

# ARMOR TESTING BOOKLET

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HG2 & IIIA+ Soft Armor  
IV ICW Rifle Plates



**SAFE LIFE**  
DEFENSE

**OBL**  
OREGON BALLISTIC LABORATORIES

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*These testing results are provided by an independent NIJ approved lab, Oregon Ballistics Laboratory. Our Body Armor is tested regularly and the results in this booklet have been randomly selected and reproduced here for your review.*

### Level IIIA Soft Armor Ballistic Resistance Testing Summary:

The samples were tested in accordance with NIJ-STD-0101.07 (draft) HG2 (abbreviated) (modified) in an indoor range with the muzzle of the test barrel mounted 15 feet away from the target and positioned to produce 0-degree obliquity impacts. Four Oehler model 57 infrared velocity light screens, in conjunction with two HP 5315A timebased frequency counters, were placed such that projectile velocity was measured 8.25 feet from the target. Penetrations were determined by examination of a 5.5-inch clay block mounted behind the test sample. Results for all testing performed for this purpose are summarized in the following table.

### Result From 9mm FMJ

Test Sample			Ballistic Threat				Results			
OBL NO.:	S/N.:	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD		Pass/Fail
					Min.	Max.		Min.	Max.	
36103	HG2-2.16	1.38	9mm FMJ	6	1446	1498	0	33.72	33.74	<u>PASS</u>

### Result From .44 MAG 240gr. SJHP

Test Sample			Ballistic Threat				Results			
OBL NO.:	S/N.:	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD		Pass/Fail
					Min.	Max.		Min.	Max.	
36105	HG2-2.19	1.37	.44Mag SJHP	6	1409	1421	0	35.05	37.62	<u>PASS</u>

### Testing Data From 9mm 124gr. FMJ

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 $\mu$ s (10 <sup>-6</sup> )	TIME 2 $\mu$ s (10 <sup>-6</sup> )	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	124.4	6.4	3337	2672	1498	1497	1498	P	0°	33.74	
2	124.0	6.3	3345	2677	1495	1494	1495	P	0°	31.72	
3	124.2	6.3	3367	2695	1485	1484	1485	P	0°	32.51	
4	124.4	6.3	3469	2696	1484	1484	1484	P	30°		
5	125.2	6.3	3359	2769	1446	1445	1446	P	45°		
6	123.4	6.3	3387	2710	1476	1476	1476	P	0°		
<b>REMARKS:</b> P=Partial Penetration C=Complete Penetration UH=Unfair Hit					<b>TEST RESULTS:</b> Test sample satisfied the ballistic requirements given.						
					<b>FOOTNOTES:</b> Sample was not subjected to Armor Submersion.						

### Testing Data from .44 Mag 240gr. SJHP

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 $\mu$ s (10 <sup>-6</sup> )	TIME 2 $\mu$ s (10 <sup>-6</sup> )	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	241.3	12.4	3508	2823	1425	1417	1421	P	0°	35.37	
2	240.0	12.4	3522	2834	1420	1411	1416	P	0°	37.62	
3	241.8	12.5	3528	2839	1417	1409	1413	P	0°	35.05	
4	240.0	12.5	3539	2848	1413	1404	1409	P	30°		
5	241.7	12.5	3518	2831	1421	1413	1417	P	45°		
6	240.2	12.5	3515	2828	1422	1414	1418	P	0°		
<b>REMARKS:</b> P=Partial Penetration C=Complete Penetration UH=Unfair Hit					<b>TEST RESULTS:</b> Test sample satisfied the ballistic requirements given.						
					<b>FOOTNOTES:</b> Sample was not subjected to Armor Submersion.						

### Level IIIA+ Soft Armor Ballistic Resistance Testing Summary:

The samples were tested in accordance with NIJ-STD-0101.06 Level IIIA (abbreviated) (modified) in an indoor range with the muzzle of the test barrel mounted 15 feet away from the target and positioned to produce 0-degree obliquity impacts. Four infrared light screens, in conjunction with time-based frequency counters, were positioned such that bullet velocity was measured 8.25 feet from the target. Penetrations were determined by examination of a 5.5-inch clay block mounted behind the test sample. Results for all testing performed for this purpose are summarized in the following table.

