Test Report No.: 64.190.25.0053.01-00
Dated: 2025-01-24

Applicant:	TRECK S.A.
Address:	Santa Rose 5220, San Joaquin, 8960025 Santiago, Chile
Sample Submission:	The sample was submitted by applicant and identified.
Product Name:	Casco Activex IV Alpine ABS
Identification/Style No.:	01-01-33X (X showing exists in different colour)
Product size:	53-64cm
Receipt Date of Sample:	2024-12-23
Date of Testing:	From 2024-12-24 to 2025-01-14
Test Result:	Refer to the data listed in following pages

Test Specification(s) or Test Item(s): **Conclusions:**

1. ANSI/ISEA Z89.1-2014(Excluding clause 6) **Pass**

Hardline Laboratory

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch

Tested By: Mac Xiao **Reviewed By:** Steven Pan

Mac Xiao
Test Engineer

Steven Pan
Designated Reviewer

Note: (1) "General Terms & Conditions" applied. For full version, please visit: http://www.tuvsud.cn/cn-scn/terms-and-conditions
2) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. 3) The conclusion of test result was drawn according to corresponding regulation or standard method and/ or client's requirement

Description of the test subject:

1	**Product Description**	Product name: Casco Activex IV Alpine ABS Size: 53-64cm Types and Classes: Type II Class E
Sample photo(s)		
		

Test Results:

1. ANSI/ISEA Z89.1-2014 American National Standard for Industrial Head Protection

Clause	Requirement	Results
6	**INSTRUCTIONS AND MARKING**	
6.1	Each helmet shall be accompanied by manufacturers' instructions explaining the application(s) of use, proper method of size adjustment and fitting (including, if applicable, reverse wearing) and, guidelines for care and useful service life. NOTE: Useful service life guidelines are intended to provide the user with information that certain conditions may affect a specific helmet's continued protection over time. A specific service life, defined in terms of number of years, is not required though individual manufacturers may choose to include such information for their respective helmets.	N/T
6.2	Each helmet shall bear permanent markings in at least 1.5 mm (0.06 in.) high letters stating the following information: a. Name or identification mark of the manufacturer. b. The date of manufacture. c. The American National Standard designation, ANSI/ISEA Z89.1-2014. d. The applicable Type and Class designations, followed by applicable optional criteria markings; e. The approximate headsize range (see Table 2).	N/T
6.3	If optional performance features are satisfied, the appropriate marking below shall be applied in the sequence as specified below: -Reverse donning; LT - Lower temperature HV - High visibility HT–Higher temperature The size of the reverse donning symbol shall be large enough to be legible.	N/T
7	**PERFORMANCE REQUIREMENTS**	
7.1	Requirements for Type I and Type II Helmets	
7.1.1	Flammability Helmets shall be tested in accordance with Section 10.1. No flame shall be visible 5 seconds after removal of the test flame.	P
7.1.2	Force Transmission Helmets shall be tested in accordance with Section 10.2 and shall not transmit a force to the test headform that exceeds 4,450 N (1,000 lbf). Additionally, for each preconditioning specified, the maximum transmitted force of individual test samples shall be averaged. The averaged values shall not exceed 3,780 N (850 lbf).	P
7.1.3	Apex Penetration Helmets shall be tested in accordance with Section 10.3. The penetrator shall not make contact with the top of the test headform.	P
7.1.4	Electrical Insulation Requirements 7.1.4.1 General Class G and Class E helmets shall meet their appropriate performance requirement as listed below. ClassC helmets are not tested for electrical insulation. 7.1.4.2 Class G Requirements	N/A

Clause	Requirement	Results
	Class G helmets shall be tested in accordance with Section 10.7 and shall withstand 2,200 volts (root mean square) AC. 60 hertz, for 1 minute. Leakage shall not exceed 3 mill amperes.	
	7.1.4.3 Class E Requirements After first passing the force transmission test specified in Section 7.1.2, Class E helmets shall be tested in accordance with Section 10.7 and shall withstand 20,000 volts (root mean square) AC, 60 hertz, for 3 minutes. Leakage shall not exceed 9 mill amperes.At 30,000 volts, the test sample shall not burn through.	P
7.2	Additional Requirements for Type II Helmets	
7.2.1	Impact Energy Attenuation Type II helmets shall be tested in accordance with Section 10.4. Maximum acceleration shall not exceed 150g.	P
7.2.2	Off-center Penetration Type II helmets shall be tested in accordance with Section 10.5. For each helmet tested, the penetrator shall not make contact with the test headform.	P
7.2.3	Chin Strap Chin straps shall be made of material not less than 12.7mm (0.50 in.) in width. Type II helmets which are provided with chin straps shall be tested for retention in accordance with Section 10.6. For each helmet tested, the chin strap shall remain attached to the helemt. The residual elongation of the strap shall not exceed 25 mm (1.0 in.).	P

Abbreviation: P=Pass; F=Fail; N/A = Not Applicable; N/T=Not Tested; N/R=Not Requested

Appendix:

Clause 7.1.1- FLAMMABILITY TEST
Testing Conditions: 23 °C, 50 %

Sample No.	Result	Assessment
12#	0 s	Pass
Temperature of the flame at the tip of the inner cone: 848 °C.		

