



Test Report # T17236-02-1 Issue 1
ANSI/ISEA Z89.1 - 2014 (R2019)
Jinhua City Jinhan Safety Tools Co., Ltd.
W-003 – Industrial Safety Helmet
05 October 2022



Approved by:

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Prepared by:

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Issued to: Jinhua City Jinhan Safety Tools Co., Ltd.
 No. 8, Chuang Ye Road, Luo Dian Industrial District
 Jinhua City, Zhejiang Province
 China

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Objective:

Contract testing to ANSI/ISEA Z89.1-2014 (R2019) “American National Standard for Industrial Head Protection”.

-Type I, Class E, G & C

Sample(s):

W-003* - Industrial Safety Helmet

Description	Qty	Date Code	Material	Date Received	Sample ID
Orange Shell (Front Brim Cap) w/ Ratchet Suspension (4 pt.), Non-Vented w/ Chin Strap	30	7/22	Not present on product	06 September 2022	6A-02-x

*W-003 not present on product

Procedures:

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

Testing procedures as specified within Section 10 of ANSI/ISEA Z89.1-2014 (R2019) were followed.

Testing was performed at room temperature 23°C ± 3°C (73.4°F ± 5.4°F) per ANSI/ISEA Z89.1 – 2014 (R2019).

Equipment:

Cadex Twin Wire Test Platform
 Environmental Conditioning Chambers
 Cadex Impact Software V6.9U
 Hanco Dielectric Strength Chamber

Assessment Summary:

Date Tested: 04 October 2022 – 05 October
 Test Performed By: Joe McGreal – Engineering Technician

Requirements	Compliant	Non-Compliant
6 Instruction and Marking	<i>Excluded</i>	
7 Performance Requirements		
7.1 Requirements for Type I		
7.1.1 Flammability	X	
7.1.2 Force Transmission	X	
7.1.3 Apex Penetration	X	
7.1.4 Electrical Insulation Requirement		
7.1.4.3 Electrical Insulation Requirement - Class E	X	
7.3 Requirements for Optional Testing		
7.3.1 Reverse Wearing		
-Force Transmission		
7.3.2 High-Visibility	Not Applicable	
7.3.3 Higher Temperature		
7.3.4 Lower Temperature		

Samples as assessed meet the mechanical performance requirements of ANSI/ISEA Z89.1 2014 (R2019) for Type I, Class E, G & C.

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Results:

7.1.1 Flammability

Sample ID	Afterflame (sec)	Pass	Fail
6A-02-12	0	X	
Specification:	< 5		

7.1.2 Force Transmission

Sample ID	Conditioning (°C)	Velocity (m/s)	Force (N)	Specified Value (N)	Observations	Pass	Fail
6A-02-1	49 ± 2	5.51	2484	≤ 4450	-	X	
6A-02-2		5.51	2420		-	X	
6A-02-3		5.51	2484		-	X	
6A-02-4		5.50	2203		-	X	
6A-02-5		5.52	2095		-	X	
6A-02-6		5.50	2506		-	X	
6A-02-7		5.52	2527		-	X	
6A-02-8		5.52	2356		-	X	
6A-02-9		5.52	2398		-	X	
6A-02-10		5.52	2334		-	X	
6A-02-11		5.53	2398		-	X	
6A-02-12		5.52	2311		-	X	
Average			2376	≤ 3780		X	
6A-02-13	-18 ± 2	5.51	3238	≤ 4450	-	X	
6A-02-14		5.51	3179		-	X	
6A-02-15		5.52	3241		-	X	
6A-02-16		5.51	3282		-	X	
6A-02-17		5.52	3392		-	X	
6A-02-18		5.52	3477		-	X	
6A-02-19		5.52	3153		-	X	
6A-02-20		5.53	3217		-	X	
6A-02-21		5.51	3393		-	X	
6A-02-22		5.52	3242		-	X	
6A-02-23		5.52	3219		-	X	
6A-02-24		5.52	3283		-	X	
Average			3276	≤ 3780		X	
Specification:		5.50 ± 0.05					

Observations:
 (-) No observation

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7.1.3 Apex Penetration

Sample ID	Conditioning (°C)	Velocity (m/s)	Electrical Contact (Yes/ No)	Observations	Pass	Fail
6A-02-25	49 ± 2	7.1	No	-	X	
6A-02-26		7.1	No	-	X	
6A-02-27		7.0	No	-	X	
6A-02-28	-18 ± 2	7.1	No	-	X	
6A-02-29		7.1	No	-	X	
6A-02-30		7.0	Nox	-	X	
Specification:		7.0 ± 0.1	No Electrical Contact Allowed			

Observations:
 (-) No observation

7.1.4.3 Electrical Insulation Requirements (Class E)

Sample ID	Leakage (mA)	Burn Through (Yes/ No)	Observations	Pass	Fail
6A-02-1	4.3	No	-	X	
6A-02-13	4.3	No	-	X	
Specification:	Class E: ≤ 9 mA	No Burn Through Allowed			

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

Note: Test line lowered to prevent flashover

Observations:
 (-) No observation

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Sample Photographs:



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