

TEST RECORD NO. 3

SAMPLES:

Samples of Models ArmorCore Level 5, -Level 6, -Level 7 and -Level 8 material rated for Level 5, Level 6,, Level 7 and Level 8, respectively, were submitted by the manufacturer and subjected to the following test program.

BALLISTICS TEST:

General - The ammunition used for the investigation was:

Level 5, Level 8 - 150 grain (9.7 g) 7.62 mm rifle lead core full metal copper jacket, military ball, minimum velocity 2750 fps (838 mps).

Level 6 - 124 grain (8.0 g) 9 mm full metal copper jacket with lead core, minimum velocity of 1400 fps (427 mps).

Level 7 - 55 grain (3.56 g) 5.56 mm rifle full metal copper jacket with lead core, minimum velocity of 3080 fps (939 mps).

All tests were conducted at close range, approximately 15 ft (4.6 m), using the ammunition and weapon specified. The test samples were mounted in a rigidly fixed frame, with 1/8 in. (3.2 mm) thick corrugated cardboard indicator panels placed approximately 18 in. (467 mm) behind the protected side of each test sample. During the test, each bullet velocity was monitored and recorded.

The Level 5 samples were subjected to a 1-shot pattern.

The 1-shot pattern consists of a single shot in the approximate center of the test sample. With this shot pattern, there shall be no penetration of the projectile through the test sample, nor spalling of the material on the protected side of the test sample, to the extent that fragments embed in or damage the cardboard indicators.

The Level 6, 7 and 8 samples were subjected to a 5-shot pattern.

The 5-shot pattern consists of five shots placed in a square pattern that is 4-1/2 by 4-1/2 in. (114 mm) located in the center of the test sample. With this shot pattern, there shall be no penetration of the projectile through the test sample, nor spalling of the material on the protected side of the test sample, to the extent that fragments embed in or damage the cardboard indicators.

OUTDOOR RATING(LEVEL 5 ONLY):

METHOD

Three samples were subjected to various ambient conditions. One sample at room temperature, $22 \pm 3^{\circ}\text{C}$ ($72 \pm 5^{\circ}\text{F}$), one sample after exposure to a temperature of 49°C (120°F) for a period of 3 h to the complete sample, and one sample after exposure to -32°C (-25°F) to the side receiving the shots for a period of 3 h were subjected to the 1-shot pattern. The samples were tested immediately following the exposure to the indicated temperature conditions.

The velocity of each bullet was recorded during the test.

RESULTS

Acceptable results were recorded for all shot patterns at all ambient conditions as outlined above.

ARMORCORE - LEVEL 5

| <u>Shot Pattern</u> | <u>Velocity</u> (fps) |
|---------------------------|--------------------------|
| 1-Shot (High Temperature) | 2788 |
| 1-Shot (Low Temperature) | 2817 |

ARMORCORE - LEVEL 6

| <u>Shot Number</u> | <u>Velocity</u> (fps) |
|--------------------|--------------------------|
| Shot 1 | 1425 |
| Shot 2 | 1465 |
| Shot 3 | 1457 |
| Shot 4 | 1445 |
| Shot 5 | 1434 |

ARMORCORE - LEVEL 7

| <u>Shot Number</u> | <u>Velocity</u> (fps) |
|--------------------|--------------------------|
| Shot 1 | 3184 |
| Shot 2 | 3205 |
| Shot 3 | 3220 |
| Shot 4 | 3229 |
| Shot 5 | 3171 |

ARMORCORE - LEVEL 8

| <u>Shot Number</u> | <u>Velocity</u> (fps) |
|--------------------|--------------------------|
| Shot 1 | 2816 |
| Shot 2 | 2886 |
| Shot 3 | 2806 |
| Shot 4 | 2811 |
| Shot 5 | 2788 |

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

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