Clause 7.1.2- FORCE TRANSMISSION TEST
Testing Conditions: 23 °C, 50 %

Preconditioning Environments	Result				Assessment
Hot: 49°C,2h	1#	3016 N	7#	2567 N	Pass
	2#	2567 N	8#	2842 N	
	3#	2798 N	9#	2946 N	
	4#	2652 N	10#	2789 N	

	5#	2580 N	11#	2666 N	
	6#	2708 N	12#	2812 N	
	Average values: 2745 N				
Cold: -18°C,2h	13#	2999 N	19#	2878 N	
	14#	2979 N	20#	2914 N	
	15#	2953 N	21#	2982 N	
	16#	2835 N	22#	3084 N	
	17#	2992 N	23#	3052 N	
	18#	3138 N	24#	3897 N	
	Average values: 2975 N				
The impactor: 3.60 kg Impact velocity: 5.50 m/s					

Clause 7.1.3- APEX PENETRATION TEST
Testing Conditions: 23 °C, 50 %

Preconditioning Environments	Result		Assessment
Hot: 49°C,2h	25#	The penetrator didn't make contact with the top of the test headform	Pass
	26#		
	27#		
Cold: -18°C,2h	28#		
	29#		
	30#		
The penetrator :1.0 kg Impact velocity: 7.0 m/s			

Clause 7.1.4- ELECTRICAL INSULATION REQUIREMENTS TEST
Testing Conditions: 23 °C, 50 %

Preconditioning Environments	Result		Assessment
b) 20kV Type II			
Hot: 49°C,2h	1#	4.02 mA	Pass

(After the force transmission test)		At 30,000 volts, the sample was not burned through	
Cold: -18°C,2h (After the force transmission test)	24#	3.89 mA At 30,000 volts, the sample was not burned through	
Fresh tap water Voltage: 20kV for 3 min and then, 30kV/s and then immediately reducing t to 0 V.			

Clause 7.2.1- IMPACT ENERGY ATTENUATION TEST
Testing Conditions: 23 °C, 50 %

Preconditioning Environments	Result			Assessment
Hot: 49°C,2h	2#	Side	Peak deceleration: 92.7g	Pass
	3#		Peak deceleration: 118.4g	
	4#		Peak deceleration: 99.1g	
	5#		Peak deceleration: 108.2g	
Cold: -18°C,2h	14#	Side	Peak deceleration: 115.2g	
	15#		Peak deceleration: 67.4g	
	16#		Peak deceleration: 131.4g	
	17#		Peak deceleration: 98.1g	
Water immersion: 23°C,2h	6#	Side	Peak deceleration: 109.1g	
	7#		Peak deceleration: 128.4g	
	18#		Peak deceleration: 132.5g	
	19#		Peak deceleration: 111.8g	
The impactor: 5.0 kg Impact velocity: 3.5m/s				

Clause 7.2.2- CENTER PENETRATION TEST
Testing Conditions: 23 °C, 50 %

Preconditioning Environments	Result			Assessment
Hot: 49°C,2h	8#	Side Front	The penetrator didn't make contact with the top of the test headform.	Pass

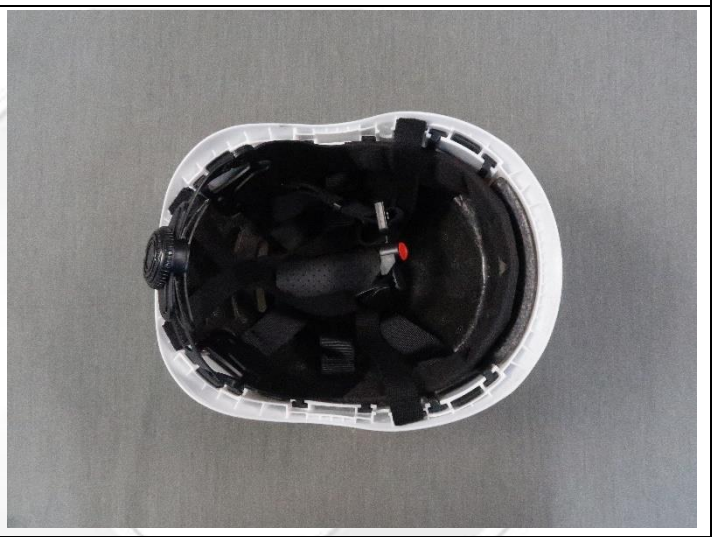
	9#	Side	The penetrator didn't make contact with the top of the test headform.	
		Front		
Cold: -18°C,2h	20#	Side	The penetrator didn't make contact with the top of the test headform.	
		Front		
	21#	Side	The penetrator didn't make contact with the top of the test headform.	
		Front		
Water immersion: 23°C,2h	10#	Side	The penetrator didn't make contact with the top of the test headform.	
		Front		
	22#	Side	The penetrator didn't make contact with the top of the test headform.	
		Front		
The impactor: 1.0 kg Impact velocity: 5.0m/s				

Clause 7.2.3- CHIN STRAP TEST
Testing Conditions: 22 °C, 50 %

Preconditioning Environments	Result		Assessment
/	The width of chin straps:18 mm		Pass
Hot: 49°C,2h	11#	The chin straps remained attached to the helmet. The residual elongation of the strap:16.8mm.	
Cold: -18°C,2h	13#	The chin straps remained attached to the helmet. The residual elongation of the strap:15.7mm.	
Water immersion: 23°C,2h	23#	The chin straps remained attached to the helmet. The residual elongation of the strap:10.4mm.	

Photos for reference:

Front view	
Side view	
Back view	

Top view	
Bottom view	

Remark:

1. The test results exclusively based on the submitted sample.
2. The tests were subcontracted to Testing Center for Personal Protective Equipment, Institute of Urban Safety and Environmental Science, Beijing Academy of Science and Technology.
3. As requested by the applicant, no actual test was conducted in this report, only refer to test data of the report 64.190.24.3272.01-00 which was issued on 2025-01-22. And only the information of applicant was modified.

-End of Test Report-