TABLE I		
Symbol	**Requirements / Specifications**	**Required performance**
P	Perforation resistance	≥ 1100 N
E	Energy absorption of seat region	≥ 20 J
A	Antistatic footwear	0.1 to 1000 MΩ
C	Conductive footwear	< 0.1MΩ
See EN 50321	Electrically insulating footwear	
WRU	Water penetration and absorption of upper	≥ 60 min.
CI	Cold insulation of sole complex	At - 17° C *
HI	Heat insulation of sole complex	At 150° C
HRO	Resistance to hot contact of the outsole	At 300° C
FO	Resistance of sole to fuel oil	≤ 12 %
WR	Water-resistant footwear	≤ 3 cm2
M	Metatarsal protection (for EN ISO 20345 only)	≤ 40 mm (size 41/42)
AN	Ankle protection	≤ 10 kN
CR	Cut resistance of the upper	≥ 2.5 (index)
SRA	Surface: ceramic tile floor Lubricant: water and detergant solution	min. 0,28 min. 0,32
SRB	Surface: smooth steel Lubricant: glycerol	min. 0,13 min. 0,18
SRC	SRA + SRB	

*

- Scandia shoes, boots, and footwear comply with CE and EN standards.
- Cold insulation has been tested to -17°C in accordance with the requirements in EN ISO 20345:2011 p.6.2.3.2.

Maximum grip of the sole is normally achieved after the new footwear has undergone a certain "running-in" period (similar to that of car tyres), to remove residues of silicone and releasing agents as well as other physical or chemical surface irregularities. The resistance to slipping can also change depending on the state of wear of the sole. Compliance with the specifications, however does not guarantee the absence of slipping in any condition.

TABLE II		
Additional requirements	**EN ISO 20345**	**EN ISO 20347**
	S1 S2 S3	**01 02 03**
Closed seat region. Antistatic properties (A). Energy absorption of seat region (E). Resistance of the sole to fuel oil (FO) (for EN ISO 20345 only)	X X X	X X X
Closed seat region. Antistatic properties (A). Energy absorption of seat region (E). Water penetration and absorption of upper (WRU).	X X	X X
Closed seat region. Antistatic properties (A). Energy absorption of the seat region (E). Water penetration and absorption of upper (WRU). Perforation resistance (P), cleated outsole.	X	X

*** Perforation of the bottom :**
Footwear with SB-P, S1P, S3, OB-P, O1-P, O3 marking.
N.B.: The resistance to perforation, in the case of synthetic composite plates, tends to drop with the diameter of the perforating object. On the other hand this type of lamia has ergonomic advantages (e.g., greater protective surface, flexibility, isolation, absorption of humidity, and impact). Its selection must be based on the risk assessment linked to the real work conditions.

The puncture resistance of this shoe was assessed in the laboratory by means of a 4.5 mm diameter nail with a truncated-conical tip and a force of 1,100 N. Greater puncture forces and nails with a lower diameter increase the risk of perforation.

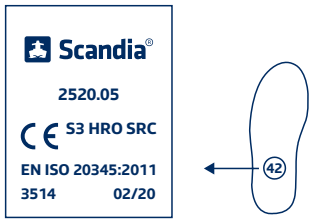
In these cases, alternative preventive measures must be considered. Currently there are two types of anti-perforation inserts in the shoes (PPE). These may either be metallic or non-metallic. Both types of inserts satisfy the minimum puncture resistance requirements of the standard indicated on these shoes, but each of them has different advantages and disadvantages:

Metallic anti-perforation insert:
Puncture resistance is less affected by the shape of the sharp object (i.e. the diameter, shape and pointed shape), but due to limitations of the required size for the production of the footwear, it does not cover the entire surface of the lower part of the shoe.

Non-Metallic anti-perforation insert:
It may be lighter, more flexible and provide greater coverage when compared to the metal insert, but the puncture resistance may vary depending on the shape of the sharp object (i.e. the diameter, shape and, pointed shape).

Figure I

1. Scandia: Identification mark of manufacturer www.scandiagear.com
2. 42 (e.g.) shoe size
3. 2520.05 (e.g.) model identification code
4. CE marking certifying conformity with the standard: symbol of PPE with categories
5. EN ISO 20345:2011 (e.g.) reference standard
6. 02/20 (e.g.) Month/year of manufacture
7. 3514 (e.g.) Production batch



Disclaimer

Scandia Gear is not liable for damages that result from the improper use of these products.

Made with 100% recycled paper

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SAFETY FOOTWEAR

CE

User's Instruction

www.scandiagear.com

ROTTERDAM SINGAPORE HOUSTON DUBAI

MARITIME OUTFITTERS since 1974

Scandia®

SAFETY **FOOTWEAR**

Thank you for choosing our safety footwear

Read carefully before using your footwear

Footwear for professional use should be considered as an item of Personal Protection Equipment (PPE). It is subject to the requirements of Directive 89/686/EEC and / or EU Regulation 2016/425 concerning Personal Protective Equipment (PPE) which envisages obligatory CE marking. Our safety footwear is Class II Personal Protection Equipment which has been awarded CE or EU certification by the Notified Body :

CIMAC No. 0465, Corso G. Brodolini,19 - Vigevano PV Italy.
RICOTEST NO. 0498, Via Tione, 9 - 37010 Pastrengo VR Italy.

The EU Declaration of Conformity (DOC) can be obtained through following link : www.scandiagear.com

Materials and manufacture

All the materials used, whether natural or synthetic, and all manufacturing techniques applied have been selected to meet the requirements of the above European technical standard in terms of safety, ergonomics, comfort, solidity, and innocuousness.

