



UNIVERSITY OF DAYTON RESEARCH INSTITUTE  
**IMPACT PHYSICS LABORATORY**  
 DAYTON, OHIO 45469-0116 937/229-4237

**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 09 February 2015 Contract/Order No.: J88991 / IC 1301

Ambient Temperature: 71 °F Relative Humidity: 24 %

Test Panel Identification: 14mmMultilayer Glass Ballistic Samples OS2620A & B (01-22-15)

500mm x 500mm x 15.89lb Test Specification NIJ Level 2A

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 0.545 (13.9mm) inch(es) Areal Density: 5.9 lbs/sq.ft.

Projectile Caliber: .357 Mag (158 grain) Projectile Type: JSP, Speer 4217

9 mm (124 grain) FMJ/RN, Rem. 23549

Propellant Type: IMR 4227 Gun I.D.: SN: 357MagNIJLg

Witness Plate Material: 0.020" Thick 2024-T3 Bare Aluminum

Impact Obliquity: 0 degrees File Name: 10020915c.doc

Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration
	Projectile	Propellant	No. 1	No. 2	Average	Description
						OS2620A: .357 Mag.
10-86318	158.4	14.0	1307	1306	1307	No Penetration, ULC
10-86319	158.0	13.7	1252	1252	1252	No Penetration, URC
10-86320	158.0	13.7	1260	1258	1259	No Penetration, LRC
10-86321	158.1	13.7	1265	1260	1263	No Penetration, LLC
10-86322	158.3	13.7	1248	1247	1248	No Penetration, Center
						OS2620B: 9mm.
10-86323	124.1	12.0	1149	1147	1148	No Penetration, ULC
10-86324	124.2	10.0	1072	1072	1072	No Penetration, URC
10-86325	124.0	10.5	1066	1066	1066	No Penetration, LRC
10-86326	124.0	10.5	1138	1136	1137	No Penetration, LLC
10-86327	124.1	10.5	1123	1122	1123	No Penetration, Center

Comments: Test Criteria: Test IAW NIJ 0108-01 "Protective Materials" Level 2A. Impacts equally spaced on a 200mm shot square, with last impact at target center. .357 Mag. Velocity criteria is 1250 ± 50 fps. 9 mm velocity criteria is 1090 ± 40 fps. Sample set PASSED test specifications

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_



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**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 24 February 2015 Contract/Order No.: IC 1302

Ambient Temperature: 72 °F Relative Humidity: 10 %

Test Panel Identification: 19.5mm Multilayer Glass Ballistic Samples OS2653A & B (02-17-15)  
500mm x 500mm x 21.85lb Test Specification NIJ Level 3A

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 0.745 (19mm) inch(es) Areal Density: 8.1 lbs/sq.ft.

Projectile Caliber: .44 Mag (240 grain) Projectile Type: SWC, Hornady #1110  
9 mm (124 grain) FMJ/RN, Hornady. 3557

Propellant Type: IMR 4227 Gun I.D.: SN: 44MagNIJLg /357MagNIJLg

Witness Plate Material: 0.020" Thick 2024-T3 Bare Aluminum

Impact Obliquity: 0 degrees File Name: 10022415d.doc

Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration Description
	Projectile	Propellant	No. 1	No. 2	Average	
						OS2653A: .44 Mag.
10-86430	240.5	20.6	1465	1465	1465	No Penetration, ULC
10-86431	240.5	20.3	1444	1444	1444	No Penetration, URC
10-86432	240.6	20.2	1453	1452	1453	No Penetration, LRC
10-86433	240.3	20.2	1444	1443	1444	No Penetration, LLC
10-86434	240.5	20.2	1455	1454	1455	No Penetration, Center
						OS2653B: 9mm.
10-86435	124.4	16.5	1492	1491	1492	No Penetration, ULC
10-86436	124.3	16.2	1437	1435	1436	No Penetration, URC
10-86437	124.3	16.2	1424	1423	1424	No Penetration, LRC
10-86438	124.2	16.2	1440	1438	1439	No Penetration, LLC
10-86439	124.6	16.2	1427	1425	1426	No Penetration, Center

Comments: Test Criteria: Test IAW NIJ 0108-01 "Protective Materials" Level 3a. Impacts equally spaced on a 200mm shot square, with last impact at target center. Velocity criteria is 1400 ± 50 fps. Sample set PASSED test specifications.

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_



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**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 27 April 2015 Contract/Order No.: J889E1 / IC 1306

Ambient Temperature: 72 °F Relative Humidity: 30 %

Test Panel Identification: 21mm Multilayer Glass Ballistic Sample OS 2845A,B,C (Dated: 04-17-15)  
500mm x 500mm x 24.6lb.

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 0.822 (20.9mm) inch(es) Areal Density: 9.1 lbs/sq.ft.

Projectile Caliber: .44 Mag (240 grain) Projectile Type: FMJ/FN, Rainier Lot: 12071962

Propellant Type: IMR 4227 Gun I.D.: SN: 44MagNIJLg

Witness Plate Material: 0.002" Thick Bare Aluminum Foil

Impact Obliquity: 0 degrees File Name: 10042715a.doc

Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration
	Projectile	Propellant	No. 1	No. 2	Average	Description
						OS 2845A
10-86816	239.6	22.8	1451	1450	1451	No Penetration, 12 O clock
10-86817	239.4	22.8	1470	1469	1470	No Penetration, 04 O clock
10-86818	239.7	22.8	1460	1459	1460	No Penetration, 08 O clock
						OS 2845B
10-86819	239.3	22.7	1443	1443	1443	No Penetration, 12 O clock
10-86820	240.0	22.7	1441	1441	1441	No Penetration, 04 O clock
10-86821	239.6	22.7	1420	1419	1420	No Penetration, 08 O clock
						OS 2845C
10-86822	238.9	22.7	1449	1448	1449	No Penetration, 12 O clock
10-86823	240.1	22.7	1454	1449	1452	No Penetration, 04 O clock
10-86824	240.6	22.7	1420	1420	1420	No Penetration, 08 O clock

Comments: Test Criteria: Test IAW CEN BR4 Three impacts on the vertices of a 120mm shot triangle @ 1443 ± 33fps (440 ± 10mps). Panels PASSED test criteria.

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_



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**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 26 August 2015 Contract/Order No.: J889K1 / IC 1312

Ambient Temperature: 74 °F Relative Humidity: 51 %

Test Panel Identification: 26mm Multilayer Glass Ballistic Sample OS 2934A,B,C (Dated: 08-20-15)  
500mm x 500mm x 30.60lb.

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 1.015 (25.8mm) inch(es) Areal Density: 11.4 lbs/sq.ft.

Projectile Caliber: .30 Carbine (110 Grain) Projectile Type: FMJ, PMC, 30A

Propellant Type: (factory powder-PMC) Gun I.D.: S/N: 30 Carbine

Witness Plate Material: 0.002" Thick Bare Aluminum Foil

Impact Obliquity: 0 degrees File Name: 10082615d.doc


















Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration
	Projectile	Propellant	No. 1	No. 2	Average	Description
						Sample 2934A
10-86777	110	14.2	1982	1980	1981	No Penetration, 12 O'clock
10-86778	110	14.2	1986	1985	1986	No Penetration, 4 O'clock
10-86779	110	14.2	1979	1978	1979	No Penetration, 8 O'clock
						Sample 2934B
10-86780	110	14.2	1981	1980	1981	No Penetration, 12 O'clock
10-86781	110	14.2	2017	2016	2017	No Penetration, 4 O'clock
10-86782	110	14.2	1977	1976	1977	No Penetration, 8 O'clock
						Sample 2934C
10-86783	110	14.2	1978	1977	1978	No Penetration, 12 O'clock
10-86784	110	14.2	2007	2006	2007	No Penetration, 4 O'clock
10-86785	110	14.2	1974	1973	1974	No Penetration, 8 O'clock

Comments: Test Criteria: Level III+, see page 2. Three impacts on the vertices of a 120mm shot triangle @ 1988 ±33fps (606±10mps). Samples PASSED test criteria.

