



Test Report: WND-01509, Issue: 1

ANSI Z87.1-2020

Wendy's Pancake Welding Shields

Z - Model

June 06, 2024



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Authorized By:

A handwritten signature in black ink, appearing to read 'Jacob Gary'.

Jacob Gary
Director of Operations

Reviewed By:

A handwritten signature in black ink, appearing to read 'Jason Fawell'.

Jason Fawell
Technical Engineer

Requested by: David Keup

Report Summary

Product Description: Z - Model: Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece
Date Received: April 18, 2024
Date(s) Tested: June 05, 2024 to June 06, 2024
Standard: ANSI Z87.1-2020
Laboratory Conditions: 23°C, 50% RH

Final Conclusion:

The Welding Helmet Sample: Z - Model (Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece) **does** comply with ANSI Z87.1-2020 for the test(s) included in this report.

Test Name	Result
ANSI Z87.1-2020 Welding Helmet Shell Requirements	
5.2 Physical Requirements	Pass
5.2.2 Ignition	Pass
5.2.3 Corrosion Resistance of Metal Components	Pass
5.2.4 Minimum Coverage Area	Pass
5.3.1 Required Protector Markings	Pass
5.3.2 Placement of Markings	Pass
5.4.3.1 Cover Lenses	Pass
5.4.3.2 Information provided with Welding Protectors	Pass
5.5.2 Welding Helmets and Handshields - Replaceable Lenses	Pass
ANSI Z87.1-2020 Optional Claim (+)	
7.1.3 Lateral (Side) Coverage	Pass
7.1.4.2 High Mass Impact	Pass
7.1.4.3 High Velocity Impact	Pass
7.1.4.4 Penetration Test (lenses only)	Pass



**Test Results - WND-01509-01/Z - Model Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece
 ANSI Z87.1-2020 Welding Helmet Shell Requirements**

5.2 Physical Requirements

Test	Specification	Pass
Free of defects which may cause discomfort or injury		Pass

5.2.2 Ignition

Test	Specification	Pass
Shell		Pass
Lens Housing		Pass
Other		Pass

5.2.3 Corrosion Resistance of Metal Components

Test	Specification	Pass
Function of protector not impaired		Pass

5.2.4 Minimum Coverage Area

Test	Specification	Pass
40 x 33 mm (34 x 28 mm - H)		Pass

5.3.1 Required Protector Markings

Test	Specification	Pass
Markings		Pass

5.3.2 Placement of Markings

Test	Specification	Pass
Markings		Pass

5.4.3.1 Cover Lenses

Test	Specification	Pass
Cover Lenses		Pass

5.4.3.2 Information provided with Welding Protectors

Test	Specification	Pass
List of lens and retention components		Pass
Suspension Type		N/A
Information to allow correct installation		Pass
Statement regarding protection		Pass
Nominal thickness of cover lenses		Pass

5.5.2 Welding Helmets and Handshields - Replaceable Lenses

Test	Specification	Pass
Dimensions		Pass

Test Results - WND-01509-01/Z - Model Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

ANSI Z87.1-2020 Optional Claim (+)

7.1.3 Lateral (Side) Coverage

Test	Specification	Pass
Lateral (Side) Coverage		Pass

7.1.4.2 High Mass Impact

Test	Specification	Pass
Left Eye Sample 1		Pass
Left Eye Sample 2		Pass
Right Eye Sample 3		Pass
Right Eye Sample 4		Pass

7.1.4.3 High Velocity Impact

Test	Specification	Pass
Left Eye Center	Min: 150.00	152 (fps)
Left Eye Center		Pass
Left Eye 30°	Min: 150.00	153 (fps)
Left Eye 30°		Pass
Right Eye Center	Min: 150.00	153 (fps)
Right Eye Center		Pass
Right Eye 30°	Min: 150.00	152 (fps)
Right Eye 30°		Pass
One Side 90° at 10mm Above (H - 8mm)	Min: 150.00	154 (fps)
One Side 90° at 10mm Above (H - 8mm)		Pass
Opposite Side 90° at 10mm Below (H - 8mm)	Min: 150.00	154 (fps)
Opposite Side 90° at 10mm Below (H - 8mm)		Pass

Test Results - WND-01509-01/Z - Model Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

7.2.2.2 Trans. of Non-Lens Comp. (Welding Helmet)

7.2.2.2 Transmittance of Non-Lens Components (Welding Helmets)

Light Penetration		Pass
Non-lens area		Pass
Near UV		0.0000010 (%)
Far UV		0.0000010 (%)
Luminous		0.0000220 (%)
Infrared		0.0048090 (%)
Blue Light		0.0000230 (%)

7.1.4.4 Penetration Test (lenses only)

7.1.4.4 Penetration Test (lenses only)

Test	Specification	Pass
Left Eye Sample 1		Pass
Left Eye Sample 2		Pass
Right Eye Sample 3		Pass
Right Eye Sample 4		Pass

Issued to: Wendy's Pancake Welding Shields
500 Countryside Place
Madison, MS 39110



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Test Results - WND-01509-01/Z - Model Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

Observations:

Test Name		Observation
5.2.2 Ignition	Other	Strap buckle

APPENDIX 1

ANSI Z87.1 - 2020 Measurement Uncertainty Values

Section	Requirement	Uncertainty
5.1.2	Luminous Transmittance	0.19%
5.1.3	Haze	0.08%
5.1.4	Refractive Power	0.018D
	Astigmatism	0.018D
	Prism	0.048Δ
5.4.5	Minimum Lens Thickness	0.012 mm
5.5.1	Replaceable Lenses – Goggles	0.17 mm
5.5.2	Replaceable Lenses – Welding Helmets and Handshields	0.17 mm
6.1	Relaxed Optics Level	See 5.1.4
6.2	Anti-Fog Properties	1.79%
7.2.1	Optical Radiation - Clear Lenses	See 5.1.2
7.2.2.1.1	Transmission Requirements	
	Table 7 (Welding Filters)	
	W1.3 – W3.0	See 5.1.2
	W4	0.0018287%
	W5	0.0003283%
	W6	0.0003605%
	W7	0.0000961%
	W8	0.0001944%
	W9	0.0000459%
	W10	0.0000707%
	W11	0.0000163%
	W12	0.0000055%
	W13	0.0000029%
	W14	0.0000017%
	EFUV	0.0000551%
	NUV	0.0000576%
	IR	0.010395%
	Table 8 (UV Filters)	
	EFUV	0.0000551%
	NUV	0.0000576%
	Table 9 (IR Filters)	0.010395%
	Table 10 (VIS Filters)	See 7.2.2.1.1 W1.3 – W10
	Table 11 Tinted	See 5.1.2
	Extra Dark	See 5.1.2
7.2.2.1.2	Visible Light Filters	
	Visible Light (L1.3 - L3)	See 5.1.2
	UVA	See Table 7 NUV
	UVB	See Table 7 EFUV
7.2.2.2	Transmittance of Non-lens Components	See 7.2.2.1.1 Table 7, 8 & 9
7.2.3.1	Automatic Darkening Welding Filter Lenses - Luminous Transmittance	See 7.2.2.1.1 Table 7
7.2.3.2	Automatic Darkening Welding Filter Lenses - UV/IR Transmittance	See 7.2.2.1.1 Table 7
7.2.3.3	Switching Index	0.0192 mSec
7.2.3.5	Angular dependence of luminous transmittance	See 7.2.2.1.1 Table 7