



Shenzhen Huawin Testing Certification Co., Ltd.

Add: 7F, Building A, Shenye U Center, No. 743, Zhoushi Road, Bao'an District, Shenzhen, China

Http://www.huawinlab.com E-mail: eng@huawinlab.com

## TEST REPORT

Report No.: HW20240816224R

Date: August 12, 2024

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### Appendix 1 (Label)

Product Name: Safety shoes

Model No: FZ-160

Category: SBP

Manufacturer: Gaomi anbaili Shoes Co, Ltd

Address: 777 Jiankang Road (South), Mishui street, Gaomi City,

Weifang City, Shandong Province, China

MADE IN CHINA

\*\*\* END OF REPORT \*\*\*



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**Applicant:** Gaomi anbaill Shoes Co, Ltd

**Address:** 777 Jiankang Road (South), Mishui street, Gaomi City, Weifang City, Shandong Province, China

**Manufacturer:** Gaomi anbaill Shoes Co, Ltd

**Address:** 777 Jiankang Road (South), Mishui street, Gaomi City, Weifang City, Shandong Province, China

**Sample Name:** Safety shoes

**Model No. :** FZ-160

**Date of Sample Received:** August 9, 2024

**Testing period:** August 9, 2024 to August 12, 2024

**Test Requested:** Selected test(s) as requested by client

**Test Method:** Please refer to next page(s).

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

Result Summary:

Testing requested	Result(s)
EN ISO 20345:2022 Personal protective equipment - Safety footwear	PASS

\*\*\*\*\*FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)\*\*\*\*\*

Written by:

*Stella*

Engineer: Stella Li

Date: August 16, 2024

Approved by:



Manager: Jerson Wang

Date: August 18, 2024



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**1) Test Requested:**

Upper/Outsole Bond Strength (Whole Footwear)

**Test Method:**

With EN ISO 20344:2021(5.2)

Sample	Size	Result	Requirement	Comment
No.1	40	4.1 N/mm	*	PASS.

Remark: \* = Min. 4.0 N/mm, If The Sole Was Torn, Min. 3.0 N/mm

Expanded Uncertainty: 0.10 N/mm, With k= 2 At 95% Confidence Level

**2) Test Requested:**

Impact Resistance of Safety Footwear

**Test Method:**

With EN ISO 20344:2021(5.4)

**Test Condition:**

Mass of Striker: (20±0.2) kg

Impact Energy: (200±4) J

Sample	Size	Result		Requirement	Comment.
No.1	40	Left	15.8 mm	Min. 14.0 mm	PASS
		Right	15.8 mm	Min. 14.0 mm	PASS

Remark: # = In Addition, The Toecap Shall Not Develop Any Cracks Which Go Through The Material, i.e. Through Which Light Can Be Seen.

Expanded Uncertainty: 0.36(Urel), With k=1.96 At 95% Confidence Level.

**3) Test Requested:**

Compression Resistance of Safety Footwear

**Test Method:**

With EN ISO 20344:2021(5.5)



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### Test Condition:

Compression Speed: (5±2) mm/min

Load: (15±0.1) kN

Sample	Size	Result		Requirement	Comment
		Left	Right		
No.1	40	18.2 mm	18.0 mm	Min. 14.0 mm	PASS
				Min. 14.0 mm	PASS

Expanded Uncertainty: 0.13 mm, With k= 1.96 At 95% Confidence Level.

### 4) Test Requested:

Tear Strength (Upper)

### Test Method:

With EN ISO 20344:2021(6.3)

Sample	Size	Result		Requirement	Comment.
		Mean Value			
No.1	40	138.2 N		Min. 120 N	PASS

Expanded Uncertainty: 2.77 N, With k= 2.06 At 95% Confidence Level.

### 5) Test Requested:

Tear Strength (Outsole)

### Test Method:

With EN ISO 20344:2021(8.3), ISO 34-1:2010, Method A

Sample	Size	Density	Result	Requirement	Comment
No.1	40	1.2 g/cm <sup>3</sup>	9.2 kN/m	*	PASS

Remark: \* = Density: > 0.9 g/cm<sup>3</sup>, Min. 8 kN/m



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Sample	Size	Result	Requirement	Comment
No.1	40	3.0 mm	Max. 4 mm (*)	PASS

Remark: \* = Spontaneous Cracks Are Acceptable In The Following Circumstances.

- Only The Centre Of The Tread Area Shall Be Assessed For Cracking, i.e. Cracks Under The Toecap Zone Shall Be Ignored.
- Superficial Cracks Up To 0.5 mm Deep Shall Be Ignored.
- 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 Number.

Expanded Uncertainty: 0.06 mm, With  $k = 1.96$  At 95% Confidence Level.

### 9) Test Requested:

Nail Penetration Resistance Of Penetration Resistant Inserts

#### Test Method:

With EN ISO 20344:2021(5.8.2), EN 12568:2010(7.2.1), 10mm/min

Sample	Size	Result		Requirement	Comment
No.1	40	Left	No Nail Penetration At 1,100 N	*	PASS
		Right	No Nail Penetration At 1,100 N	*	PASS

Remark: \* = The Tip Of The Test Nail Shall Not Penetrate Through The Test Piece And Separation Of The Layers Shall Not Occur Before 1,100 N

### 10) Test Requested:

Multiple Flex Resistance Of Penetration Resistant Inserts

#### Test Method:

With EN ISO 20344:2021(5.12)

Sample	Size	Result		Requirement	Comment
No.1	40	Left	No Cracking After $1 \times 10^6$ Flexion Cycles	*	PASS
		Right	No Cracking After $1 \times 10^6$ Flexion Cycles	*	PASS

Remark: \* = The Inserts Shall Exhibit No Visible Signs Of Cracking, Disintegration Or Delamination After Having Been Subjected To  $1 \times 10^6$  Flexion Cycles

This report is considered invalidated without the Special Seal for Inspection of the Shenzhen Huawin Testing Certification Co., Ltd. This report shall not be altered, increased or deleted. The results shown in this test report refer only to the sample(s) tested. Without written approval of Shenzhen Huawin Testing Certification Co., Ltd. this test report shall not be copied except in full and published as advertisement.



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Expanded Uncertainty: 0.32 kN/m, With  $k=2.26$  At 95% Confidence Level.

**6) Test Requested:**

Abrasion Resistance (Outsole)

**Test Method:**

With EN ISO 20344:2021(8.4)

Sample	Size	Density	Result	Requirement	Comment
No.1	40	1.2 g/cm <sup>3</sup>	Relative Volume Loss: 134.0 mm <sup>3</sup>	*	PASS

Remark: \* = Density: > 0.9 g/cm<sup>3</sup>, Max. 150 mm<sup>3</sup>

Expanded Uncertainty: 1.76 mm<sup>3</sup>, With  $k=1.96$  At 95% Confidence Level

**7) Test Requested:**

Rigidity Test (Outsole)

**Test Method:**

With EN ISO 20344:2021(8.6)

Sample	Size	Result
No.1	40	> 50°

Conclusion: There's Need To Be Performed The Flexing Test

NOTE: Footwear Whose Angle Under The Applied Force Is Lower Than 45° From The Horizontal Is Not Subjected To The Flexing Test

**8) Test Requested:**

Flexing Resistance (Outsole)

**Test Method:**

With EN ISO 20344:2021(8.6)

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Specimen No      Model  
NO.1                FZ-160

Description  
Black safety shoes

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### Photograph of Sample



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