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_

## Protección Balística

### NIJ 0108.01 - NIVELES DE PROTECCIÓN PARA BLINDAJE AUTOMOVILÍSTICO

CATEGORIA	NIVELES	NORMAS INTERNACIONALES	NOMENCLATURA	TIPO DE ARMA Y CARTUCHO	PRUEBA CRÍTICA
VIOLENCIA URBANA	II	NOM-142-SCFI / Norma Mexicana	A	 Rifle, 22 LRHV LEAD 2.6 gr.	
		CEN 1064 / Norma Europea	BR-2	 Revolver .38 especial RN LEAD 10.2 gr. Magnum .357	38 Super Auto + P Encamisado; 8.42 grs. Velocidad 370.33 m/s
		NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	I, II A LEVEL 1-2	 Pistola .38 especial + P 10.16 gr.  Pistola .38 especial + P 10.16 gr.	
	III	NOM-142-SCFI / Norma Mexicana	A, B	 Pistola .44 Magnum SJHP 11.67 gr.	
		CEN 1064 / Norma Europea	BR-2, BR-3	 9 mm. x 19mm. FMJ 8.0-12.4 gr.	.44 Magnum semi-encamisado o punta hueva; 15.53 grs Velocidad 426 m/s
		NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	I, II A, III A LEVEL 1 AL 3	 Pistola Magnum .44 LEAD SWC gas checked 15.56 gr.  Revolver .38 Super Auto encamisado 5.7 x 28 (blindaje en acero)	
III +	NOM-142-SCFI / Norma Mexicana	A, B	 .357 Magnum S.E Expansivo, 7.12-10.22 gr.		
	CEN 1064 / Norma Europea	BR-2, BR-3, BR-4	 .357 Magnum S.E Expansivo, 7.12-10.22 gr.	0.30 M-1, encamisado; 712 gr. Velocidad 606 m/s	
	NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	I, II A, III A LEVEL 1 AL 4	 Carabina 0.30 M-1 FMJ, .12 gr.  Carabina 0.30 M-1 FMJ, .12 gr.		
CONTRA SECUESTRO	IV	NOM-142-SCFI / Norma Mexicana	A, B, C	 Fusil de asalto AK47, 7.62 x 39 mm. MSC (METAL STEEL CORE), 7.62 X 39 MM. FMJ 7.97 gr.	7.62 x 39 mm. encamisado (NATO) 7.97 gr. MSC Velocidad 710 m/s
		CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	BR-2, BR-3, BR-5 I, II A, III A LEVEL 1 AL 5		
CONTRA ATENTADO	IV+	NOM-142-SCFI / Norma Mexicana	A, B, C	 Fusil AR-15, M16, Gall 5.5 x 45 mm. FMJ 4.0 gr. 5.5 x 45 mm. FMJ 3.56 gr.	5.56 x 45 mm. encamisado (NATO) 7.97 gr. MSC. Velocidad 710 m/s
		CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	BR-2, BR-3, BR-5 I, II A, III A LEVEL 1 AL 6		
CONTRA ATENTADO	V	NOM-142-SCFI / Norma Mexicana	A, B, C, D	 Fusil y Rifle FAL, G-3 7.62 x 51 mm. FMJ 9.7 gr. .308 Winchester FMJ, 9.7 gr.	7.62 x 63 mm. JSP; 11.67 gr. Velocidad 822.96 m/s
		CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	BR-2, BR-3, BR-5, BR-6 I, II A, III A, III LEVEL 1 AL 7		
CONTRA ATENTADO	V+ M193	NOM-142-SCFI / Norma Mexicana	A, B, C, D	 Fusil y Rifle FAL, G-3 7.62 x 51 mm. FMJ 9.7 gr. .308 Winchester FMJ, 9.7 gr.	7.62 x 63 mm. JSP; 11.67 gr. Velocidad >990 m/s
		CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	BR-2, BR-3, BR-5, BR-6 I, II A, III A, III LEVEL 1 AL 8		
ANTI-PERFORANTE	VI	NOM-142-SCFI / Norma Mexicana	A, B, C, D, E	 Winchester 30.06 AP G3, 10.8 gr.	7.62 x 51 mm. PERFORANTE (ARMOR PIERCING) 9.75 gr. Velocidad 869 m/s
		CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	BR-2, BR-3, BR-5, BR-6, BR-7 I, II A, III A, III, IV LEVEL 1 AL 8		



