

Test Report # T5375-01 Issue1 ANSI Z89.1-2009 Standard Representaciones Internationales JYR S.A. WW-2004 – Industrial Safety Helmet 09 March 2010



Approved by:

Jagdesh Sookhdeo

Head Protection – Lab Manager

Prepared by:

Shelley Brady

Head Protection - Administrator

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ICS Laboratories, Inc. •1072 Industrial Parkway North • Brunswick, Ohio 44212 USA
Phone: 330.220.0515 Fax: 330.220.0516





Camino al Milagro # 104 Colonia El Milagro Apodaca 66634

Mexico

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# Objective:

Contract testing to ANSI Z89.1-2009 "American National Standard for Industrial Head Protection".

Type I, Class E

### Sample(s):

WW-2004 - Industrial Safety Helmets:

Description	Qty	Date Code	Material	Received	Sample ID
White Shell with Pinlock Suspension	15	8/09	PE 26 E-1 2010		<b>5</b> A
Blue Shell with Pinlock Suspension	15	8/09	PE	26 February 2010	5A-x

#### **Procedures:**

Testing protocols in accord with good laboratory practice were employed unless otherwise specified, for all tests.

Testing procedures as specified within Section 9 of ANSI Z89.1-2009 were followed.

Testing was performed at room temperature  $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$  (73.4°F ± 3.6°F) per ANSI Z89.1 – 2009.

### **Assessment Summary:**

Date tested: 04 March 2010

Requirements	Compliant	Non Compliant
6 Instruction and Marking	X	
7 Performance Requirements		
7.1 Requirements for Type I and Type II		
7.1.1 Flammability	X	
7.1.2 Force Transmission	X	
7.1.3 Apex Penetration	X	
7.1.4 Electrical Insulation Requirement		
7.1.4.2 Electrical Insulation Requirement - Class E	X	

Sample as assessed meet the requirements of ANSI Z89.1 2009 for Type I, Class E.





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### **Results:**

### 6 Instruction and Marking

	Pass	Fail
6.1 Instructions Provided	X	
6.2 Marking:		
-the name or mark of the manufacturer	X	
-the date of manufacture	X	
-the American National Standard designation (ANSI/ISEA Z89.1)	X	
-the applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings (if applicable Type and Class followed by optional criteria markings).	blicable)	
-the approximate headband size range	X	

Note: All markings under clause 6.2 shall be at least 1.5 mm (0.06 in.) in height.

7.1.1 Flammability

Sample ID	Afterflame (sec)	Pass	Fail
5A-12	0.0	X	
Specification:	< 5		





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### 7.1.2 Force Transmission

Sample ID	Conditioning	Velocity (m/s)	Force (N)	Specified Value (N)	Observations	Pass	Fail
5A-1		5.52	2470		1, 2	X	
5A-2		5.50	2533		1	X	
5A-3		5.49	2438		1	X	
5A-4		5.50	8232		3	X	
5A-5		5.49	2685	. 1150	1	X	
5A-6		5.51	2443		1	X	
5A-7	49° ± 2°C	5.49	2728	≤ 4450	2	X	
5A-8		5.45	2599	1	2, 3	X	
5A-9		5.50	2603		2, 3	X	
5A-10		5.52	2482		2, 3	X	
5A-11		5.47	2728		1, 2	X	
5A-12		5.51	2758		1	X	
Average			3058	≤ 3780		X	
5A-13		5.51	11547		3, 4	X	
5A-14		5.50	4059		-	X	
5A-15		5.52	3581		3, 4	X	
5A-16		5.52	3756		3, 4	X	
5A-17		5.53	3162		3, 4	X	
5A-18		5.50	3176	1150	3, 4	X	
5A-19	-18 ± 2°C	5.52	3304	≤ 4450	3, 4	X	
5A-20		5.51	2798		3, 4	X	
5A-21		5.50	3628		3	X	
5A-22		5.52	3372	]	3, 4	X	
5A-23		5.51	3687		3, 4	X	
5A-24		5.53	3974		3, 4	X	
Average			4170	≤ 3780		X	
Specification:		5.50 ± 0.05 m/s		*			

Note:

Drop Height: 60.7 inches





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7.1.3 Apex Penetration

Sample ID	Conditioning	Velocity (m/s)	Electrical Contact (Yes/ No)	Observations	Pass	Fail
5A-25		7.0	No	_	X	
5A-26	49° ± 2°C	7.0	No	-	X	
5A-27		7.0	No	-	X	
5A-28		7.0	No	1, 2	X	
5A-29	$-18 \pm 2$ °C	7.0	No	-	X	
5A-30		7.0	No	_	X	
Specification:		7.0 ± 0.1 m/s	No Electrical Contact Allowed			

Note:

Drop Height: 98.3 inches

### Observations:

1 – Suspension tab broke2 – Suspension tab released

7.1.4 Electrical Insulation Requirements (Class E)

Sample Leakage ID (mA)		Burn Through (Yes/ No)	Observations	Pass	Fail
5A-1	4.5	No	-	X	
5A-13	4.7	No	_	X	
Specification:	Class E: < 9 mA	No Burn Through Allowed			

Note:

Class E - 20,000 volts, 60 Hz, 3 minutes, 30,000 volts no burn through.

Observations:

None

### Sample Photographs:















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- 17. Client agrees to pay any and all additional costs associated with unexpected or above standard communications and/or consultations with client or third parties as designated by client.
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- 22. In the event that payment is not received within 15 days of invoice date, Client agrees to pay a late payment charge on the unpaid balance equal to 1-1/2% per month or the maximum charge allowed by law, whichever is less, and all costs and expenses, including attorney's fees where recovery of the same is not prohibited by law, incurred by ICS in collecting such invoices.
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