



CLIENT: **PANDA SPORT SRL**
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MMA

FOR THE ATTENTION OF: Luigi Gargiullo

DC 20505/E

SAMPLING: done by the Applicant

TEST REPORTS: this document is based on Test Reports no.: 3934616/E + 4134529/E + 4135108/E + 4230935.01/E + 4331001/E + 4339019/E + 4344069/E + 4404057/E + 4407042/E + 4416031/E.

SAMPLES: Safety footwear, as follows:
- "**LX-9519 S3L FO AN SR RITMO**" sizes 37, 42 and 47;
- "**LX-2519 S3L FO SR REGATA**" size 42.

See the complete description on the next page.

REQUEST: Laboratory tests in accordance with EN ISO 20345:2022+A1:2024 for the aim of the Certification (Regulation (EU)2016/425).

NOTE:
These articles are already certified in accordance with EN ISO 20345:2011 with EU no. 189211401/OE and 1892110402/OE.

OUTCOME:  **PASS**

Notes:

All results refer exclusively to the tested materials as received.

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Positive results of a test report do not imply that the tested product is "certified" or "approved" by RCT.

Comments and interpretations are of subjective nature and not part of the Test Report.

Test carried out by qualified partner lab ISO 17025.

* Test not accredited by Accredia

Conformity assessment criterion: the result is considered compliant until the value falls within or coincides with the specification limit.

Unless otherwise indicated, the test conditions correspond to the reference standard.

M22 rev08 del 01/01/2023



Description:

article: "LX-9519 S3L FO AN SR RITMO";

model: B (ankle boot);

fastening system: by means of laces;

processing: direct injection;

outsole: light grey TPU marked "MADE IN ITALY ANTISTATIC OIL RESISTANT" (POL7070), with size indication;

midsole: black foam PU (POL1001-POL1002);

upper: black split leather idro, declared thickness 1,8-2,0 mm (PEL0500290) with grey insert (MTO2110070);

collar: black coated fabric (MTO2010090), matched with foam material;

tongue/bellows: black coated fabric (MTO2010090), centrally lined and padded;

vamp lining: dark grey felt (MRI305);

rear/quarter lining: red three-dimensional fabric (MFO2010020);

heel-grip: anthracite grey felt (MRI301);

ankle protection: polymeric material, diameter 60 mm marked "Panda safety Anti-impact Ankle protection" and padded with white non-woven material and with foam approx. Thickness 2,2 mm (code AC20020);

insole: white multi-layered fabric marked in red "TESSILTOSCHI K18.0/2 ZERO Type PL" (SSOP202), which also serves as penetration resistant insert;

penetration resistant insert: see insole;

heel seat lining: grey foam material matched with black fabric (code SFIF169042);

toecap: black polymeric material "143 ETS Ro" (PUN21008).

article: "LX-2519 S3L FO SR REGATA".

This article differs from the main model in the following features:

model: A (low shoe).

Materials tested for Azo-dyes content:

PEL0500290

MTO2110070

MRI301

MTO2010090

MRI305

MFO2010020

SFIF169042



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
Requirement standard (method standard)						
EN ISO 20345:2022 + A1 2024 (EN ISO 20344:2021 + A1 2024)	Safety footwear, class I					
LX-9519 S3L FO AN SR RITMO						
5.2	Design					
5.2.1	Design	-	A, B, C, D, E (figure 4)	B		
5.2.2 (6.2)	Height of upper	mm	37- 38 $\geq$ 105 41-42 $\geq$ 113 $\geq$ 45 $\geq$ 121	115	135	143
5.2.3	Heel area (only B, C, D, E) In the heel area, (10 $\pm$ 2)% of the total length and below the minimum height given in Table 8 for design A		Closed	Pass	Pass	Pass
			No holes	Pass	Pass	Pass
5.3	Whole footwear					
5.3.1	Constructional performance					
5.3.1.1	Construction - with insole: cannot be removed without damaging the footwear - without insole: a permanently attached insock is present and cannot be removed without damaging the footwear	-	pass	Pass	Pass	Pass
			pass	-	-	-
5.3.1.2 (5.2)	Upper/outsole bond strength (if not stitched)	N/mm	$\geq$ 4 (if sole tear $\geq$ 3)	4,5 (60% clear detachment 40% midsole delamination)	4,5	4,8



