

# **TEST RESULTS and REPORT**

## **for**

**ADF- 600S**

by



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-TEC101608-01**

- Results in this report only relate to the samples analyzed.
- This report shall not be reproduced, except in full, without written approval from COLTS Laboratories.
- Unless otherwise requested, test samples will be discarded 21 days from the report date.

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***SUMMARY  
REPORT*****Z-TEC101608-01**

Project ID	Test /Model(s)	Results	Reason	Page
		Pass / Fail		
Z-TEC101608-01-01	ANSI Z87.1-2003 Automatic Darkening Welding Filter Requirements ADF- 600S - Shades 4/9-13	Pass		1



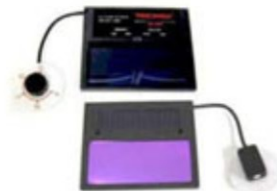
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## Report Summary

### Report To:

### PROJECT

**Report of:** ANSI Z87.1-2003 Automatic Darkening Welding  
Filter Requirements  
**of Model(s):** ADF- 600S - Shades 4/9-13  
**Project ID(s):** Z-TEC101608-01-01



**Date:** Tuesday, November 18, 2008

On Thursday, October 16, 2008, COLTS Laboratories received ADFs: ADF- 600S - Shades 4/9-13 from  
October 21, 2008 through Tuesday, November 18, 2008 COLTS Laboratories tested these ADFs in accordance with ANSI Z87.1-2003.

From Tuesday,

### Final Conclusion:

The ADFs: ADF- 600S - Shades 4/9-13 do comply with ANSI Z87.1-2003 for the test(s) performed for ANSI Z87.1-2003 Automatic Darkening Welding Filter Requirements.

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

Respectfully submitted,  
COLTS Laboratories

Darin McCormick  
Lab Manager

John M. Young  
President



Lab Temp (°C): 23

Lab Rh: 48

## Report of: ANSI Z87.1-2003 Automatic Darkening Welding Filter Requirements

Test/Property	ANSI Z87-1 Paragraph	Requirement	Test Results	Acceptance
Drop Ball Impact	10.2.2.1	The lens shall not fracture as a result of this test.	Sample 1 Sample 2 Sample 3 Sample 4	Pass Pass Pass Pass
Plastic Lens Penetration Test	10.2.2.2 10.3.1.3	The lens shall not fracture or be pierced through as a result of this test (Plastic welding lenses only).		N/A
Prismatic Power	10.4.1	Shall apply to all clear impact resistant and filter lenses less than shade 9 (light state for autotransforming lenses). The prismatic power shall not exceed 0.50 prism diopters in any direction. Vertical prism imbalance shall not exceed 0.25 prism diopters, and horizontal prism imbalance shall not exceed 0.25 prism diopters "Base In" or 0.75 prism diopters "Base Out".	Complete prism Vertical Imbalance Horizontal Imbalance Base In Horizontal Imbalance Base Out	0.071 D 0.05 D N/A 0.05 D
Refractive Power	10.4.2	Clear impact resistant lenses and filter lenses less than shade 9 (light state of autotransforming lenses) The refractive power, in any meridian, shall not exceed +/- 0.06 D. The maximum astigmatism, the absolute difference in power measured in the two extreme meridians, shall not exceed 0.06 D.	Refractive Left Refractive Right Astigmatism Left Astigmatism Right	+0.01 D +0.01 D 0.02 D 0.02 D
Resolving Power	10.4.3	Clear impact resistant lenses and filter lenses less than shade 9 (light state for autotransforming lenses). All lines in both orientations of NBS Pattern 20 shall be clearly resolved.	Left Right	40 40
Flammability	10.6	The material shall not burn at a rate greater than 76 mm (3 in) per minute when tested in accordance with section 14.6. This test is intended to measure the rate of burning or extent of burning of plastics used in protectors.	Welding Filter/ADF	Self Extinguished Pass



Lab Temp (°C): 23

Lab Rh: 48

# Report of: ANSI Z87.1-2003 Automatic Darkening Welding Filter Requirements

Test/Property	ANSI Z87-1 Paragraph	Requirement	Test Results	Acceptance
Markings	10.11	All markings shall be permanent, legible, and placed so that interference with the vision of the wearer is minimal.	Acceptable	Pass
Removable Lens Markings	10.11.2	Lenses shall be marked as follows (cover lenses are excluded):  Manufacturer: Manufacturer's mark. Z87: Complies with Basic Testing Requirements of section 10.2. Z87+: Complies with High Impact Testing Requirements of section 10.3. Shade Number: Filter lens which complies with table 1. (For a clear lens which complies with table 1 - no indication mark is needed.)	Acceptable Acceptable Acceptable	Pass Pass N/A Pass
Dark State Transmittance	10.12.1	Automatic darkening welding filter lenses shall comply with the luminous transmittance requirements specified in Table 1 when tested in each designated dark shade number in accordance with section 14.12.  -5 degrees C +/- 2 degrees C 23 degrees C +/- 2 degrees C 55 degrees C +/- 2 degrees C	See Charts See Charts See Charts	Pass Pass Pass
UV and IR Transmittance	10.12.3	The test specimen shall meet the requirements for UV and IR transmittance as specified in Table 1 for its designated dark shade number. An adjustable shade lens shall meet the Table 1 requirement for its highest designated dark shade number.  Dark State - 23 degrees C +/- 2 degrees C Light State - 23 degrees C +/- 2 degrees C Unpowered - 23 degrees C +/- 2 degrees C	See Charts See Charts See Charts	Pass Pass Pass
Switching Index	10.12.4	Shall meet the requirements of Table 3 when tested.  -5 degrees C +/- 2 degrees C 23 degrees C +/- 2 degrees C 55 degrees C +/- 2 degrees C	See Charts See Charts See Charts	Pass Pass Pass
Occlusion	10.12.5	Other than in the case of a complete failure to switch, shall meet the requirements of Table 3.  -5 degrees C +/- 2 degrees C 23 degrees C +/- 2 degrees C 55 degrees C +/- 2 degrees C	Acceptable Acceptable Acceptable	Pass Pass Pass