



Banc National d'Épreuve
Saint-Etienne

ORIGINAL



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TEST REPORT N° 59/10/BNE/A
on May 19th 2010
Supersedes n°59/10/BNE on April 1st 2010

DELIVERED TO:

BOLLE SAFETY

95 rue Louis Guérin

69100 VILLEURBANNE - FRANCE

PURPOSE : Determine the protection level of face shields against ballistics projectiles following to the STANAG 2920 of July 2003

TESTED SAMPLE(S): RAIDER model version clear, smoke, yellow, ESP

TESTING DATE : 15th of April 2010

Publication : BOLLE SAFETY – 1 copy

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The present report contains 2 page (s).



TESTED SAMPLE(S)

RAIDER model version clear, smoke, yellow, ESP

ORIGINAL

TESTING CONDITIONS

Shooting range temperature: 15.9°C, 16.2°C, 16.3°C

Relative humidity: 61%, 63%, 69%, 74%

Used equipment

Cannon n°04

Velocity light gates PROTOTYPA LS 008

Plastilina SUEUR 40

Projectiles

FSP according to drawing DCTA/A3/6723/1 from United-Kingdom (1.102g), batch BOE 01/09

Implementation

According to STANAG 2920

TESTING RESULTS

Enclosed results

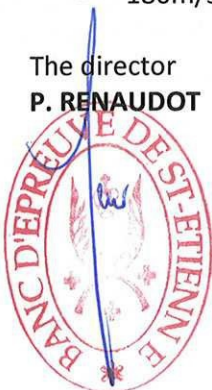
CONCLUSION

Following to the performed tests according to STANAG 2920, the protection ballistic limit (V50) of RAIDER model glasses, supplied by BOLLE SAFETY, is:

- 193m/s for the clear version,
- 185m/s for the smoked version,
- 198m/s for the yellow version,
- 186m/s for the ESP version.

The director

P. RENAUDOT



Saint-Etienne, 26th of April 2010



CHAMBRE DE COMMERCE & D'INDUSTRIE de
ST-ETIENNE - MONTBRISON
BANC NATIONAL D'EPREUVE

CERTIFICATE OF COMPLIANCE

Reference: Test Report n°59/10/BNE on 2010/04/26th

Laboratory: BANC NATIONAL D'EPREUVE DE
SAINT-ETIENNE

Company: BOLLE SAFETY
95 rue Louis Guérin
69100 VILLEURBANNE

Date of the tests: 15th of April 2010

Material: RAIDER model glasses available in 4
versions: clear, smoked, yellow, ESP.

Range temperature: 15.9°C, 16.2°C, 16.3°C

Relative humidity: 61%, 63%, 69%, 74%

Projectiles: 1.102g

RESULTS: Following to the performed tests according to STANAG
2920, the protection ballistic limit (V50) of RAIDER model glasses,
supplied by BOLLE SAFETY, is:

- ♦193m/s for the clear version,
- ♦185m/s for the smoked version,
- ♦198m/s for the yellow version,
- ♦186m/s for the ESP version.

Director:
M. RENAUDOT

BANC NATIONAL D'EPREUVE DES ARMES ET MUNITIONS
Chambre de Commerce et d'Industrie de Saint-Etienne/Montbrison
TEST BALISTIQUE

ORIGINAL

SAMPLE N°: 1/2

CUSTOMER : BOLLE SAFETY

Date : 2010/04/15th

Sizes : Face shield RAIDER version smoke

CALIBER:	1.102g			
DISTANCE:	5 METERS			

Range temperature: 15.9°C
 Relative humidity: 63%

Plastiline : Head SUEUR 40 plastilina

N° shots	Used impact for V50	V impact (m/s)	Protection	N° sample	Sample temperature (°)	Support temperature (°)	Range temperature/ Relative humidity (°C/%HR)	Remark
1		195	NO	1	19.6	18.1	15.9/63	
2	X	195	NO		18.5	18.1	15.7/62	Ejected face shield
3	X	187	YES		17.3	18.1	15.7/61	Ejected face shield
4	X	185	NO		16.6	18.1	15.7/59	Ejected face shield
5	X	187	NO	2	19.0	17.9	16.8/55	
6	X	180	YES		18.4	17.9	16.6/55	Ejected face shield
7	X	175	YES		18.2	17.9	16.3/56	

