



中国认可
国际互认
检测
TESTING
CNAS L0167

Test Report

No. SL91939254253401FW

Date: July 16, 2019

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ZHONG SHAN MITARENE FOOTWEAR CO.,LTD
51 DONGSHENG ROAD, XIAOLAN, ZHONGSHAN, GUANGDONG

The following samples were submitted and identified on behalf of the client as:

- A: Ten pairs of Low Shoes in black
- B: Four pairs of Ankle Boots in black
- C: Two pieces of 100% Polyester Grey Mesh for quarter lining

Product Style Number	:	(A) MT-8807 (Alpha-L) (B) MT-8808 (Alpha-M)
Size	:	37# 42# 46# 48#
Toecap	:	604 Steel Toecap
Insert Plate	:	604 Steel Insert Plate
Upper	:	Black Action Leather
Vamp Lining	:	Grey Non-Woven Fabric
Quarter Lining	:	100% Polyester Grey Mesh
Counter Lining	:	Black Microfiber
Tongue	:	Black Synthetic PU
Collar	:	Black Synthetic PU
Shoe Lace	:	100% Polyester Black/Grey Shoelace
Outsole	:	MT-16 PU/PU Sole
Insole	:	Polyester Non-Woven Fabric
Insock (footbed)	:	EVA with 100% Polyester Black BK Mesh
Sample Receiving Date	:	Jun 18, 2019
Test Performing Period	:	Jun 18, 2019 ~ July 16, 2019
Test Performed	:	Selected test(s) as requested by applicant against EN ISO 20345: 2011 performance standard.

* * * *

Test Results : Please refer to the next page(s).

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Huang Asan
Approved Signatory



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Height of Upper (EN ISO 20344:2011, 6.2)

(A)

Size	Results (mm)	Design	Requirement	Pass/Fail
37	81	Design A	<105mm	Pass
42	90	Design A	<113mm	Pass
48	95	Design A	<121mm	Pass

(B)

Size	Results (mm)	Design	Requirement	Pass/Fail
37	119	Design B	Min:105mm	Pass
42	131	Design B	Min:113mm	Pass
48	144	Design B	Min:121mm	Pass



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Seat Region (EN ISO 20345:2011, 5.2.3)

(A)

Size	Assessment	Requirement	Pass/Fail
37	The Seat Region Was Closed. In This Area of The Upper, There Are No Holes Other Than to Form Seams.	*	Pass
42	The Seat Region Was Closed. In This Area of The Upper, There Are No Holes Other Than to Form Seams.	*	Pass
48	The Seat Region Was Closed. In This Area of The Upper, There Are No Holes Other Than to Form Seams.	*	Pass

Remark: * = The Seat Region Shall Be Closed. In This Area of The Upper, Below the Minimum Height Given in Below, There Shall Be No Holes Other Than to Form Seams.

Size 37 : 46 mm
Size 42 : 50 mm
Size 48 : 53 mm

(B)

Size	Assessment	Requirement	Pass/Fail
37	The Seat Region Was Closed. In This Area of The Upper, There Are No Holes Other Than to Form Seams.	*	Pass
42	The Seat Region Was Closed. In This Area of The Upper, There Are No Holes Other Than to Form Seams.	*	Pass
48	The Seat Region Was Closed. In This Area of The Upper, There Are No Holes Other Than to Form Seams.	*	Pass

Remark: * = The Seat Region Shall Be Closed. In This Area of The Upper, Below the Minimum Height Given in Below, There Shall Be No Holes Other Than to Form Seams.

Size 37 : 46 mm
Size 42 : 50 mm
Size 48 : 53 mm



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Specific Ergonomic Features (EN ISO 20344:2011, 5.1)

(A)

Size		Assessment	Requirement	Pass/Fail
37	Left	All the answers are positive.	*	Pass
	Right	All the answers are positive.	*	Pass
42	Left	All the answers are positive.	*	Pass
	Right	All the answers are positive.	*	Pass
46	Left	All the answers are positive.	*	Pass
	Right	All the answers are positive.	*	Pass

Remark * = All the answers are positive in the questionnaire as below:

- : Question 1: Is the inside surface of the footwear free from rough, sharp or hard areas that caused you irritation or injury?
- Question 2: Is the footwear free of features that you consider making wearing the footwear hazardous?
- Question 3: Can the fastening be adequately adjusted (If necessary)?
- Question 4: Can the following activities be performed without problems?
 - 4.1 Walking
 - 4.2 Climbing stairs
 - 4.3 Kneeling/ crouching down (It is not applicable if the footwear is rigid in accordance with ISO 20344, 8.4.1.)