Identifying and selecting the appropriate model

Employers are responsible by law for the suitability of the PPE used for the type of risk present in the workplace and the respective ambient conditions. Before use, make sure that the specifications of the chosen model correspond to the specific requirements for use.

Protection classes and risk levels

Our safety footwear is designed and manufactured to ensure suitable protection, of the highest possible level, for the type of risk in question. All our footwear have been type-tested based on the methods described in EN ISO 20344:2011. Our footwear also complies with the basic requirements of one of the following standards:

EN ISO 20345:2011 - Specifications for safety footwear for professional use.

In which "safety footwear for professional use" is defined as footwear with characteristics developed to protect the wearer against injuries that may derive from accidents in the work sectors for which the footwear was designed, equipped with toe-caps designed to protect against impact (200J) and against compression (15kN).

EN ISO 20347:2012 - Specifications for occupational footwear for professional use.

In which "occupational footwear for professional use" is defined as footwear with characteristics developed to protect the wearer against injuries that may derive from accidents in the work sectors for which the footwear was designed.

As well as the compulsory basic requirements **(SB for EN ISO 20345, OB for EN ISO 20347)**, envisaged by the standard, other characteristics may be necessary for both safety footwear and occupational footwear. **Additional requirements** for special applications are marked with symbols (see **table I**) and/or classes (see **table II**). The classes are the most common combinations of basic and additional requirements.

Meaning of marking (see figure I)

The symbols and classes marked on our products enable you to choose the right type of PPE for the risk in question. Our footwear is not suitable for protecting against risks not indicated in this information sheet, with particular reference to those within the scope of Class III Personal Protection Equipment.

Recommended uses

Industry in general, light engineering, construction, agriculture, warehouses, public bodies, and the agrofood sector.

Preliminary checks and use: warnings

Safety footwear meets the relevant safety specifications only if worn properly and in perfect condition. Before use visually inspect to ensure perfect condition and try the footwear on. If it is not in sound condition and shows visible signs of damage such as broken stitching, excessive wear on the sole, breaks or soiling, replace it.

Use and maintenance

For correct use of your footwear:

- Select the correct model according to the specific requirements of the workplace and the respective ambient/ atmospheric conditions
- Choose the right size, preferably by trying the footwear on
- When not in use, keep the footwear in a dry, clean, ventilated place
- Check that the footwear is in good condition before each use
- Prior to first worksite use, be sure to lightly roughen the bottoms and sides of your safety shoes soles by rubbing them over a gritty surface
- Clean your footwear regularly with brushes, shop-cloths, rags, etc.: Cleaning intervals depend on the conditions in the workplace
- Periodically treat the upper with suitable polish, wax, or silicone based, etc.
- Do not use aggressive products such as petrol, acids, and solvents, which may adversely affect the quality, safety, and durability of the PPE
- Do not dry your footwear next to or in direct contact with heaters, radiators, and other sources of heat
- Changes or modifications to the environmental conditions (for example, extreme temperatures or humidity) can significantly reduce the performance of the footwear

Storage

To prevent the risk of deterioration, safety footwear must be transported and stored in its original pack, in a place which is dry and not too hot. New footwear, if taken from the original, undamaged pack, can generally be considered to be suitable for use. In recommended storage conditions, the footwear retains its suitability for use for a long time, so it is impractical to indicate a "use by" date.

However, the obsolescence date of a footwear is generally estimated in:

- 10 years after the date of manufacturing for shoes with upper leather, rubber and thermoplastic materials (such as SEBS etc) and EVA
- 5 years after the date of manufacturing for shoes including PVC
- 3 years after the date of manufacturing for shoes including PU and TPU

Additional information

Antistatic footwear should be used if it is necessary to minimise electrostatic build-up by dissipating electrostatic charges, thus avoiding the risk of spark ignition of, for example, flammable substances and vapours, and if the risk of electric shock, from any electrical apparatus or live parts, has not been completely eliminated. It should be noted, however, that antistatic footwear cannot guarantee an adequate protection against electric shock as it introduces only a resistance between foot and floor. If the risk of electric shock has not been completely eliminated, additional measures to avoid this risk are essential. Such measures, as well as the additional tests mentioned below, should be a routine part of the accident prevention program at the workplace.

Experience has shown that, for antistatic purposes, the discharge path through a product should normally have an electrical resistance of less than 1 000 MΩ at any time throughout its useful life. A value of 100 kΩ is specified as the lowest limit of resistance of a product when new, in order to ensure some limited protection against dangerous electric shock or ignition in the event of any electrical apparatus becoming defective when operating at voltages of up to 250 V. However, under certain conditions, users should be aware that the footwear might give inadequate protection and additional provisions to protect the wearer should be taken at all times.

The electrical resistance of this type of footwear can be changed significantly by flexing, contamination or moisture. This footwear will not perform its intended function if worn in wet conditions. It is therefore necessary to ensure that the product is capable of fulfilling its designed function of dissipating electro-static charges and also of giving some protection during the whole of its life. The user is recommended to establish an in-house test for electrical resistance and use it at regular and frequent intervals.

Removable insock

If the safety footwear is equipped with a removable insock, the certified ergonomic and protective functions refer to the footwear complete with its insock. Always use the footwear with its insock in place! Replace the insock only with an equivalent model from the original supplier. Safety footwear without removable insock must be used without insock, because the introduction of an insock could adversely affect the protective functions.