### Result From 9mm 50gr. Liberty Civil Defense

Test Sample			Ballistic Threat				Results			
OBL NO.:	Model	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD		Pass/Fail
					Min.	Max.		Min.	Max.	
18119	PLUS	1.87	9mm 50gr. Liberty Civil Defense	6	2037	2067	0	17.38	18.78	<u>PASS</u>

### Result From .357 SIG FMJ

Test Sample			Ballistic Threat				Results			
OBL NO.:	Model	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD		Pass/Fail
					Min.	Max.		Min.	Max.	
18120	PLUS	1.85	.357 SIG FMJ	6	1397	1423	0	20.68	21.05	<u>PASS</u>

### Testing Data From 9mm 50gr. Liberty Civil Defense

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 $\mu$ s (10 <sup>-6</sup> )	TIME 2 $\mu$ s (10 <sup>-6</sup> )	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	50.0		2421	2420	2065	2066	2066	P	0°	17.68	
2	50.0		2455	2454	2037	2037	2037	P	0°	18.78	
3	50.0		2420	2419	2066	2067	2067	P	0°	17.38	
4	50.0		2438	2438	2051	2051	2051	P	30°		
5	50.0		2438	2437	2051	2052	2052	P	45°		
6	50.0		2442	2442	2048	2048	2048	P	0°		
<b>REMARKS:</b> P=Partial Penetration C=Complete Penetration UH=Unfair Hit					<b>TEST RESULTS:</b> Test sample satisfied the ballistic requirements given.						
					<b>FOOTNOTES:</b>						

### Testing Data From .357 SIG FMJ

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 $\mu$ s (10 <sup>-6</sup> )	TIME 2 $\mu$ s (10 <sup>-6</sup> )	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	125.8	6.2	3576	3572	1398	1400	1399	P	0°	20.83	
2	125.9	6.2	3542	3549	1412	1409	1411	P	0°	20.68	
3	124.7	6.2	3548	3544	1409	1411	1410	P	0°	21.05	
4	125.1	6.2	3521	3506	1420	1426	1423	P	30°		
5	124.9	6.2	3550	3550	1408	1408	1408	P	45°		
6	124.5	6.2	3577	3585	1398	1395	1397	P	0°		
<b>REMARKS:</b> P=Partial Penetration C=Complete Penetration UH=Unfair Hit					<b>TEST RESULTS:</b> Test sample satisfied the ballistic requirements given.						
					<b>FOOTNOTES:</b>						

### Result From .44 Mag SJHP

Test Sample			Ballistic Threat				Results			
OBL NO.:	Model	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD		Pass/Fail
					Min.	Max.		Min.	Max.	
18122	PLUS	1.86	.44 Mag SJHP	6	1344	1355	0	30.30	33.54	PASS

### Testing Data From .44 Mag SJHP

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 $\mu$ s (10 <sup>-6</sup> )	TIME 2 $\mu$ s (10 <sup>-6</sup> )	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	240.1	10.4	3697	3694	1352	1354	1353	P	0°	30.58	
2	239.7	10.4	3708	3705	1348	1350	1349	P	0°	30.30	
3	240.3	10.4	3699	3695	1352	1353	1353	P	0°	33.54	
4	240.1	10.4	3711	3708	1347	1348	1348	P	30°		
5	240.1	10.4	3722	3719	1343	1344	1344	P	45°		
6	240.0	10.4	3694	3691	1354	1355	1355	P	0°		

**REMARKS:**  
P=Partial Penetration  
C=Complete Penetration  
UH=Unfair Hit

**TEST RESULTS:**  
Test sample satisfied the ballistic requirements given.

**FOOTNOTES:**

### Level IIIA+ Stab Resistance Testing Summary:

The sample was tested in accordance with NIJ-0115.00 in an indoor lab. Two laser break screens, in conjunction with one time-based frequency counter, were used to measure impact velocity and calculate strike energy. Penetrations were determined by examination of NIJ foam and polyart paper.