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(B)

Size		Assessment	Requirement	Pass/Fail
37	Left	All the answers are positive.	*	Pass
	Right	All the answers are positive.	*	Pass
42	Left	All the answers are positive.	*	Pass
	Right	All the answers are positive.	*	Pass
46	Left	All the answers are positive.	*	Pass
	Right	All the answers are positive.	*	Pass

Remark * = All the answers are positive in the questionnaire as below:

- :
- Question 1: Is the inside surface of the footwear free from rough, sharp or hard areas that caused you irritation or injury?
 - Question 2: Is the footwear free of features that you consider making wearing the footwear hazardous?
 - Question 3: Can the fastening be adequately adjusted (If necessary)?
 - Question 4: Can the following activities be performed without problems?
 - 4.1 Walking
 - 4.2 Climbing stairs
 - 4.3 Kneeling/ crouching down (It is not applicable if the footwear is rigid in accordance with ISO 20344, 8.4.1.)

Construction of Insole (EN ISO 20345:2011, 5.3.1.1)

(A)

Size	Assessment	Requirement	Pass/Fail
37	The Insole Cannot Be Removed Without Damaging the Footwear	*	Pass
42	The Insole Cannot Be Removed Without Damaging the Footwear	*	Pass
48	The Insole Cannot Be Removed Without Damaging the Footwear	*	Pass

Remark: * = The Insole Cannot Be Removed Without Damaging the Footwear. If There Is No Insole, A Permanently Attached Insock Shall Be Present.



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Upper/Outsole Bond Strength (EN ISO 20344:2011, 5.2)

(B)

Size	Results (N/mm)	Requirement	Pass/Fail
37	5.8	*	Pass

Remark: * = Min. 4.0 N/mm, If the sole was torn, Min. 3.0 N/mm

Toe Protection General (EN ISO 20345:2011, 5.3.2.1)

(B)

Size	Assessment	Requirement	Pass/Fail
37	The Toecap Cannot Be Removed Without Damaging the Footwear. Edge Covering Beneath Toecap: 6 mm Edge Covering Behind Toecap: 13 mm Width of Toecap Flange: 7 mm The Scuff -Resistant Covering Is Not Present. Vamp Lining Present.	*	Pass
42	The Toecap Cannot Be Removed Without Damaging the Footwear. Edge Covering Beneath Toecap: 6 mm Edge Covering Behind Toecap: 13 mm Width of Toecap Flange: 5 mm The Scuff -Resistant Covering Is Not Present. Vamp Lining Present.	*	Pass
48	The Toecap Cannot Be Removed Without Damaging the Footwear. Edge Covering Beneath Toecap: 7 mm Edge Covering Behind Toecap: 13 mm Width of Toecap Flange: 7 mm The Scuff -Resistant Covering Is Not Present. Vamp Lining Present.	*	Pass

Remark: *= The Toecap Cannot Be Removed Without Damaging the Footwear.
 Edge Covering Beneath Toecap: Min. 5 mm
 Edge Covering Behind Toecap: Min. 10 mm
 Width of Toecap Flange: Max. 10 mm
 Thickness of Scuff-Resistant Covering (If Present): Min. 1 mm
 Footwear Shall Have a Vamp Lining or An Element of The Upper That Serves as A Lining.



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Internal Length of Toecaps (EN ISO 20344:2011, 5.3)

(B)

Size		Results (mm)	Requirement	Pass/Fail
37	Left	43	Min.36mm	Pass
	Right	43		Pass
42	Left	45	Min.39mm	Pass
	Right	43		Pass
48	Left	46	Min.42mm	Pass
	Right	44		Pass

Impact Resistance of Safety Footwear (EN ISO 20344:2011, 5.4)

Test Condition:

Impact Energy: (200 ± 4) J

(A)

Size		Results (mm)	Requirement	Pass/Fail
37	Left	15.0	Min.13.0mm (#)	Pass
	Right	16.0		Pass
42	Left	15.0	Min.14.0mm (#)	Pass
	Right	15.0		Pass
48	Left	18.0	Min.15.0mm (#)	Pass
	Right	18.0		Pass

Remark: # = In addition, the toecap shall not develop any cracks which go through the material, i.e. Through which light can be seen.



