



Test Report # T17167-01-2 Issue 1
ANSI/ISEA Z89.1 - 2014 (R2019)

Treck S.A.
Casco Altura Activex IV Alpine ABS – Industrial Safety Helmet
19 September 2022



Approved by:

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Prepared by:

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 Santiago - Chile

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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 & C

Sample(s):

Casco Altura Activex IV Alpine ABS - Industrial Safety Helmet

Description	Qty	Date Code	Material	Date Received	Sample ID
White Shell (Cap) w/ Ratchet Suspension (6-12 pt.), Non-Vented w/ Chin Strap	32	Not present on product		19 May 2022	7A-x

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: 02 June 2022 – 03 June 2022
 Test Performed By: Joe McGreal – Engineering Technician

Requirements	Compliant	Non-Compliant
6 Instruction and Marking	Excluded	
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		

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

Results:

7.1.1 Flammability

Sample ID	Afterflame (sec)	Pass	Fail
7A-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
7A-1	49 ± 2	5.52	2811	≤ 4450	-	X	
7A-2		5.52	2815		-	X	
7A-3		5.52	2639		-	X	
7A-4		5.51	3097		-	X	
7A-5		5.52	2674		-	X	
7A-6		5.53	2956		-	X	
7A-7		5.52	2834		-	X	
7A-8		5.51	3076		-	X	
7A-9		5.52	2937		-	X	
7A-10		5.52	2627		-	X	
7A-11		5.53	2988		-	X	
7A-12		5.52	2561		1	X	
Average			2834	≤ 3780		X	
7A-13	-18 ± 2	5.51	3202	≤ 4450	-	X	
7A-14		5.52	3164		-	X	
7A-15		5.52	3230		-	X	
7A-16		5.52	3246		-	X	
7A-17		5.52	3202		-	X	
7A-18		5.52	3246		-	X	
7A-19		5.52	3356		-	X	
7A-20		5.51	3379		-	X	
7A-21		5.53	3270		-	X	
7A-22		5.52	3319		-	X	
7A-23		5.51	3225		-	X	
7A-24		5.52	3209		-	X	
Average			3254	≤ 3780		X	
Specification:		5.50 ± 0.05					

Observations:
 (-) No observation
 1 – Two suspension straps broken

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7.1.3 Apex Penetration

Sample ID	Conditioning (°C)	Velocity (m/s)	Electrical Contact (Yes/ No)	Observations	Pass	Fail
7A-25	49 ± 2	7.1	No	-	X	
7A-26		7.1	No	-	X	
7A-27		7.0	No	-	X	
7A-28	-18 ± 2	7.1	No	-	X	
7A-29		7.0	No	-	X	
7A-30		7.0	No	-	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
7A-1	5.8	No	-	X	
7A-13	5.6	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
 Samples do not have test line coverage for E or G.

Observations:
 (-) No observation

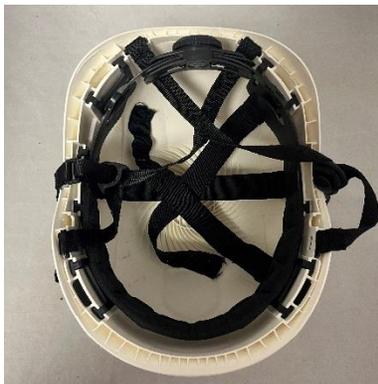
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Sample Photographs:



Observation Photograph:



7A-12 Broken Suspension Straps

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19. It is agreed that if ICS should be found liable for any losses or damages attributable to the services hereunder in any respect, its liability shall not exceed the amount of the fee paid by Client for services rendered and Client's sole remedy at law or in equity shall be the right to recover that sum.
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