



Test Report T4482-01-2 Issue 1
ANSI Z87.1-2003 Welding Helmets

NH3003 Flip Front Welding Helmet
20 March 2009



Certificate 1722.01

Approved by:

A handwritten signature in blue ink, appearing to read "Keith E. Whitten".

Keith E. Whitten
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Prepared by:

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Cathy Woloszyn
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Objective:

Contract testing ANSI Z87.1-2003 "Practice for Occupational and Educational Eye and Face Protection."
Section 10 Welding Helmets and Handshields.

Welding Helmet Only, Lenses not assessed.

Samples:

NH3003 Filp Front Welding Helmets

Description	Quantity	Received	Sample ID
Shield with headgear, and test lenses	24	21 January 2009	NH3003
	24	03 March 2009	

Procedures:

Testing protocols in accord with good laboratory practice were employed for all tests.

All tests were conducted in a standard laboratory atmosphere unless otherwise specified.

Testing procedures as specified within Section 15 of ANSI Z87.1-2003 were followed.

Samples were randomly selected from the quantity provided and tested in the as-received condition unless otherwise stated.

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Assessment Summary:

Dates tested: 26 January 2009 and 18 through 19 March 2009

Section 10 Welding Helmets and Handshields	Compliant	Non Compliant
10.1 Introduction		
10.2 Basic Impact Testing Requirements		
10.2.1 Welding Helmet Shell Tests		
10.2.1.1 High Mass Impact	X	
10.2.1.2 High Velocity Impact	X	
10.2.2 Basic Impact Lens Tests	Lens not assessed	
10.3 High Impact Testing Requirements	Assessed to 10.2	
10.4 Optical Requirements for Plano welding Helmet lenses	Lens not assessed	
10.5 Optical Requirements for Non-Plano Welding Helmet Lenses	Not applicable	
10.6 Flammability	X	
10.7 Corrosion Resistance	Not applicable	
10.8 Cleanability	X	
10.9 Non-Lens Area Transmittance and Light Tightness		
10.9.1 Transmittance of Non-Lens Area	X	
10.9.2 Light Tightness	X	
10.10 Replacement Welding Helmet Lenses	Not applicable	
10.11 Marking	Not assessed	
10.12 Transmittance Requirement-Automatic Darkening Welding Filter Lenses	Lens not assessed	
10.13 Cover Plates	Exempt	

Samples as assessed meet the requirements of ANSI Z87.1-2003 for Welding Helmets.

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Results:

10.2.1.1 High Mass Impact

Sample ID	Location	Pass	Fail
NH3003	Right Ocular	X	
	Left Ocular	X	
	Right Ocular	X	
	Left Ocular	X	

Tested with flip front in up position.

10.2.1.2 High Velocity Impact

Sample ID	Location	Velocity (ft/sec)	Pass	Fail
NH3003	Right Ocular 15° Nasal	152	X	
	Right Ocular 0°	151	X	
	Right Ocular 15° Temporal	152	X	
	Right Ocular 30° Temporal	152	X	
	Right Ocular 45° Temporal	152	X	
	Right Ocular 60° Temporal	152	X	
	Right Ocular 75° Temporal	151	X	
	Right Ocular 90° Temporal	151	X	
	Right Ocular 90° Temporal +10 mm	151	X	
	Right Ocular 90° Temporal -10 mm	152	X	
	Left Ocular 15° Nasal	152	X	
	Left Ocular 0°	151	X	
	Left Ocular 15° Temporal	152	X	
	Left Ocular 30° Temporal	151	X	
	Left Ocular 45° Temporal	150	X	
	Left Ocular 60° Temporal	151	X	
	Left Ocular 75° Temporal	152	X	
	Left Ocular 90° Temporal	151	X	
	Left Ocular 90° Temporal +10 mm	152	X	
	Left Ocular 90° Temporal -10 mm	152	X	

Tested with flip front in up position.

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10.6 Flammability Resistance

Sample ID	Component	Measured Value (mm/min)	Pass	Fail
NH3003	Shell	15	X	
	Bezel	20	X	
	Flip Front	20	X	
	Sweatband	33	X	
	Sweatband	23	X	
	Headgear	40	X	
	Sweatband	0	X	
	Headgear	30	X	
	Sweatband	0	X	
	Headgear	30	X	
	Sweatband	0	X	
Specification:		≤ 76		

10.8 Cleanability; Result: Pass

Function is not impaired by cleaning.

10.9.1 Transmittance (Non-Lens Area)

Sample ID:	2A-13	2A-14	2A-15	Specification	Pass	Fail
Luminous (%)	<1E-5	<1E-5	<1E-5	≤ 0.00044	X	
Far-Ultraviolet (%)	<1E-5	<1E-5	<1E-5	≤ 0.0001	X	
Near-Ultraviolet (%)	<1E-5	<1E-5	<1E-5	≤ 0.000016	X	
Infrared (%)	<1E-5	<1E-5	<1E-5	≤ 0.3	X	
Blue Light (%)	<1E-5	<1E-5	<1E-5	≤ 0.00044	X	

Note: Specification is for a shade 14 lens.

10.9.2 Light Tightness; Result: Pass

When equipped with test lens the helmet does not allow direct penetration of visible light between the lens and lens holder.

10.13 Cover Lenses

Are exempt from all requirements of this standard, shall not be marked.

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Sample Photographs:

