

TEST RESULTS and REPORT

for

LIBUS PPE

Malla Forest Mesh Faceshield

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 and CSA International

Z-LIB062615-04

- Results in this report only relate to the samples analyzed.
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- Unless otherwise requested, test samples will be discarded 21 days from the report date.

COLTS Laboratories

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**PRODUCT
RESULTS
SUMMARY**

A2LA Accredited Certificate # 1612.01

**LIBUS PPE
Z-LIB062615-04**

| Project ID | Test/Models(s) | Results Pass / Fail | Reason | Page |
|-------------------|---|------------------------|--------|------|
| Z-LIB062615-04-01 | ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model Malla Forest Mesh Faceshield Nylon Screen Window with Orange Crown and Black Ratcheting Headgear | Pass | | 1 |
| Z-LIB062615-04-02 | ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model Malla Forest Mesh Faceshield Nylon Screen Window with Black Bracket on Blue LIBUS Hardhat | Pass | | 6 |

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**Report
Summary**

A2LA Accredited Certificate # 1612.01

Report To:

LIBUS PPE
Calle 21 Nro. 1213
Berazategui, Bs.As.

Project

of Model(s): Malla Forest Mesh Faceshield
Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen
Window Base Model
Project ID(s): Z-LIB062615-04-01



Attn: Miguel Caro

Date: July 02, 2015

Product Description: Nylon Screen Window with Orange Crown and Black Ratcheting Headgear

On June 26, 2015, COLTS Laboratories received Wire Mess Faceshields: Malla Forest Mesh Faceshield from LIBUS PPE. From July 01, 2015 through July 02, 2015 COLTS Laboratories tested these Wire Mess Faceshields in accordance with ANSI Z87.1-2010.

Final Conclusion:

The Wire Mess Faceshields: Malla Forest Mesh Faceshield (Nylon Screen Window with Orange Crown and Black Ratcheting Headgear) do comply with ANSI Z87.1-2010 for the test(s) performed for ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model.

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

Respectfully submitted,

COLTS Laboratories

Daryl Neely
Vice-President & COO

Dale Payne
Technical Services Manager

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Report To: LIBUS PPE
Project No: Z-LIB062615-04-01



Sample ID:
Malla Forest Mesh Faceshield
Nylon Screen Window with Orange Crown and Black
Ratcheting Headgear

A2LA Accredited Certificate # 1612.01

Report Date: 7/2/2015

Lab Temp (C): 23

Lab Rh: 46

Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model

| 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 |
| Drop Ball Impact Resistance | 5.2.1 | When tested in accordance with Section 9.6, protector lenses shall not fracture when impacted by a 25.4 mm (1 in.) steel ball when dropped from a height of 127 cm (50 in.). Glass welding filter lenses shall be tested and used in conjunction with a safety plate in order to comply with the impact performance criteria. Sample 1 - Left Eye Sample 2 - Left Eye Sample 3 - Right Eye Sample 4 - Right Eye | Acceptable Acceptable Acceptable Acceptable | Pass Pass Pass Pass |
| Ignition (Faceshield) | 5.2.3 | When tested in accordance with Section 9.7, protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of textiles or elastic bands) shall be tested. Lens/Window Frame/Shell Housing Headgear/Adapter Crown Chin protector Other | Acceptable N/A N/A Acceptable Acceptable N/A N/A | Pass N/A N/A Pass Pass N/A N/A |
| Corrosion Resistance of Metal Components | 5.2.4 | When tested in accordance with Section 9.8, 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. Lenses and electrical components are excluded from these requirements. Corrosion Resistant | N/A | N/A |
| Minimum Coverage Area | 5.2.5 | The eyewire and lens shall cover an area not less than 40 mm wide and 33 mm high (elliptical) in front of each eye. Frames designed for small head sizes (marked H) shall cover an area of not less than 34 mm wide and 28 mm high (elliptical). Minimum Coverage Area | Acceptable | Pass |

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Report To: LIBUS PPE
Project No: Z-LIB062615-04-01



Sample ID:
Malla Forest Mesh Faceshield
Nylon Screen Window with Orange Crown and Black
Ratcheting Headgear

A2LA Accredited Certificate # 1612.01

Report Date: 7/2/2015

Lab Temp (C): 23

Lab Rh: 46

Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|--|-----------|---|--------------|------------|
| Marking Requirements | 5.4 | All protectors shall bear the permanent markings in specified locations as shown in Table 4a. Markings shall follow the sequence shown in Table 4b. 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. | | |
| | | Lens and Replacement Lens Markings Sequence | N/A | N/A |
| | | Permanence of markings | N/A | N/A |
| Markings not accessed per customer request | | | | |
| Marking Requirements (Faceshields) | 5.4 | All protectors shall bear the permanent markings in specified locations as shown in Table 4a. Markings shall follow the sequence shown in Table 4b. 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. | | |
| | | Permanence of Markings | N/A | N/A |
| | | Complete Device Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |
| | | Replaceable Lens Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A |

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Report To: LIBUS PPE
Project No: Z-LIB062615-04-01



Sample ID:
Malla Forest Mesh Faceshield
Nylon Screen Window with Orange Crown and Black
Ratcheting Headgear

A2LA Accredited Certificate # 1612.01

Report Date: 7/2/2015

Lab Temp (C): 23

Lab Rh: 46

Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|------------------------------------|-----------|---|--------------|------------|
| Marking Requirements (Faceshields) | 5.4 | All protectors shall bear the permanent markings in specified locations as shown in Table 4a. Markings shall follow the sequence shown in Table 4b. 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. | | |
| | | Faceshield Headgear/Adapter Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |
| | | Faceshield Crown Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |
| | | Faceshield Chin Protector Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |

Markings not accessed per customer request

Report To: LIBUS PPE
Project No: Z-LIB062615-04-01



Sample ID:
Malla Forest Mesh Faceshield
Nylon Screen Window with Orange Crown and Black
Ratcheting Headgear

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Report Date: 7/2/2015

Lab Temp (C): 23

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Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|----------------------------------|-----------|---|---|--------------|
| Screen Windows and Screen Lenses | 5.5.2 | Exposed borders of screen windows and cutouts in the screen window (combination plastic and screen) shall be finished in such a manner as to eliminate any sharp, rough or unfinished edges. Screen windows and lenses are exempt from penetration, optical and minimum thickness requirements. Finish | Acceptable | Pass |
| Aftermarket Components | 5.7 | All original equipment manufacturers (OEM) and non-OEM aftermarket components not sold with the original device shall be tested. Aftermarket Components | Manufacturer requirement | Not testable |
| Impact Rated Protectors | 6.1.1 | Impact-rated protectors and replaceable components shall meet the impact requirements in this standard and be marked in accordance with Table 4a and Table 4b. Impact Requirements Marking Requirements | Acceptable N/A Markings not accessed per customer request | Pass N/A |
| Lateral (Side) Coverage | 6.1.3 | When tested in accordance with Section 9.10, impact rated protectors shall provide continuous lateral coverage (i.e. no openings greater than 1.5mm (0.06 in.) in diameter) from the vertical plane of the lenses tangential to a point not less than 10 mm (0.394 in.) posterior to the corneal plane and not less than 10 mm (0.394 in.) in height (or 8 mm (0.315 in) for the smaller headform) above and not less than 10 mm (0.394 in.) in height (or 8 mm (0.315 in) for the smaller headform) below the horizontal plane centered on the eyes of the headform. The probe shall not contact the headform within the defined coverage area. Lateral (Side) Coverage | Acceptable | Pass |

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Calle 21 Nro. 1213
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Project

of Model(s): Malla Forest Mesh Faceshield
Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen
Window Base Model
Project ID(s): Z-LIB062615-04-02



Attn: Miguel Caro

Date: July 02, 2015

Product Description: Nylon Screen Window with Black Bracket on Blue LIBUS Hardhat

On June 26, 2015, COLTS Laboratories received Wire Mess Faceshields: Malla Forest Mesh Faceshield from LIBUS PPE. From July 01, 2015 through July 02, 2015 COLTS Laboratories tested these Wire Mess Faceshields in accordance with ANSI Z87.1-2010.