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
5.3.2	Toe protection					
5.3.2.1	Toecaps Toecaps cannot be removed without damaging the footwear	-	pass	Pass	Pass	Pass
	A vamp lining or an element of the upper that serves as lining shall be present	-	pass	Pass	Pass	Pass
	Toecaps fulfil the requirements given in ISO 22568-1/2:2019 p. 4.2.	-	pass	Pass	Pass	Pass
	Length of the edge covering from the back edge of the toecap:					
	- beneath the toecap	mm	≥ 5	6,0	6,0	6,0
	- opposite direction	mm	≥ 10	10,0	10,0	10,0
5.3.2.2 (5.3.2.1) EN ISO 22568-1-2:2019 p 5.2.1	Internal length of toecaps - right - left	mm	Size length 37- 38 ≥ 36 41- 42 ≥ 39 ≥ 45 ≥ 42	Pass Pass	Pass Pass	Pass Pass
5.3.2.3 (5.3.2.2) EN ISO 22568-1-2:2019 p 5.2.2	Width of toecap flange - metallic - non metallic	mm	≤ 12 ≤ 15	- Pass	- Pass	- Pass
5.3.2.5 (5.6.2)	Behaviour of toe caps			TR in accordance with EN ISO 22568-2:2019 verified		
5.3.2.6 (5.4)	Impact resistance Clearance under the toecap after impact (200 J): - right - left	mm	Size 37- 38 ≥ 13,0 41- 42 ≥ 14,0 ≥ 45 ≥ 15,0	15,0 14,5	18,0 17,5	19,0 20,0
	The toecap shall not develop any cracks passing through the material		pass	pass	pass	pass
5.3.2.7 (5.5)	Compression resistance Clearance under the toecap at a compression load of 15 kN: - right - left	mm	Size 37- 38 ≥ 13,0 41- 42 ≥ 14,0 ≥ 45 ≥ 15,0	17,0 15,5	21,5 20,5	22,0 22,5
	The toecap shall not develop any cracks passing through the material		pass	pass	pass	pass



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
5.3.4 (5.1)	Specific ergonomic features Right Left			Pass Pass	Pass Pass	Pass Pass
5.3.5.2 (5.14) [EN ISO 13287:2019]	Slip resistance Mandatory for "conventional" outsole ceramic tile floor with NaLS Right A - forward heel slip (7°) B - backward forepart slip (7°) Left A - forward heel slip (7°) B - backward forepart slip (7°)	- - - -	≥ 0,31 ≥ 0,36 ≥ 0,31 ≥ 0,36	0,36 0,37 0,36 0,37	0,34 0,37 0,34 0,37	0,36 0,38 0,36 0,38
6.2.10 (5.14) [EN ISO 13287:2019]	Slip resistance (SR) optional ceramic tile floor with glycerine Right C – forward heel (7°) D – backward forepart (7°) Left C – forward heel (7°) D – backward forepart (7°)	- - - -	≥ 0,19 ≥ 0,22 ≥ 0,19 ≥ 0,22	0,27* 0,22* 0,27* 0,22*	0,28* 0,22* 0,28* 0,22*	0,27* 0,23* 0,27* 0,23*
				* after simulation of walking by slight abrasion		
5.4	Upper			PEL0500290		
5.4.3 (6.3) EN ISO 3377-2:2016 EN ISO 4674-1:2016/B	Tear strength - leather - coated fabric and textile	N N	≥ 120 ≥ 60	379 -	379 -	379 -
5.4.6 (6.6- 6.7- 6.8) ISO 14268:2012	Water vapour permeability Water vapour coefficient	mg/(cm ² ·h) mg/cm ²	≥ 0,8 ≥ 15	1,5 19,2	1,5 19,2	1,5 19,2
(6.2.3)	Non-water vapour permeable material maximum area		≤ 10	0	0	0