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**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 27 August 2015 Contract/Order No.: J889K1 / IC 1312

Ambient Temperature: 76 °F Relative Humidity: 50 %

Test Panel Identification: 38mm Multilayer Glass Ballistic Sample OS 2935A,B,C (Dated: 08-20-15)  
500mm x 500mm x 47.60lb.

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 1.520 (38.6mm) inch(es) Areal Density: 17.7 lbs/sq.ft.

Projectile Caliber: 5.56 x 45mm Projectile Type: M855, LC – '92

Propellant Type: Winchester 748 Gun I.D.: SN: 4223

Witness Plate Material: 0.002" Thick Bare Aluminum Foil

Impact Obliquity: 0 degrees File Name: 10082715a.doc














Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration
	Projectile	Propellant	No. 1	No. 2	Average	Description
						Sample 2935A
10-86786	62.1	27.4	3160	3159	3160	No Penetration, 12 O'clock
10-86787	62.4	27.6	3145	3143	3144	No Penetration, 4 O'clock
10-86788	62.3	28.0	3197	3196	3197	No Penetration, 8 O'clock
						Sample 2935B
10-86789	61.9	27.9	3202	3200	3201	No Penetration, 12 O'clock
10-86790	62.0	27.8	3171	3171	3171	No Penetration, 4 O'clock
10-86791	62.2	27.8	3150	3150	3150	No Penetration, 8 O'clock
						Sample 2935C
10-86792	62.1	27.8	3164	3163	3164	No Penetration, 12 O'clock
10-86793	62.1	27.8	3200	3199	3200	No Penetration, 4 O'clock
10-86794	62.2	27.8	3157	3157	3157	No Penetration, 8 O'clock

Comments: Test Criteria: Level IV+, see page 2. Three impacts on the vertices of a 120mm shot triangle @ 3150-3200 fps (960-975mps). Samples PASSED test criteria.