Final Conclusion:

The Wire Mess Faceshields: Malla Forest Mesh Faceshield (Nylon Screen Window with Black Bracket on Blue LIBUS Hardhat) do comply with ANSI Z87.1-2010 for the test(s) performed for ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model.

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

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Sample ID:
Malla Forest Mesh Faceshield
Nylon Screen Window with Black Bracket on Blue LIBUS
Hardhat

A2LA Accredited Certificate # 1612.01

Report Date: 7/2/2015

Lab Temp (C): 23

Lab Rh: 46

Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model

| 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 |
| Drop Ball Impact Resistance | 5.2.1 | When tested in accordance with Section 9.6, protector lenses shall not fracture when impacted by a 25.4 mm (1 in.) steel ball when dropped from a height of 127 cm (50 in.). Glass welding filter lenses shall be tested and used in conjunction with a safety plate in order to comply with the impact performance criteria. Sample 1 - Left Eye Sample 2 - Left Eye Sample 3 - Right Eye Sample 4 - Right Eye | Acceptable Acceptable Acceptable Acceptable | Pass Pass Pass Pass |
| Ignition (Faceshield) | 5.2.3 | When tested in accordance with Section 9.7, protectors shall not ignite or continue to glow once the rod is removed. Each externally exposed material (exclusive of textiles or elastic bands) shall be tested. Lens/Window Frame/Shell Housing Headgear/Adapter Crown Chin protector Other | Acceptable N/A N/A Acceptable Acceptable N/A N/A | Pass N/A N/A Pass Pass N/A N/A |
| Corrosion Resistance of Metal Components | 5.2.4 | When tested in accordance with Section 9.8, 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. Lenses and electrical components are excluded from these requirements. Corrosion Resistant | N/A | N/A |
| Minimum Coverage Area | 5.2.5 | The eyewire and lens shall cover an area not less than 40 mm wide and 33 mm high (elliptical) in front of each eye. Frames designed for small head sizes (marked H) shall cover an area of not less than 34 mm wide and 28 mm high (elliptical). Minimum Coverage Area | Acceptable | Pass |

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| | | Lens and Replacement Lens Markings Sequence | N/A | N/A |
| | | Permanence of markings | N/A | N/A |
| | | | Markings not accessed per customer request | |
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| | | Permanence of Markings | N/A | N/A |
| | | Complete Device Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |
| | | Replaceable Lens Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | Lens Type (multiple claim sequence W,U,L,R,V,S) | N/A | N/A |

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Nylon Screen Window with Black Bracket on Blue LIBUS
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| | | Faceshield Headgear/Adapter Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |
| | | Faceshield Crown Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |
| | | Faceshield Chin Protector Markings | N/A | N/A |
| | | Sequence Correct | N/A | N/A |
| | | Mfg Mark or Logo | N/A | N/A |
| | | Z87 Mark | N/A | N/A |
| | | + Mark | N/A | N/A |
| | | H Mark (Coverage - small head sizes) | N/A | N/A |
| | | Use (multiple claim sequence D3,D4,D5) | N/A | N/A |

Markings not accessed per customer request

Report To: LIBUS PPE
Project No: Z-LIB062615-04-02



Sample ID:
Malla Forest Mesh Faceshield
Nylon Screen Window with Black Bracket on Blue LIBUS
Hardhat