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
5.4.1	Collar and other upper materials present above the height given in table 8			MTO2010090		
5.5.2 (6.3) EN ISO 3377-2:2016	Tear strength - leather	N	≥ 30	-		
EN ISO 4674-1:2016/B	- coated fabric and textile	N	≥ 15	26,2	26,2	26,2
5.5.3 (6.12)	Abrasion resistance - 25 600 cycles dry - 12 800 cycles wet	- -	no hole development on the wearing surface	pass pass		
5.5	Vamp lining			MRI305		
5.5.2 (6.3) EN ISO 3377-2:2016	Tear strength - leather	N	≥ 30	-		
EN ISO 4674-1:2016/B	- coated fabric and textile	N	≥ 15	90	88	88
5.5.3 (6.12)	Abrasion resistance - 25 600 cycles dry - 12 800 cycles wet	- -	no hole development on the wearing surface	Pass Pass		
5.5.4 (6.6- 6.7- 6.8) ISO 14268:2012	Water vapour permeability	mg/(cm ² ·h)	$\geq 2,0$	40,4	39,7	39,3
	Water vapour coefficient	mg/cm ²	≥ 20	323,4	317,7	314,5
5.5	Quarter lining			MFO2010020		
5.5.2 (6.3) EN ISO 3377-2:2016	Tear strength - leather	N	≥ 30	-	-	-
EN ISO 4674-1:2016/B	- coated fabric and textile	N	≥ 15	33	33	33
5.5.3 (6.12)	Abrasion resistance Quarter lining: - 25 600 cycles dry - 12 800 cycles wet	- -	no hole development on the wearing surface	Pass Pass		
5.5.4 (6.6- 6.7- 6.8) ISO 14268:2012	Water vapour permeability	mg/(cm ² ·h)	$\geq 2,0$	89,3		
	Water vapour coefficient	mg/cm ²	≥ 20	714,2		



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
5.5	Heel-Grip			MRI301		
5.5.2 (6.3) EN ISO 3377-2:2016 EN ISO 4674-1:2016/B	Tear strength - leather - coated fabric and textile	N N	≥ 30 ≥ 15	- 15,8	- 15,8	- 5,8
5.5.3 (6.12)	Abrasion resistance Quarter lining: - 25 600 cycles dry - 12 800 cycles wet Seat region lining: - 51 200 cycles dry - 25 600 cycles wet	- - - -	no hole development on the wearing surface no hole development on the wearing surface	pass pass pass pass		
5.6	Tongue			MTO2010090 See Collar 5.4.1		
5.7	Insole			SSOP202		
5.7.1 (7.1)	Thickness	mm	≥ 2,0	5,0	5,0	5,0
5.7.3 (7.2)	Water absorption	mg/cm ²	≥ 70	115	119	117
	Water desorption	%	≥ 80	100	100	100
5.7.4.1 (7.3)	Abrasion resistance "Veslic" Minimum final thickness of the original thickness after 400 cycles	%	≥ 66	100	100	100
5.7	Insock			SFIF169042		
5.8	Outsole			POL7070 + POL1001-POL1002		
5.8.2	Design Outsoles with a cleat height less than 2,5 mm are regarded as uncleated	-	Cleated / uncleated	Cleated		
5.8.2.1 (8.2.3)	Thickness d ₁ - non-cleated outsole - cleated outsole Thickness d ₄ - thickness of the full outsole material of a mounted outsole with cavities	mm mm mm	≥ 6 ≥ 4 ≥ 2	7,4 -	- 7,2 -	7,3 -



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
5.8.2.2 (8.2.2 fig.36)	Cleated area	-	Cleats shall be open to the side	pass	pass	pass
	Ratio between sole length and length of the cleated zone:					
	- front	-	$\geq 0,45$	0,53	0,53	0,52
	- back	-	$\geq 0,25$	0,36	0,35	0,36
5.8.2.3 (8.2.3)	Cleat height d_2	mm	$\geq 2,5$	4,2	4,2	4,3
ISO 2781:2018	Outsole density (method A)	g/cm ³		1,20		
5.8.3 (8.3) ISO 34-1:2015 (method A)	Tear strength - material with density $> 0,9$ g/cm ³ - material with density $\leq 0,9$ g/cm ³	kN/m kN/m	$\geq 8,0$ $\geq 5,0$	33,2	33,2 -	33,2
5.8.4 (8.4) ISO 4649:2017 (method A)	Abrasion resistance					
	- material with density $> 0,9$ g/cm ³	mm ³	≤ 150	68	68	68
	- material with density $\leq 0,9$ g/cm ³	mm ³	≤ 250	-	-	-
	Appearance of hole(s) in the outer layer of the sole material	-	Yes/No	No	No	No
5.8.5 (8.6)	Flexing resistance - cut growth after 30 000 flex cycles - spontaneous cracks	mm -	≤ 4 not present (with some exceptions)	3,0 0	3,5 0	3,0 0
5.8.7 (5.2)	Interlayer bond strength	N/mm	$\geq 4,0$ ($\geq 3,0$ in case of sole tear)	10,7	12,4	15,5 (midsole delamination)
6	Additional requirements					
6.2	Whole footwear					
6.2.1	Perforation resistance			SSOP202		
6.2.1.1.3 (5.10.4.2.2)	Non-metallic insert (PL) 1100 N - right	-	No perforation and no separation of the layers shall occur ("tent effect") throughout the test	pass	pass	pass
	- left	-		pass	pass	pass
				pass	pass	pass
				pass	pass	pass
				pass	pass	pass