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Compression Resistance of Safety Footwear (EN ISO 20344:2011, 5.5)

(A)

Size		Results (mm)	Requirement	Pass/Fail
37	Left	17.5	Min.13.0mm (#)	Pass
	Right	18.0		Pass
42	Left	19.5	Min.14.0mm (#)	Pass
	Right	19.5		Pass
48	Left	22.5	Min.15.0mm (#)	Pass
	Right	20.5		Pass

Remark: # = In addition, the toecap shall not develop any cracks which go through the material, i.e. Through which light can be seen.

Slip Resistance (EN ISO 20344:2011 5.11, SRC)

(A)

Size	Test Floor	Lubricant	Modes	Results	Requirement	Pass/Fail
37	Eurotile 2	NaLS	Forward Heel Slip(#1)	0.34	Min. 0.28	Pass
			Forward Flat Slip (#2)	0.39	Min. 0.32	Pass
	Steel Floor	Glycerine	Forward Heel Slip(#1)	0.16	Min. 0.13	Pass
			Forward Flat Slip (#2)	0.18	Min. 0.18	Pass

Remark: #1 = Using Standard Shoemaking Last
#2 = Using Mechanical Foot

Note: It must be noted that the slip resistance test carried out in this report denotes an indication of slip of this footwear/Component on the surface mentioned in the test item. It is important to note that footwear is subject to many different conditions encountered in everyday use and that it is impossible to make footwear resistant to slip in all conditions. Nevertheless, it is generally accepted that problems are minimized if the guideline coefficients of friction are achieved.



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Penetration Resistance (Metallic Insert) (EN ISO 20344:2011, 5.8.2)

(B)

Size		Results (N)	Requirement	Pass/Fail
37	Left	1224	Min. 1 100 N	Pass
	Right	1258		Pass
42	Left	1295	Min. 1 100 N	Pass
	Right	1232		Pass
48	Left	1331	Min. 1 100 N	Pass
	Right	1355		Pass

Construction of Penetration Resistance insert (EN ISO 20345:2011,6.2.1.2)

(B)

Size		Assessment	Requirement	Pass/Fail
37	Left	Comply with Requirement	*	Pass
	Right	Comply with Requirement	*	Pass
42	Left	Comply with Requirement	*	Pass
	Right	Comply with Requirement	*	Pass
48	Left	Comply with Requirement	*	Pass
	Right	Comply with Requirement	*	Pass

Remark: * = The Penetration Resistance Insert Can Not Be Removed Without Damaging the Footwear.

Except For Non-Metallic Inserts That Also Function as An Insole, The Insert Shall Not Lie Above the Flange of The Safety Toecap and Shall Not Be Attached to It



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Dimensional Conformity of Penetration Resistance Insert (EN ISO 20344:2011, 5.8.1)

(B)

Size		Assessment				Requirement	Pass/Fail
37	Left	Except the Heel Region:	2.5	mm		*	Pass
		In the Heel Region:	4.5	mm			
		The Penetration-Resistant Insert Has No Holes.					
	Right	Except the Heel Region:	3.0	mm		*	Pass
		In the Heel Region:	11.0	mm			
		The Penetration-Resistant Insert Has No Holes.					
42	Left	Except the Heel Region:	6.5	mm		*	Pass
		In the Heel Region:	5.0	mm			
		The Penetration-Resistant Insert Has No Holes.					
	Right	Except the Heel Region:	6.0	mm		*	Pass
		In the Heel Region:	3.0	mm			
		The Penetration-Resistant Insert Has No Holes.					
48	Left	Except the Heel Region:	6.5	mm		*	Pass
		In the Heel Region:	6.5	mm			
		The Penetration-Resistant Insert Has No Holes.					
	Right	Except the Heel Region:	3.5	mm		*	Pass
		In the Heel Region:	6.5	mm			
		The Penetration-Resistant Insert Has No Holes.					

