August 21, 2014

Zhejiang Nicety Technology Co LTD No 9 Fengyangpu Rd Xinqiao Town Luqiao District Taizhou, Zhejiang 318055



E-mail: chinanicety@163.net

File	SA33023
UL Project	4786816846
Product Service	CITS (Developmental) Industrial Head Protection Testing per ANSI/ISEA Z89.1-
Description	2014 (2014-01-01)
Product	Model: NTC (Type II, Class E)

Dear Mr. Wang,

Per your request, a project was opened according to the Product Service Description detailed above. The test data collected is provided below.

UL LLC did not select the samples, determine whether the samples were representative of production samples or witness the production of the test samples, nor were we provided with information relative to the formulation or identification of component materials used in the test samples. The test results apply only to the actual samples tested.

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This letter will serve to report that all tests on the subject product have been completed. This letter will also serve to close the UL Project (noted above), and you will be invoiced for the charges incurred during the Project.

Thank you for the opportunity to provide your company with these services. Please do not hesitate to contact us if you should have any questions or comments.

Best Regards,

Reviewed By,

Keith Zynda Senior Project Engineer Personal Protective Equipment Keith.Zynda@ul.com

919-549-1611

Robin Tutor Staff Engineer

Personal Protective Equipment

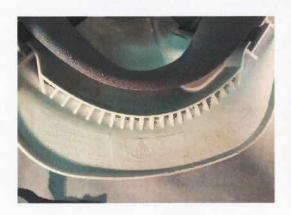
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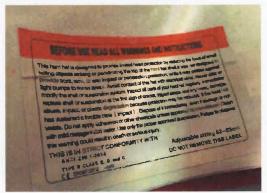
Robin.B.Tutor@ul.com

919-549-1465

Sample Photographs:







1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2014 SECTION	
Flammability Test	10.1	

2.0 RESULTS

Helmet Model:	NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented
Sample ID	Afterflame
	(sec)
12	0
Specification:	< 5

3.0 COMPLIANCE CRITERIA

3.1 Specimens shall have an afterflame of less than 5 seconds.

1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2014 SECTION	
Force Transmission Test	10.2	

2.0 RESULTS

Helmet Model: NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented

Sample ID	Conditioning (°C)	Velocity (m/s)	Force (N)	Specified Value (N)	Observations
1		5.52	3282		-
2		5.51	3194		-
3		5.51	3686		-
4		5.49	2879		
5		5.49	2691		<u> </u>
6		5.48	3326	1.4450	
7	49 ± 2	5.46	2952	≤ 4450	
8		5.45	2718		
9		5.48	3372		
10		5.50	3159		<u>-</u>
11		5.49	3023		-
12		5.47	2688		
Average			3081	≤ 3780	
13		5.50	3182		
14		5.47	3177		
15		5.48	3210		
16		5.49	3178		
17		5.52	3153		
18		5.46	3250	14450	
19	-18 ± 2	5.49	3277	≤ 4450	-
20		5.45	2968		
21		5.46	3315		•
22		5.46	3304		- T
23		5.49	3162		- nh
24		5.52	3164		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Average			3195	≤ 3780	
Specification	n:	5.50 ± 0.05			

3.0 COMPLIANCE CRITERIA

- 3.1 1. Specimens shall have an average force of no more than 3780 N (850 lbf).
 - 2. Specimens shall have an individual force of no more than 4450 N (1000 lbf).

1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2014 SECTION	
Apex Penetration Test	10.3	

2.0 RESULTS

Helmet Model:	NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented	

CONDITIONING: SEE TABLE BELOW

Sample ID	Conditionin g (°C)	Velocity (m/s)	Electrical Contact (Yes/ No)	Observations
25		7.0	No	
26	49 ± 2	6.9	No	
27		7.0	No	-
28		7.0	No	
29	-18 ± 2	7.0	No	
30		7.0	No	
pecification:		7.0 ± 0.1	No Electrical Contact Allowed	the newson factor of the state of

Impact Velocity: 23 ± 0.3 ft/s

3.0 COMPLIANCE CRITERIA

3.1 Specimens shall not exhibit electrical or physical contact between the penetration test striker and the headform.

1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2014 SECTION	
Electrical Insulation Test	10.7	

2.0 RESULTS – CLASS E HELMETS

Helmet Model:	NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented

CONDITIONING: AS RECEIVED

Sample ID	Leakage (mA)	Burn Through (Yes/ No)	Observations
1	6.3	No	
24	6.0	No	
Specification:	Class E: ≤ 9 mA	No Burn Through Allowed	

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

3.0 COMPLIANCE CRITERIA – CLASS E HELMETS

- 3.1 1. Specimens shall have a leakage current of no more than 9 mA.
 - 2. Specimens shall not burn through.

1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2009 SECTION	UL WORK INSTRUCTION
Impact Energy Attenuation Test	9.4	03-LO-W0048

2.0 RESULTS

Helmet Model: NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented

CONDITIONING: SEE TABLE BELOW

Sample ID	Conditioning (°C)	Velocity (m/s)	Acceleration (g)	Observations
2		3.5	246	_
3		3.5	271	
4	49 ± 2	3.5	267	
5		3.5	256	
14	-18 ± 2	3.5	241	
15		3.5	232	
16		3.5	232	
17		3.5	250	
6		3.5	245	
7	23 ± 2	3.5	257	-
18		3.5	258	
19		3.5	255	
Specification:		3.5 ± 0.1	≤ 150	

Impact Velocity: 11.5 ± 0.3 ft/s

3.0 COMPLIANCE CRITERIA

3.1 Specimens shall have an acceleration of no more than 150 Gn.

1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2009 SECTION	UL WORK INSTRUCTION	
Off Center Penetration Test	9.5	03-LO-W0048	

2.0 RESULTS

Helmet Model:	NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented
Ticillict Model.	1410 Write Orien Writatoriet Odsperision (opt.), 14011-verited

CONDITIONING: SEE TABLE BELOW

Sample ID	Location	Conditioning (°C)	Velocity (m/s)	Electrical/ Physical Contact Between Striker and Headform [Y/N]
8	Front	49 ± 2	5.0	No
0	Side		4.9	No
0	Rear		5.0	No
9	Left		5.0	No
20	Front	-18 ± 2	5.0	No
20	Side		5.0	No
0.4	Rear		5.0	No
21	Left		5.0	No
10 22	Front	23 ± 2	5.0	No
	Side		5.0	No
	Rear		5.0	No
	Left		5.0	No
Specification:			5.0 ± 0.1	

Impact Velocity: 16.4 ± 0.3 ft/s

3.0 COMPLIANCE CRITERIA

3.1 Specimens shall not exhibit electrical or physical contact between the penetration test striker and the headform.

1.1 Test in accordance with:

TEST NAME	ANSI Z89.1-2009 SECTION	UL WORK INSTRUCTIONS	
Chin Strap Retention Test	9.6	03-LO-W0XXX	

2.0 **RESULTS**

Helmet Model:	NTC White Shell w/Ratchet Suspension (6pt.), Non-Vented

Sample ID	Conditioning (°C)	Defiection Value	Chin Strap Remained Attached (Yes/No)	Observations
11	49 ± 2	0	Yes	-
13	-18 ± 2	0	Yes	
23	23 ± 2	0.1065	Yes	-
Specification:		≤ 25 mm	Chin strap shall remain attached to helmet	

Drop Height: 4.0 ± .02 in.

3.0 **COMPLIANCE CRITERIA**

- Specimens shall have an elongation of no more than 25 mm (1.0 in.). Specimens shall remain intact $\,$ 3.1 1.
 - 2.