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
6.2.1.2	Construction - the perforation resistant insert cannot be removed without damaging the footwear;	-	pass	pass	pass	pass
	- the metallic inserts shall lie beneath the flange of the toecap;	-	pass	-	-	-
	- Non- metallic inserts incorporated as a layer into the outsole shall not get thinner in any point;	-	pass	-	-	-
	- non-metallic inserts that also serves as an insole may lie above the flange of the safety toecap and shall not get thinner in any point, apart from the following exception: where they are covering the toecap flange, maintaining a minimum thickness of 2mm in the skived area.	-	pass	pass	pass	pass
6.2.1.3 (5.8)	Dimensions Maximum distance between the edge of the insert to the feather edge of the last (N.A. per inserti tessili che fungono da sottopiede):					
	whole circumference, heel excluded:	mm	≤ 6,5			
	- right					
	- left	mm	≤ 17			
	heel:					
	- right					
	- left					
	Metallic inserts:					
	Number of holes					
	Diameter of holes					
	Holes shall not lie in the shaded area 1 of figure 15 (Holes in the shaded area 2 are disregarded)					
	Non-metallic insert	-	No holes			
6.2.1.4	Perforation-resistant inserts			TR in accordance with EN ISO 22568-4:2021 verified		



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
6.2.2	Electrical properties					
6.2.2.2 (5.13)	Antistatic footwear (A) After conditioning in: Dry atmosphere 7days/30% r.h. - right - left	MΩ	> 0,1 and ≤ 1 000	350 410	380 370	400 365
	Wet atmosphere 7days/85% r.h. - right - left	MΩ	> 0,1 and ≤ 1 000	9,6 7,5	10 9,0	8,4 8,0
6.2.4 (5.17)	Energy absorption of seat region (E) - right - left	J	≥ 20	42 42	44 43	40 43
6.2.7 (5.21) (5.22)	Ankle protection (AN) The ankle protection fully covers the minimum protection area	-	Yes/No	Yes	Yes	Yes
	Shock absorption capacity External (mandatory) - mean value of the 6 transmitted forces	kN	≤ 10	7,9	7,7	7,6
	- highest obtained single value	kN	≤ 15	8,5	8,3	8,1
	Internal (optional) - mean value of the 6 transmitted forces	kN	≤ 10	-	-	-
	- highest obtained single value	kN	≤ 15	-	-	-
6.3 (6.13)	Upper- Water penetration and absorption (WPA)			PEL0500290		
	- water penetration after 60 min. - water absorption after 60 min.	g %	≤ 0,2 ≤ 30	0 2,2		
	Non-functional and decorative stitching and perforations, if used within the area defined in 5.4.1.1, shall fulfil the requirements of 6.2.5 (WR)	-	pass		-	



References	Tests	Measuring unit	Requirements	Results		
				37	42	47
6.4	Outsole					
6.4.2 (8.8.2.1) ISO 1817:2015 p.8.3	Resistance to fuel oil (FO) - increase in volume If the test piece shrinks by more than 1% in volume or increases in hardness by more than 10 Shore A hardness units:	%	≤ 12	2,2	2,2	2,2
(8.8.2.2) ISO 4643:1992 Annex C	Ross- flex (150 000 cycles/- 5°C) after conditioning 22h/isooctane - cut growth	mm	≤ 6	-	-	-
LX-2519 S3L FO SR REGATA						
5.2	Design					
5.2.1	Design	-	A, B, C, D, E (figure 4)	A		
5.2.2 (6.2)	Height of upper	mm	41-42 ≥ 113	76		

- End of the Technical Report -