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_

## Protección Balística

### NIJ 0108.01 - NIVELES DE PROTECCIÓN PARA BLINDAJE AUTOMOVILÍSTICO

CATEGORIA	NIVELES	NORMAS INTERNACIONALES	NOMENCLATURA	TIPO DE ARMA Y CARTUCHO	PRUEBA CRÍTICA	
VIOLENCIA URBANA	II	NOM-142-SCFI / Norma Mexicana	A		Rifle, 22 LRHV LEAD 2.6 gr.	
		CEN 1064 / Norma Europea	BR-2		Revolver .38 especial RN LEAD 10.2 gr. Magnum .357	38 Super Auto + P Encamisado; 8.42 grs. Velocidad 370.33 m/s
		NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	I, II A LEVEL 1-2		Pistola .38 especial + P 10.16 gr. Pistola .38 especial + P 10.16 gr.	
	III	NOM-142-SCFI / Norma Mexicana	A, B		Pistola .44 Magnum S&HP 11.67 gr.	
		CEN 1064 / Norma Europea	BR-2, BR-3		9 mm. x 19mm. FMJ 8.0 -12.4 gr.	.44 Magnum semi-encamisado o punta hueva; 15.53 grs Velocidad 426 m/s
		NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	I, II A, III A LEVEL 1 AL 3		Pistola Magnum .44 LEAD SWC gas checked 15.56 gr. Revolver .38 Super Auto encamisado 5.7 x 28 (blindaje en acero)	
III +	NOM-142-SCFI / Norma Mexicana CEN 1064 / Norma Europea	A, B BR-2, BR-3, BR-4		.357 Magnum S.E Expansivo, 7.12 -10.22 gr. .357 Magnum S.E Expansivo, 7.12 -10.22 gr.	0.30 M-1, encamisado; 712 gr. Velocidad 606 m/s	
	NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	I, II A, III A LEVEL 1 AL 4		Carabina 0.30 M-1 FMJ, .12 gr. Carabina 0.30 M-1 FMJ, .12 gr.		
CONTRA SECUESTRO	IV	NOM-142-SCFI / Norma Mexicana CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	A, B, C BR-2, BR-3, BR-5 I, II A, III A LEVEL 1 AL 5		Fusil de asalto AK47, 7.62 x 39 mm. MSC (METAL STEEL CORE), 7.62 x 39 MM. FMJ 7.97 gr.	7.62 x 39 mm. encamisado (NATO) 7.97 gr. MSC. Velocidad 710 m/s
	IV+	NOM-142-SCFI / Norma Mexicana CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	A, B, C BR-2, BR-3, BR-5 I, II A, III A LEVEL 1 AL 6		Fusil AR-15, M16, Galil 5.5 x 45 mm. FMJ 4.0 gr. 5.5 x 45 mm. FMJ 3.56 gr.	5.56 x 45 mm. encamisado (NATO) 7.97 gr. MSC. Velocidad 710 m/s
CONTRA ATENTADO	V	NOM-142-SCFI / Norma Mexicana CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	A, B, C, D BR-2, BR-3, BR-5, BR-6 I, II A, III A, III LEVEL 1 AL 7		Fusil y Rifle FAL, G-3 7.62 x 51 mm. FMJ 9.7 gr. .308 Winchester FMJ, 9.7 gr.	7.62 x 63 mm. JSP; 11.67 gr. Velocidad 822.96 m/s
	V+ M193	NOM-142-SCFI / Norma Mexicana CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	A, B, C, D BR-2, BR-3, BR-5, BR-6 I, II A, III A, III LEVEL 1 AL 8		Fusil y Rifle FAL, G-3 7.62 x 51 mm. FMJ 9.7 gr. .308 Winchester FMJ, 9.7 gr.	7.62 x 63 mm. JSP; 11.67 gr. Velocidad >990 m/s
ANTI-PERFORANTE	VI	NOM-142-SCFI / Norma Mexicana CEN 1064 / Norma Europea NIJ 0188.01 / Estados Unidos UL 752 / Estados Unidos	A, B, C, D, E BR-2, BR-3, BR-5, BR-6, BR-7 I, II A, III A, III, IV LEVEL 1 AL 8		Winchester 30.06 AP G3, 10.8 gr.	7.62 x 51 mm. PERFORANTE (ARMOR PIERCING) 9.75 gr. Velocidad 869 m/s



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**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 19 August 2014 Contract/Order No.: J88961 / IC 1298

Ambient Temperature: 72 °F Relative Humidity: 53 %

Test Panel Identification: 41mm Multilayer Glass Ballistic Samples OS 2563A-C (08-04-14)

19.5" x 19.5" x 50.2lb. Test Specifications: CEN Level BR6.

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 1.629 (41.4mm) inch(es) Areal Density: 19.0 lbs/sq.ft.

Projectile Caliber: 7.62 x 51mm Projectile Type: M80 Ball

Propellant Type: IMR 4895 (PD-53) Gun I.D.: SN : 33835 (308)

Witness Plate Material: 0.002" Thick Bare Aluminum Foil.

Impact Obliquity: 0 degrees File Name: 10081914b.doc

Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration
	Projectile	Propellant	No. 1	No. 2	Average	Description
						OS 2563A
10-85525	147.2	39.8	2999	2999	2999	No Penetration, 12 O'clock
10-85526	146.9	39.8	2697	2696	2697	No Penetration, 4 O'clock
10-85527	146.8	39.8	2699	2699	2699	No Penetration, 8 O'clock
						OS 2563B
10-85528	147.1	39.9	2706	2705	2706	No Penetration, 12 O'clock
10-85529	147.0	39.9	2711	2710	2711	No Penetration, 4 O'clock
10-85530	147.2	39.9	2705	2705	2705	No Penetration, 8 O'clock
						OS 2563C
10-85531	146.8	40.0	2721	2721	2721	No Penetration, 12 O'clock
10-85532	146.8	40.0	2719	2719	2719	No Penetration, 4 O'clock
10-85533	146.9	40.0	2735	2733	2734	No Penetration, 8 O'clock

Comments: Test Criteria: CEN Level BR6. Three impacts on the vertices of a 120mm shot triangle @ 2722 ± 33fps (830 ± 10mps). Panels PASSED test criteria.