A2LA Accredited Certificate # 1612.01

Report Date: 7/2/2015

Lab Temp (C): 23

Lab Rh: 46

Report of: ANSI Z87.1-2010 Faceshields - Wire-Screen Window Base Model

| Test/Property | Paragraph | Requirement | Test Results | Acceptance |
|----------------------------------|-----------|---|---|--------------|
| Screen Windows and Screen Lenses | 5.5.2 | Exposed borders of screen windows and cutouts in the screen window (combination plastic and screen) shall be finished in such a manner as to eliminate any sharp, rough or unfinished edges. Screen windows and lenses are exempt from penetration, optical and minimum thickness requirements. Finish | Acceptable | Pass |
| Aftermarket Components | 5.7 | All original equipment manufacturers (OEM) and non-OEM aftermarket components not sold with the original device shall be tested. Aftermarket Components | Manufacturer requirement | Not testable |
| Impact Rated Protectors | 6.1.1 | Impact-rated protectors and replaceable components shall meet the impact requirements in this standard and be marked in accordance with Table 4a and Table 4b. Impact Requirements Marking Requirements | Acceptable N/A Markings not accessed per customer request | Pass N/A |
| Lateral (Side) Coverage | 6.1.3 | When tested in accordance with Section 9.10, impact rated protectors shall provide continuous lateral coverage (i.e. no openings greater than 1.5mm (0.06 in.) in diameter) from the vertical plane of the lenses tangential to a point not less than 10 mm (0.394 in.) posterior to the corneal plane and not less than 10 mm (0.394 in.) in height (or 8 mm (0.315 in) for the smaller headform) above and not less than 10 mm (0.394 in.) in height (or 8 mm (0.315 in) for the smaller headform) below the horizontal plane centered on the eyes of the headform. The probe shall not contact the headform within the defined coverage area. Lateral (Side) Coverage | Acceptable | Pass |

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APPENDIX 1

ANSI Z87.1 Measurement Uncertainty Values

| Section | Requirement | Uncertainty |
|---------|--|-------------|
| 5.1.2 | Luminous Transmittance | 0.41% |
| 5.1.3 | Haze | 0.41% |
| 5.1.4 | Refractive Power & Astigmatism | 0.007D |
| 5.1.4 | Prism | 0.01Δ |
| 5.3 | Minimum Lens Thickness | 0.1 mm |
| 5.5.3.1 | Welding Protectors – Transmittance of Non-Lens Area | 0.0000017% |
| 5.6.1 | Replaceable Lenses – Goggles | 0.1 mm |
| 5.6.2 | Replaceable Lenses – Welding Helmets and Handshields | 0.1 mm |
| 7.1.2 | Clear and Filter Lenses | |
| | Table 6 (Welding Filters) | See 7.1.3 |
| | Table 7 EFUV | 0.0000551% |
| | NUV | 0.0000576% |
| | Table 8 (IR) | 0.010395% |
| | Table 9 (VIS) | See 7.1.3 |
| | W1.3 – W10 | 0.41% |
| | Table 10 Tinted | 0.0001944% |
| | Extra Dark | |
| 7.1.3 | Automatic Darkening Welding Filter Lenses | |
| | W1.3 – W3.0 | 0.41% |
| | W4 | 0.0018287% |
| | W5 | 0.0003283% |
| | W6 | 0.0003605% |
| | W7 | 0.0000961% |
| | W8 | 0.0001944% |
| | W9 | 0.0000459% |
| | W10 | 0.0000706% |
| | W11 | 0.0000068% |
| | W12 | 0.0000055% |
| | W13 | 0.0000028% |
| | W14 | 0.0000017% |
| | EFUV | 0.0000551% |
| | NUV | 0.0000576% |
| | IR | 0.010395% |
| 7.1.3.1 | Switching Index | 0.0192 mSec |
| 7.1.4 | Visible Light Filters | |
| | Visible Light | 0.41% |
| | UVA | 0.0000576% |
| | UVB | 0.0000551% |
| 7.2.1 | Transmittance of Housings – Goggles | 0.0000017% |
| 7.2.2 | Transmittance of Housings – Faceshields | 0.0000017% |