

Safety and Protective Footwear

This type of footwear protects the wearer's toes against risk of injury from falling objects and crushing when worn in work environments where potential hazards occur.

Safety footwear can be recognised by the safety standard:

ENISO20345:2011 - Safety Footwear

ENISO20346:2004 - Protective Footwear

ENISO20349:2010 - Personal protective footwear - Footwear protecting against molten metal splash

ENISO15090:2006 - Footwear for Firefighters

The following table shows the European standard:

	EUROPE
Standard	ISO EN 20345/6/7: 2011
Toe Cap Impact Resistance	200 Joules
Toe Cap Compression	15000 Newton of compression force
Penetration Resistance	Minimum force 1100N

Slip Resistance:

Making Symbols and Specifications			
Marking	Footwear Slip Resistant on:	Minimum Coefficient of Fiction by EN ISO 13287:2007	
		Forward heel slip	Forward Flat Slip
SRA	Ceramic tile with SLS (1)	0.28	0.32
SRB	Steel with glycerol	0.13*	0.18*
SRC	Ceramic tile with SLS (1) and steel with glycerol	0.28	0.32
		0.13*	0.18*
* Lower requirements are permitted to the end of 2008: heel 0.12 and flat 0.16			
(1) Water with 0.5% sodium lauryl sulphate			

Size Chart:

UK	2	3	4	5	6	6.5	7	8	9	10	10.5	11	12	13
Europe	35	36	37	38	39	40	41	42	43	44	45	46	47	48

ADDITIONAL PROPERTY CODE	ADDITIONAL PROPERTY CODE DESCRIPTION
FO	Fuel Oil Resistant Outsole
HRO	Heat Resistant Outsole to 300°C
P	Penetration Resistance: 1100 Newtons
C	Conductive: When measured in accordance with ENISO20344:2011, 5.10, after conditioning in a dry atmosphere (ENISO20344:2011, 5.10.3.3a), the electrical resistance shall not be great than 100kΩ.
A	Conductive: When measured in accordance with ENISO20344:2011, 5.10, after conditioning in a dry atmosphere (ENISO20344:2011, 5.10.3.3a) and b)), the electrical resistance shall be above 100kΩ and less than or equal to 1000mΩ.
CI	Cold Insulation of the sole complex: 30 minutes at -17°C, change in the temperature up to 10°C.
HI	Heat Insulation of the sole complex: 30 minutes at 150°C, change in temperature up to 22°C.
E	Energy absorption of seat region: Not less than 20 Joules
WRU	Water Resistance Upper

TYPE CLASSIFICATION	TYPE CLASSIFICATION DESCRIPTION
SB	ENISO20345:2011- Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newton's.
S1	ENISO20345:2011- Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newton's. Closed seat region (Fully enclosed heel), Antistatic properties, and Energy absorption of seat region.
S2	ENISO20345:2011- Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newton's. Closed seat region (Fully enclosed heel), Antistatic properties, and Energy absorption of seat region, water penetration and water absorption resistance.
S3	ENISO20345:2011- Safety Footwear. Toe protection 200 Joules, Compression resistance, 15000 Newton's. Closed seat region (Fully enclosed heel), Antistatic properties, and Energy absorption of seat region, water penetration and water absorption resistance, penetration resistance and cleated outsole.
S4	ENISO20345:2011- Safety Footwear. Toe protection 200 Joules, all rubber or all polymeric footwear with antistatic properties. Energy absorption of seat region.
S5	ENISO20345:2011- Safety Footwear. Toe protection 200 Joules, all rubber or all polymeric footwear with antistatic properties. Energy absorption of seat region, plus penetration resistance. Cleated outsole.