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_





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**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 08 August 2013 Contract/Order No.: J88741 / IC 1276

Ambient Temperature: 72 °F Relative Humidity: 53 %

Test Panel Identification: 42mm Multilayer Glass Ballistic Samples OS 2347A-C (Dated: 07-15-13)  
19.5" x 19.5" x 51.05lb; Test Specification NIJ Level 3

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 1.624 (41.2mm) inch(es) Areal Density: 19.3 lbs/sq.ft.

Projectile Caliber: 7.62 x 51mm Projectile Type: M80 Ball

Propellant Type: IMR 4064 Gun I.D.: S/N: 4308

Witness Plate Material: 0.020" Thick 2024-T3 Bare Aluminum

Impact Obliquity: 0 degrees File Name: 10080813a.doc

Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration Description
	Projectile	Propellant	No. 1	No. 2	Average	
OS 2347A						
10-83728	147.1	44.3	2748	2747	2748	No Penetration, ULC
10-83729	147.1	44.3	2738	2738	2738	No Penetration, URC
10-83730	147.1	44.3	2752	2752	2752	No Penetration, LRC
10-83731	147.1	44.3	2738	2737	2738	No Penetration, LLC
10-83732	147.1	44.3	2725	2724	2725	No Penetration, Center
OS 2347B						
10-83733	147.0	44.3	2764	2763	2764	No Penetration, ULC
10-83734	147.0	44.3	2731	2731	2731	No Penetration, URC
10-83735	147.0	44.3	2735	2735	2735	No Penetration, LRC
10-83736	147.0	44.3	2747	2747	2747	No Penetration, LLC
10-83737	147.0	44.3	2731	2731	2731	No Penetration, Center
OS 2347C						
10-83738	147.0	44.3	2756	2755	2756	No Penetration, ULC
10-83739	147.0	44.3	2778	2778	2778	No Penetration, URC
10-83740	147.0	44.3	2758	2757	2758	No Penetration, LRC
10-83741	147.0	44.3	2739	2738	2739	No Penetration, LLC
10-83742	147.0	44.3	2762	2761	2762	No Penetration, Center

Comments: Test Criteria: Test IAW NIJ 0108-01 "Protective Materials" Level 3. Five impacts equally spaced on a 200mm inch shot square, with the last impact at target center.  
Velocity criteria is 2750 ± 50 fps. Sample set PASSED test specification.

Witness: \_\_\_\_\_ Witness: \_\_\_\_\_



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IMPACT PHYSICS LABORATORY

DAYTON, OHIO 45469-0116

937/229-4237

BALLISTIC TEST REPORT

Prepared For: Centigon Colombia

Test Date: 08 January 2015 Contract/Order No.: J88981 / IC 1300

Ambient Temperature: 72 °F Relative Humidity: 11 %

Test Panel Identification: 60mm Multilayer Glass Ballistic Samples OS2607A-H (12/22/14)

500mm x 500mm Test Specification: Stanag 4569 L2

Type: Multilayer Glass Transparency Grade: Not Supplied

Thickness (Avg.): See Below inch(es) Areal Density: ~27 lbs/sq.ft.

Projectile Caliber: 7.62 x 39mm Projectile Type: BZ M1943 API (Soviet, '70's)

Propellant Type: IMR 4064 Gun I.D.: SN: 33835 (308)

Witness Plate Material: 0.002" Bare Aluminum Foil.

Impact Obliquity: 0 degrees File Name: 10010815a.doc

Table with 7 columns: Shot Number, Weights (Grains) - Projectile, Propellant, Velocity Data (ft/sec) - No. 1, No. 2, Average, Penetration - Description / Location. Rows include sample details and test results for shots 10-86273 through 10-86281.



