Penetration resistance, cleated outsole |
| 04 | Closed seat region, antistatic properties, energy absorption of seat region |
| 05 | As 04 plus: Penetration resistance, cleated outsole |

EN 61340-4-3:2002

Electrostatics - Standard test methods for specific applications - Footwear.

This part of EN 61340 describes a test method for determining the electrical resistance of footwear used in the control of electrostatic potential on people. This standard is suitable for use by the manufacturer of footwear as well as the end user.

Electrostatic conductive footwear

Footwear as tested by the method described in this standard with an electrical resistance of $< 1 \Omega \times 10^5$.

Electrostatic dissipative footwear

Footwear as tested by the method described in this standard with an electrical resistance of $> 1 \Omega \times 10^5$ and $< 1 \Omega \times 10^8$.

Floor/Footwear System used for primary grounding - ESD Standard EN 61340

Occupational and safety shoes standard - EN ISO 20344 to EN ISO 20347.

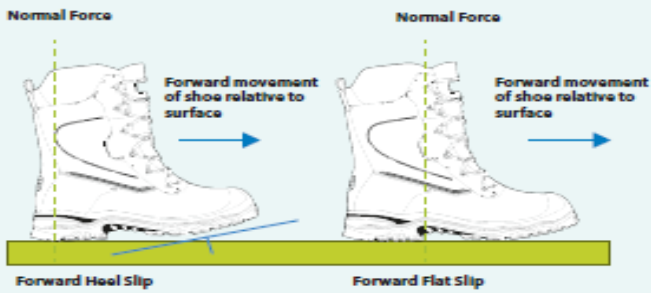
The level of charge generated is influenced by atmospheric humidity.

EN ISO 13287:2012

This European Standard specifies a method of test for the slip resistance of conventionally soled safety, protective and occupational footwear. It is not applicable to special purpose footwear containing spikes, metal studs or similar.

The item of footwear to be tested is put on a surface, subjected to a given normal force and moved horizontally relative to the surface. The frictional force is measured and the dynamic coefficient of friction is calculated.

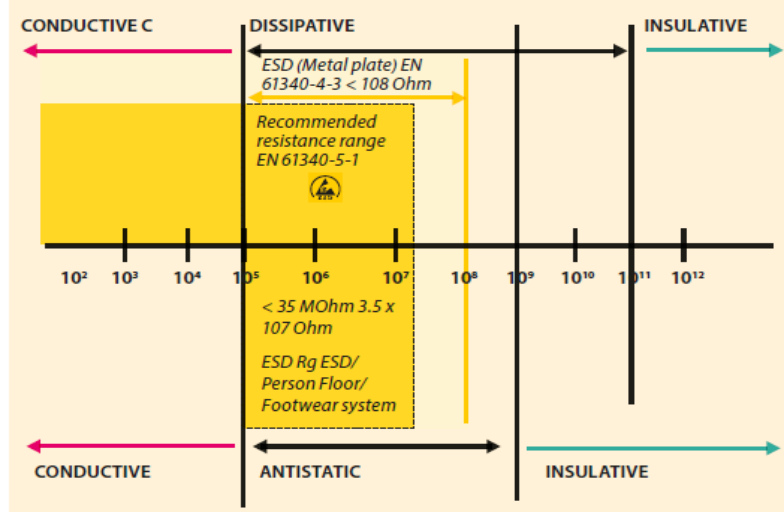
If the outsole passes both the ceramic tile test (SRA) and the steel floor test (SRB) it is marked as SRC.



EN ISO 13287:2012

| Marking Code | Test Surface | Coefficient of Friction (EN 13287) | |
|--------------|----------------------------------------------------|------------------------------------|-------------------|
| | | Forward Heel Slip | Forward Flat Slip |
| SRA | Ceramic tile with SLS* | ≥ 0.28 | ≥ 0.32 |
| SRB | Steel floor with Glycerol | ≥ 0.13 | ≥ 0.18 |
| SRC | Ceramic tile with SLS* & Steel floor with Glycerol | ≥ 0.28 ≥ 0.13 | ≥ 0.32 ≥ 0.18 |

* Water with 5% Sodium Lauryl Sulphate (SLS) solution



ASTM F2413-11

Standard specification for performance requirements for protective (safety) toe cap footwear.

The specification contains performance requirements for footwear to protect workers feet from the following hazards by providing;

- I** Impact resistance (I) for the toe area of footwear.
- C** Compression resistance (C) for the toe area of the footwear.
- Mt** Metatarsal impact protection (Mt) that reduces the chance of injury to the metatarsal bones at the top of the foot.
- Cd** Conductive properties (Cd) which reduce hazards that may result from static electricity buildup; and reduce the possibility of ignition of explosives and volatile chemicals.
- EH** Electric hazard protection (EH), to protect the wearer when accidental contact is made by stepping on live electric wires.
- SD** Static dissipative properties (SD) to reduce hazards due to excessively low footwear electrical resistance that may exist where SD footwear is required.
- PR** Puncture resistance (PR) footwear devices.