Remark: * = The Distance Between the Line Represented by The Feather Edge of The Last and The Edge of The Insert:
 Except the Heel Region: Max. 6.5 mm
 In the Heel Region: Max. 17 mm
 The Penetration-Resistant Insert Shall Have No More Than Three Holes with A Maximum Diameter Of 3 mm To Attach It to The Bottom of Footwear.
 The Holes Shall Not Lie in The Area Specified



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Electrical properties ---Antistatic Footwear (EN ISO 20344:2011, 5.10)

Test Condition		
Pretreatment:	Dry	Wet
Temperature (°C):	(20 ± 2)	(20 ± 2)
Relative Humidity (%):	(30 ± 5)	(85 ± 5)
Period:	7 Days	
Internal Electrode:	(4±1) kg Steel Balls Of 5 mm Diameter	
Test Voltage:	(100±2) V DC	
Test Period:	1 Minute	

(A)

Pretreatment	Size		Results (MΩ)	Requirement	Pass/Fail
Dry	37	Left	180.5	*	Pass
		Right	96.9	*	Pass
	42	Left	91.8	*	Pass
		Right	86.0	*	Pass
	48	Left	80.1	*	Pass
		Right	49.2	*	Pass
Wet	37	Left	26.2	*	Pass
		Right	19.5	*	Pass
	42	Left	12.3	*	Pass
		Right	37.1	*	Pass
	48	Left	42.5	*	Pass
		Right	32.8	*	Pass

Remark: * = Above 100 kΩ and less than or equal to 1 000 MΩ



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Energy Absorption of Seat Region (EN ISO 20344:2011, 5.14)

(A)

Size		Results (Joules)	Requirement	Pass/Fail
37	Left	29	Min. 20 Joules	Pass
	Right	29		Pass
42	Left	26	Min. 20 Joules	Pass
	Right	29		Pass
48	Left	29	Min. 20 Joules	Pass
	Right	27		Pass

General of Upper (EN ISO 20345:2011, 5.4.1)

(B)

Size	Assessment	Requirement	Pass/Fail
37	#1 Should Completely Fulfill the Upper Requirements.	*	N/A
42	#1 Should Completely Fulfill the Upper Requirements.	*	N/A
48	#1 Should Completely Fulfill the Upper Requirements.	*	N/A

Remark: * = Min. Height, Below Which the Upper Requirements Shall Be Fulfilled.
 Size 37 : 66 mm
 Size 42 : 70 mm
 Size 48 : 73 mm
 #1 = Black action leather



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Tear Strength of Lining (EN ISO 20344:2011, 6.3)

(B)

Size	Position	Results (N)	Requirement	Pass/Fail
37	Quarter	27.3	Min.15N	Pass
42	Quarter	27.1	Min.15N	Pass
48	Quarter	26.7	Min.15N	Pass

Water Vapour Permeability & Coefficient (Lining) (EN ISO 20344:2011, 6.6 & 6.8)

Pre-flexing:

Method: EN ISO 20344:2011, 6.6.3.1 (Bally Flexing)

Cycles: 20 000

Test Condition:

Temperature (°C): (23 ± 2)

Humidity (%): (50 ± 5)

Pre-Run Period (Hours): 1

Test Period (Hours): 8

(B)

Size	Position	WVP (mg/(cm ² ·h))	WVC (mg/cm ²)	Requirement	Pass/Fail
37	Quarter	51.90	415	*	Pass
42	Quarter	51.18	410	*	Pass
48	Quarter	51.09	409	*	Pass

Remark: * = WVP: Min. 2.0 mg/(cm²·h);
WVC: Min. 20 mg/cm².

NOTE WVP: Water Vapour Permeability
WVA: Water Vapour Absorption
WVC: Water Vapour Coefficient, WVC = 8 x WVP + WVA



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Abrasion Resistance of Lining (EN ISO 20344:2011, 6.12)

(B)

Size	Position	Condition	Test Rubs	Assessment	Requirement	Pass/Fail
37	Quarter	Dry	25 600	No holes	No holes	Pass
		Wet	12 800	No holes	No holes	Pass
42	Quarter	Dry	25 600	No holes	No holes	Pass
		Wet	12 800	No holes	No holes	Pass
48	Quarter	Dry	25 600	No holes	No holes	Pass
		Wet	12 800	No holes	No holes	Pass