### Testing Data

IMPACT NO.	THREAT	TIP SHARPNESS (HRC)	LEVEL	ENERGY LEVEL	DROP MASS (kg.)	ANGLE OF INCIDENCE (DEGREES)	DROP HEIGHT (M)	TIME ms (10-3)	IMPACT VELOCITY (M/S)	STRIKE ENERGY (J)	DEPTH OF PENETRATION (MM)	NOTES
1	Spike	-64	1	E1	1.910	0°	1.304	7.983	5.09	24.75	-	
2	Spike	-64	1	E2	1.910	0°	2.034	6.605	6.15	36.15	-	
3	Spike	-64	1	E1	1.910	45°	1.294	7.804	5.21	25.90	-	

**REMARKS:**  
Spike weight= 1.910kg  
Blade weight= 1.920kg

**TEST RESULTS:**  
Test sample satisfied the requirements given.

# RIFLE PLATE

## Level IV ICW Rifle Plate Ballistic Resistance Testing Summary:

The sample was tested in accordance with NIJ-STD-0101.06 Level IV ICW (abbreviated) (modified) in an indoor range with the muzzle of the test barrel mounted 50 feet away from the target and positioned to produce 0-degree obliquity impacts. Four infrared light screens, in conjunction with time-based frequency counters, were positioned such that bullet velocity was measured 8.25 feet from the target. Penetrations were determined by examination of a 5.5-inch clay block mounted behind the test sample. Results for all testing performed for this purpose are summarized in the following table.

## Result From .30 cal M2AP

Test Sample			Ballistic Threat				Results			
OBL NO.:	S/N.:	Weight (lbs.)	Projectile	Shots	Velocity (fps)		Penetrations	BFD (mm)		Pass/Fail
					Min.	Max.		Min.	Max.	
19612	N/A	9.82	.30 cal M2AP	6	2859	2895	0	27.63	31.95	<u>PASS</u>

## Testing Data From .30 cal M2AP

SHOT NO.	PROJECTILE WT. (gr.)	POWDER WT. (gr.)	TIME 1 $\mu$ s (10 <sup>-6</sup> )	TIME 2 $\mu$ s (10 <sup>-6</sup> )	VELOCITY 1 ft/s	VELOCITY 2 ft/s	AVERAGE VELOCITY	PENET. P/C	OBLIQUITY	CALIPER BFD	NOTES
1	161.1	44.5	1736	1732	2880	2887	2884	P	0°	31.95	Plate Complete / System Partial
2	161.5	44.5	1740	1737	2874	2879	2877	P	0°	27.63	Plate Complete / System Partial
3	162.2	44.5	1750	1748	2857	2860	2859	P	0°		Plate Partial / System Partial
4	162.0	44.6	1730	1725	2890	2899	2895	P	0°		Plate Partial / System Partial
5	161.4	44.6	1731	1727	2889	2895	2892	P	0°		Plate Partial / System Partial
6	161.6	44.6	1746	1742	2864	2870	2867	P	0°		Plate Partial / System Partial
<b>REMARKS:</b> P=Partial Penetration C=Complete Penetration UH=Unfair Hit					<b>TEST RESULTS:</b> Test sample satisfied the ballistic requirements given.						
					<b>FOOTNOTES:</b> Sample was not subjected to Armor Drop Test per section 6.2.3.4 Sample was not subjected to Armor Submersion per section 7.8.2						

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### DISCLAIMER

Given the natural limitations of body armor, Safe Life Defense assumes no liability whatsoever regarding your use or misuse of a product or its potential failure to perform. All products are sold "as is," in their delivered conditions, and "with all faults." Safe Life Defense makes no warranties or representations of any kind including warranties of fitness for a particular purpose, use, merchantability, or lack of defects. The consumer assumes risk of use. Safe Life Defense cannot be held liable for any damage sustained while wearing the body armor, including damage attributable to negligence. Moreover, the information on Safe Life Defense's website is provided in good faith, but with no representation of accuracy or completeness. Safe Life Defense is relying upon these liability limitations in agreeing to sell its product.



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