

TECHNICAL DATA SHEET

Name

Code

ENERGY GREY

11270 S1PL FO SR

Product Range

Standard

EN ISO

Weight

Size range

Mondopoint

Packaging



S1PL FO SR

20345:2022

500 grams
(1 shoe in size 42)

35 <> 50

10

6 pairs/carton
(same size)

TECHNICAL SPECIFICATIONS



SOLE

SOLE FEATURES



Through detailed analysis of worker needs across various industries, the PANDA SAFETY R&D team has developed a groundbreaking sole. The TriDuraFlex® sole, combining three distinct materials, optimizes comfort, stability, and grip.



PROTECTIVE ELEMENTS

UPPER

LINING

FOOTBED



Made from a high-strength aluminum alloy used in aerospace, this safety toe cap protects against impacts up to 200 Joules and compressions up to 15 Kilonewtons.



Protective plate made from multi-layer polyester, 40% lighter than steel, yet equally resistant up to 1,100 Newtons. It is non-magnetic, insulating and hypoallergenic.



Made from high-tenacity polyamide yarns, this fabric provides tear and abrasion resistance while offering the textile's lightness and breathability.



Abrasion-resistant and breathable lining that maintains the ideal microclimate inside the footwear.



Advanced removable insole crafted from polyurethane and polyether, providing antistatic properties, unbeatable cushioning, moisture management, and continuous air circulation.

EXTRA



SAFETY TECHNICAL SPECIFICATIONS

Description	Measurement Unit	Requirement	Test Result
TOE CAP: Impact resistance	mm	≥ 14	14,5
TOE CAP: Compression resistance	mm	≥ 14	20
ANTI-PUNCTURE PLATE: Penetration resistance	N	≥ 1.100	pass
FOOTWEAR: Antistatic properties (in wet condition)	MΩ	≥ 0,1	13,5
FOOTWEAR: Antistatic properties (in dry condition)	MΩ	≤ 1.000	300
UPPER: Water vapour permeability	mg/cm2*h	≥ 0,8	9,8
UPPER: Water vapour coefficient	mg/cm2	≥ 15	78,7
UPPER: Water penetration after 60 min	g	≤ 0,2	-
UPPER: Water absorption after 60 min	%	≤ 30	-
INTERNAL LINING: Water vapour permeability	mg/(cm2*h)	≥ 2,0	48,3
INTERNAL LINING: Water vapour coefficient	mg/cm2	≥ 20	386,8
OUTSOLE: Abrasion resistance	mm3	≤ 150	12
OUTSOLE: Energy absorption of seat region (E)	J	≥ 20	35
OUTSOLE: Flexural resistance	mm	≤ 4	0
OUTSOLE: Interlayer bond strength	N/mm	≥ 4	7,7
OUTSOLE: Resistance to fuel oil (FO)	%	≤ 12	0,9

ADDITIONAL FEATURES

Test	Measurement Unit	Requirement	Results
Electrical resistance for ESD footwear <small>Requirements IEC 61340-5-1:2016</small>	MΩ	≤ 1,00	-
Resistance to hot contact (HRO)	-	outsoles shall not melt and develop any cracks when bent	-
Cold insulation of outsole complex (CI) 30min/-17°C <small>(temperature decrease on the upper surface of the insock)</small>	°C	≤ 10	-
Heat insulation of outsole complex (HI) 30min/150°C	°C	≤ 22	-
Water resistance (WR) <small>(Total wetted area inside the footwear)</small>	cm2	after 80 min.	-
Electric hazard resistance (EH) 18kV / 60 Hz <small>(Electric flux)</small>	MΩ	≤ 100	-

STORAGE, CARE AND MAINTENANCE

- PANDA SAFETY footwear should be stored in original packaging, storage temperature should not exceed 35°C, humidity should be less than 80% and without the influence of direct sunlight.
- Sandals, shoes and boots should be cleaned after each use; dry off the shoes, not in proximity to or in direct contact with stoves or other sources of heat.
- Carry out the periodic treatment of the uppers with suitable products containing wax, grease, silicone, etc.
- Avoid contact with aggressive chemicals and extreme temperatures.
- Verify the good state before each use.

SOLE DESIGN AND PERFORMANCE



ENERGY ABSORPTION COEFFICIENT IN THE HEEL AREA				
0	MINIMUM VALUE REQUIRED	20	TEST RESULT	30
				0,42

INDUSTRIES