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						Sample OS 2607E 2.348in., 73.30lbs.
10-86282	119.9	32.5	2250	2249	2250	No Penetration, 12 O'clock
10-86283	120.0	32.5	2286	2286	2286	No Penetration, 4 O'clock
10-86284	120.0	32.5	2238	2238	2238	No Penetration, 8 O'clock
						Sample OS 2607F 2.343in., 73.05lbs.
10-86285	120.0	32.5	2250	2249	2250	No Penetration, 12 O'clock
10-86286	120.0	32.5	2269	2269	2269	No Penetration, 4 O'clock
10-86287	120.1	32.5	2319	2318	2319	No Penetration, 8 O'clock
						Sample OS 2607G 2.346in., 73.34lbs.
10-86288	120.1	32.5	2218	2217	2218	No Penetration, 12 O'clock
10-86289	120.1	32.5	2260	2259	2260	No Penetration, 4 O'clock
10-86290	120.1	32.5	2249	2248	2249	No Penetration, 8 O'clock
						Sample OS 2607H 2.343in., 73.02lbs.
10-86291	120.1	32.5	2295	2294	2295	No Penetration, 12 O'clock
10-86292	120.1	32.5	2281	2280	2281	No Penetration, 4 O'clock
10-86293	120.1	32.5	2238	2238	2238	No Penetration, 8 O'clock
						Sample OS 2607A 2.340in., 73.18lbs.
10-86270	119.8	33.0	2280	2280	2280	No Penetration, 12 O'clock

Comments: Test Criteria: Test to NATO AEP-55 STANAG 4569 Level 2. 22 Shot Protocol.  
Three impacts on the vertices of a 120mm triangle @ 695 ± 20mps (2280 ± 66 fps)  
Panels PASSED NATO STANAG 4569 KE Level 2 [PARTIAL] Test Specification.

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_



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 DAYTON, OHIO 45469-0116 937/229-4237

**BALLISTIC TEST REPORT**

Prepared For: Centigon Colombia

Test Date: 05 May 2015 Contract/Order No.: J889F1 / IC 1307

Ambient Temperature: 72 °F Relative Humidity: 52 %

Test Panel Identification: 72mm Multilayer Glass Ballistic Sample OS 2847A-C (Dated: 04-30-15)  
500mm x 500mm x 90.24lb.

Type: Multilayer Glass Transparency Grade: Not Specified

Thickness (Avg.): 2.845 (72.3mm) inch(es) Areal Density: 33.5 lbs/sq.ft.

Projectile Caliber: 7.62 x 51mm Projectile Type: M61 AP (Israeli – 76')

Propellant Type: IMR 4895 (PD-53) Gun I.D.: SN : 33835 (.308)

Witness Plate Material: 0.002" Thick Bare Aluminum Foil

Impact Obliquity: 0 degrees File Name: 10050515a.doc

Shot Number	Weights (Grains)		Velocity Data (ft/sec)			Penetration
	Projectile	Propellant	No. 1	No. 2	Average	Description
						OS 2847A
10-86855	150.5	40.0	2665	2665	2665	No Penetration 12 O'clock
10-86856	149.3	40.0	2663	2662	2663	No Penetration 4 O'clock
10-86857	150.2	40.2	2665	2664	2665	No Penetration 8 O'clock
						OS 2847B
10-86858	150.0	40.2	2661	2660	2661	No Penetration 12 O'clock
10-86859	153.1	40.5	2670	2670	2670	No Penetration 4 O'clock
10-86860	151.1	40.8	2718	2718	2718	No Penetration 8 O'clock
						OS 2847C
10-86861	149.9	40.7	2708	2708	2708	No Penetration 12 O'clock
10-86862	150.7	40.7	2681	2680	2681	No Penetration 4 O'clock
10-86863	150.3	40.7	2707	2707	2707	Penetration 8 O'clock

Comments: Test Criteria: Test to EN 1063 BR7.

Three impacts on the vertices of a 120mm triangle @ 2690 ± 33fps.

Sample FAILED test specification

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_