Flexing Resistance of Outsole (EN ISO 20344:2011, 8.4.2)

(A)

Size	Results (mm)	Requirement	Pass/Fail
37	Cut Growth:0	Max. 4 mm (*)	Pass
42	Cut Growth:0	Max. 4 mm (*)	Pass
48	Cut Growth:0	Max. 4 mm (*)	Pass

Remark: * = Spontaneous Cracks Are Acceptable in The Following Circumstances:

- a) Only the Centre Of the Tread Area Shall Be Assessed for Cracking, I.E. Cracks Under the Toecap Zone Shall Be Ignored.
- b) Superficial Cracks Up To 0.5 Mm Deep Shall Be Ignored.
- c) Soles Shall Be Deemed to Be Satisfactory If Cracks Are No Deeper Than 1.5 Mm, No Longer Than 4 Mm and No More Than Five in Numbers.



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Detection Of Amines Derived From Azocolourants And Azodyes

Test Method : With reference to EN 14362-1 :2012 - Analysis was conducted with GC-MS/HPLC-DAD.
Determination of 4-aminoazobenzene (CAS No.:60-09-3) – EN 14362-3:2012;
with the use of Gas Chromatography – Mass Spectrometry (GC-MS)

<u>Forbidden Amine</u>	<u>Cas No.</u>	<u>Result</u>
		C
1. 4-Aminodiphenyl	92-67-1	ND
2. Benzidine	92-87-5	ND
3. 4-Chloro-O-Toluidine	95-69-2	ND
4. 2-Naphthylamine	91-59-8	ND
5. O-Aminoazotoluene	97-56-3	ND
6. 2-Amino-4-Nitrotoluene	99-55-8	ND
7. P-Chloroaniline	106-47-8	ND
8. 2,4-Diaminoanisole	615-05-4	ND
9. 4,4'-Diaminodiphenylmethane	101-77-9	ND
10. 3,3'-Dichlorobenzidine	91-94-1	ND
11. 3,3'-Dimethoxybenzidine	119-90-4	ND
12. 3,3'-Dimethylbenzidine	119-93-7	ND
13. 3,3'-Dimethyl-4,4'Diaminodiphenylmethane	838-88-0	ND
14. P-Cresidine	120-71-8	ND
15. 4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	ND
16. 4,4'-Oxydianiline	101-80-4	ND
17. 4,4'-Thiodianiline	139-65-1	ND
18. O-Toluidine	95-53-4	ND
19. 2,4-Toluylenediamine	95-80-7	ND
20. 2,4,5-Trimethylaniline	137-17-7	ND
21. O-Anisidine	90-04-0	ND
22. P-Aminoazobenzene	60-09-3	ND

Detection Of Amines Derived From Azocolourants And Azodyes (Cont)

Remark: N = Not Detected
Detection Limit = 5 ppm
Requirement = 30 ppm (Max.)
ppm = Parts Per Million = mg/kg

Conclusion:

<u>Tested Samples/ Tested Components</u>	<u>Test Item/Standard</u>	<u>Result</u>
C	Azocolourants Content Requirement In Annex XVII Item 43 Of The REACH Regulation (EC) NO. 1907/2006 & Amendment No. 552/2009 and 126/2013 (Formerly Known As Directive 2002/61/EC)	Pass



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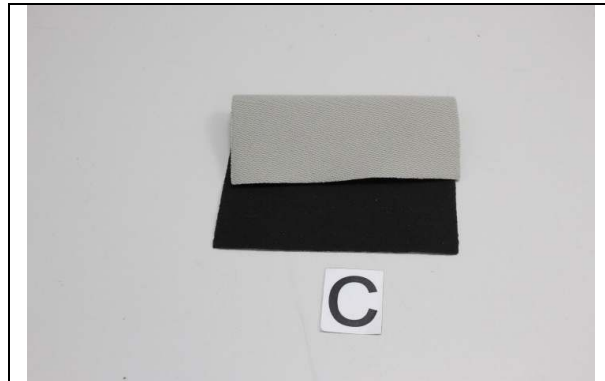
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PH Value (ISO 3071: 2005)

Result	Mean Value	6.9	C Difference Figure	--	<u>Requirement</u> 3.5 - 9.5	<u>Pass / Fail</u> Pass
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Sample Photo



*** End of Report ***