

TEST RESULTS and REPORT

for

Wendy's Pancake Welding Shields

Z- Model

by



COLTS | Laboratories™

Precision Testing. Definitive Results.

**COLTS Laboratories maintains A2LA accreditation to ISO/IEC 17025 for the tests listed on Certificate # 1612.01.
Any tests not included on this certificate have been identified on the appropriate test result page.**

Also Certified for testing by the Safety Equipment Institute

Z-WND051822-01

- Unless otherwise stated, results in this report apply only to the samples tested and not to lots from which they were taken.
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- Unless otherwise requested, test samples will be discarded 21 days from the report date.
- Decision Rule: COLTS makes all statements of conformity (Pass/Fail) based on actual values reported, unless otherwise stated.

COLTS Laboratories

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**PRODUCT
RESULTS
SUMMARY**

A2LA Accredited Certificate # 1612.01

**Wendy's Pancake Welding Shields
WND051822-01**

COLTS Project ID	Test/Models(s)	Results Pass / Fail	Reason	Page
Z-WND051822-01-01	ANSI Z87.1-2020 Welding Helmet Shell Requirements Z- Model (Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece)	Pass		1
Z-WND051822-01-02	ANSI Z87.1-2020 Welding Helmet Optional Claim (+) Z- Model (Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece)	Pass		4

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

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

Attn: David Keup

Date: May 25, 2022

Project

of Model(s): Z- Model
Report of: ANSI Z87.1-2020
Project ID(s): Z-WND051822-01-01



Product Description: Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

On May 18, 2022, COLTS Laboratories received Welding Helmets: Z- Model from Wendy's Pancake Welding Shields . From May 23, 2022 through May 24, 2022 COLTS Laboratories tested these Welding Helmets in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Welding Helmet Shell Requirements.

Detailed test results are included.

Final Conclusion:

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

Please contact us should you have any questions concerning this report.

Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President of Operations

Dale Payne
Technical Services Manager

Report To: Wendy's Pancake Welding Shields
 Project No: Z-WND051822-01-01



Sample ID:
 Z- Model
 Black Front and Side Piece, 5/8" Lens Holder Wooden Lens
 Holder/Face Piece

A2LA Accredited Certificate # 1612.01

Report Date: 5/25/2022

Lab Temp (C): 23
 Lab Rh: 47

Report of: ANSI Z87.1-2020

Test/Property	Paragraph	Requirement	Test Results	Acceptance
Physical Requirements	5.2	Protectors shall be free from: projections, sharp edges or other defects which are likely to cause discomfort or injury during use.	Acceptable	Pass
Ignition (Welding Helmet)	5.2.2	Protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of metals, textiles or elastic bands) shall be tested.		
		Shell	Acceptable	Pass
		Lens Housing	Acceptable	Pass
		Other	Acceptable	Pass
	Other	N/A	Strap buckle N/A	
Corrosion Resistance of Metal Components	5.2.3	Metal components used in protectors shall be corrosion resistant to the degree that the function of the protector shall not be impaired by the corrosion and the protector can be worn as intended. Lenses and electrical components are excluded from these requirements. Corrosion Resistant	Acceptable	Pass
Minimum Coverage Area	5.2.4	Protectors shall cover an area of not less than 40 mm in width and 33 mm in height (elliptical) in front of each eye, centered on the pupil centers of the test headform.		
		Protectors designed for small head sizes shall cover an area of not less than 34 mm in width and 28 mm in height (elliptical), centered on the pupil centers of the test headform. Minimum Coverage Area	Acceptable	Pass
Placement of Markings (Welding Helmet)	5.3.2	All protectors shall bear the permanent and legible markings in specified locations.		
		Markings for lens type and use applications shall be required only when claims for protection against the hazard or indicated use are made by the manufacturer.		
		Protector markings shall be placed in relatable proximity to each other on the product in the sequence specified below: Markings permanent, legible and in relatable proximity	Acceptable	Pass
		Markings representative of other standards shall not interfere with or be intermixed with the markings required by this standard.	Acceptable	Pass

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Report To: Wendy's Pancake Welding Shields
 Project No: Z-WND051822-01-01



Sample ID:
 Z- Model
 Black Front and Side Piece, 5/8" Lens Holder Wooden Lens
 Holder/Face Piece