Operator's name : M.MARX/M.PIOTTE
 Attending : /

Observations : STANAG 2920
 Obtained V50 : 185m/s



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TEST BALISTIQUE

ORIGINAL

SAMPLE N°: 1/2

CUSTOMER : BOLLE SAFETY

Date : 2010/04/15th

Sizes : Face shield RAIDER version yellow

CALIBER:	1.102g				
DISTANCE:	5 METERS				

Range temperature: 16.2°C
 Relative humidity: 74%

Plastiline : Head SUEUR 40 plastilina

N° shots	Used impact for V50	V impact (m/s)	Protection	N° sample	Sample temperature (°)	Support temperature (°)	Range temperature/ Relative humidity (°C/%HR)	Remark
1	X	208	YES	1	19.6	18.5	16.2/74	Ejected face shield
2		220	NO		18.0	18.5	16.3/72	
3	X	208	NO		18.3	18.5	16.3/73	
4	X	201	NO		18.3	18.5	16.2/67	Ejected face shield
5	X	195	NO	2	18.3	18.5	16.3/69	Invalid shot: near the area
6		196	NO		19.6	18.5	16.5/79	
7	X	191	YES		19.6	18.5	16.6/68	Ejected face shield
8	X	185	YES		19.3	18.5	16.6/67	Ejected face shield

Operator's name : M.MARX/M.PIOTTE
 Attending : /



Observations : STANAG 2920
 Obtained V50 : 198m/s

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TEST BALISTIQUE

ORIGINAL

SAMPLE N°: 1/2

CUSTOMER : BOLLE SAFETY

Date : 2010/04/15th

Sizes : Face shield RAIDER version ESP

CALIBER:	1.102g			
DISTANCE:	5 METERS			

Range temperature: 15.9°C
 Relative humidity: 61%

Plastiline : Head SUEUR 40 plastilina

N° shots	Used impact for V50	V impact (m/s)	Protection	N° sample	Sample temperature (°)	Support temperature (°)	Range temperature/ Relative humidity (°C/%HR)	Remark
1	X	193	YES	1	20.8	17.8	15.9/61	Ejected face shield
2		198	NO		19.3	17.8	15.6/61	Ejected face shield
3	X	191	NO		18.5	17.8	15.6/58	Ejected face shield
4	X	190	NO		17.9	17.8	15.4/59	Ejected face shield
5	X	189	NO	2	19.6	17.8	15.6/60	Ejected face shield
6	X	179	YES		18.6	17.7	15.4/60	Ejected face shield
7	X	176	YES		17.6	17.7	15.3/60	Ejected face shield

Operator's name : M.MARX/M.PIOTTE
 Attending : /

Observations : STANAG 2920
 Obtained V50 : 186m/s



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Chambre de Commerce et d'Industrie de Saint-Etienne/Montbrison
TEST BALISTIQUE

ORIGINAL

SAMPLE N°: 1/2

CUSTOMER : BOLLE SAFETY

Date : 2010/04/15th

Sizes : Face shield RAIDER version clear

CALIBER:	1.102g				
DISTANCE:	5 METERS				

Range temperature: 16.3°C
 Relative humidity: 69%

Plastiline : Head SUEUR 40 plastilina

N° shots	Used impact for V50	V impact (m/s)	Protection	N° sample	Sample temperature (°)	Support temperature (°)	Range temperature/ Relative humidity (°C/%HR)	Remark
1		190		1	19.6	18.5	16.3/69	Invalid shot
2	X	204	NO		19.0	18.5	16.3/65	
3	X	205	NO		18.6	18.5	16.4/62	Ejected face shield
4	X	189	YES		18.0	18.4	16.3/62	Ejected face shield
5	X	190	NO		17.3	18.4	16.1/63	Ejected face shield
6	X	187	YES	2	19.6	18.4	16.0/65	
7	X	184	YES		18.6	18.4	15.9/61	Ejected face shield

Operator's name : M.MARX/M.PIOTTE
 Attending : /



Observations : STANAG 2920
 Obtained V50 : 193m/s