A2LA Accredited Certificate # 1612.01

Report Date: 5/25/2022

Lab Temp (C): 23

Lab Rh: 47

Report of: ANSI Z87.1-2020

Test/Property	Paragraph	Requirement	Test Results	Acceptance
Placement of Markings (Welding Helmet)	5.3.2	All protectors shall bear the permanent and legible markings in specified locations.		
		Markings for lens type and use applications shall be required only when claims for protection against the hazard or indicated use are made by the manufacturer.		
		Protector markings shall be placed in relatable proximity to each other on the product in the sequence specified below:		
		Shell	Acceptable	Pass
		Manufacturer's Mark or Logo	Acceptable	Pass
		Z87 Mark	Acceptable	Pass
		+ Mark	Acceptable	Pass
		Lens Housing or Carrier	Acceptable	Pass
		Manufacturer's Mark or Logo	Acceptable	Pass
Cover lenses	5.4.3.1	Manufacturer's Mark or Logo	Acceptable	Pass
		Z87 Mark	Acceptable	Pass
		+ Mark	Acceptable	Pass
Cover lenses	5.4.3.1	Cover lenses are exempt from all requirements of this standard. Cover lenses do not provide protection from optical radiation or impact. Cover lenses shall not be marked "Z87."		
		Not marked Z87	Acceptable	Pass
Transmittance of Non-Lens Components (Welding Helmets)	7.2.2.2	Non-lens components shall comply with the requirements of Table 7.		
		The non-lens area of welding helmets with replaceable lenses shall transmit no more optical radiation than that permitted by Table 7 for shade number 14. Non-lens areas of welding helmets with non-replaceable lenses shall transmit no more optical radiation than that of the lens.		
		There shall be no penetration of direct visible light in all non-lens areas including the space between the lens and lens housing or carrier.		
		Light penetration	Acceptable	Pass
		Non-lens area	Acceptable	Pass
		U.V. Near	0.000005%	Pass
		U.V. Far	0.000002%	Pass
		Luminous	0.000021%	Pass
		Infrared	0.000654%	Pass
		Blue Light	0.000023%	Pass

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**Report
Summary**

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Report To:

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

Attn: David Keup

Date: May 25, 2022

Project

of Model(s): Z- Model
Report of: ANSI Z87.1-2020
Project ID(s): Z-WND051822-01-02



Product Description: Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

On May 18, 2022, COLTS Laboratories received Welding Helmets: Z- Model from Wendy's Pancake Welding Shields . From May 23, 2022 through May 24, 2022 COLTS Laboratories tested these Welding Helmets in accordance with ANSI Z87.1-2020 to the following test protocol: ANSI Z87.1-2020 Welding Helmet Optional Claim (+).

Detailed test results are included.

Final Conclusion:

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

Please contact us should you have any questions concerning this report.

Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President of Operations

Dale Payne
Technical Services Manager

Report To: Wendy's Pancake Welding Shields

Project No: Z-WND051822-01-02



Sample ID:

Z- Model

Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

A2LA Accredited Certificate # 1612.01

Report Date: 5/25/2022

Lab Temp (C): 23

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Report of: ANSI Z87.1-2020

Test/Property	Paragraph	Requirement	Test Results	Acceptance
Lateral (Side) Coverage	7.1.3	Impact-rated protectors shall provide continuous lateral coverage. The probe shall not contact the headform within the defined coverage area. Lateral (Side) Coverage	Acceptable	Pass
High Mass Impact	7.1.4.2	The complete device shall meet the protector acceptance criteria when impacted by a pointed projectile weighing a minimum of 500 g (17.6 oz) dropped from a height of at least 127 cm (50.0 in.). The lens shall fail if any of the following occurs: <ul style="list-style-type: none"> any part, fragment or material visible to the unaided eye becomes detached from the inner surface of any complete device, as determined by inspection of the device or of the contact paste; fracture; penetration of the inner surface either by the projectile passing completely through the lens, frame or housing component, or by rupture of the inner lens surface; lens not retained 		
		Left Eye Sample 1	Acceptable	Pass
		Left Eye Sample 2	Acceptable	Pass
		Right Eye Sample 3	Acceptable	Pass
		Right Eye Sample 4	Acceptable	Pass
High Velocity Impact (Welding Helmet)	7.1.4.3	The complete device shall meet the protector acceptance criteria when impacted by a 6.35 mm (0.25 in) diameter steel ball traveling at a minimum of 150 feet per second. When tested in accordance with this section, the lens shall fail if any of the following occurs: <ul style="list-style-type: none"> any part, fragment or material visible to the unaided eye becomes detached from the inner surface of any complete device, as determined by inspection of the device or of the contact paste; fracture; penetration of the inner surface either by the projectile passing completely through the lens, frame or housing component, or by rupture of the inner lens surface; lens not retained; the unaided eye observes any piece adhering to the contact paste, or observes contact paste on the projectile or complete device. 		
		Left Eye Center	151 fps	Pass
		Left Eye 30°	154 fps	Pass
		Right Eye Center	153 fps	Pass

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Z- Model

Black Front and Side Piece, 5/8" Lens Holder Wooden Lens Holder/Face Piece

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Test/Property	Paragraph	Requirement	Test Results	Acceptance
High Velocity Impact (Welding Helmet)	7.1.4.3	The complete device shall meet the protector acceptance criteria when impacted by a 6.35 mm (0.25 in) diameter steel ball traveling at a minimum of 150 feet per second.		
		When tested in accordance with this section, the lens shall fail if any of the following occurs:		
		<ul style="list-style-type: none">any part, fragment or material visible to the unaided eye becomes detached from the inner surface of any complete device, as determined by inspection of the device or of the contact paste;fracture;penetration of the inner surface either by the projectile passing completely through the lens, frame or housing component, or by rupture of the inner lens surface;lens not retained;the unaided eye observes any piece adhering to the contact paste, or observes contact paste on the projectile or complete device.		
		Right Eye 30°	154 fps	Pass
One Side 90° at 10mm Above (H - 8mm)	153 fps	Pass		
Opposite Side 90° at 10mm Below (H - 8mm)	153 fps	Pass		
Devices with Lift Fronts	7.1.4.7	Complete devices with lift fronts shall meet the applicable requirements of Section 7.1 with the lift front in the "up" position.		
		Lift front in "up" position	N/A	N/A

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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