

# BALLISTIC RESISTANCE TEST

## Chesapeake Testing

121 Bata Boulevard, Suite F  
Belcamp, MD 21017

Client: Mofet Etzion  
Job No.: CD01-2007-R01BRT-04089  
Test Date: 2/11/2008

|                            |  |                         |  |
|----------------------------|--|-------------------------|--|
| <b>Test Panel</b>          | Description: Ceramic plus (2) Dyneema panels plus aluminum |                         |  |
| Manufacturer: Mofet Etzion |  | Sample No.: CDS-1       |  |
| Size: See remarks          | Heat No.: NA   | Date Received: 2/7/2008 |  |
| Thickness: See remarks     | Weight: See remarks  | Via: Fed Ex             |  |
| Avg. Thick: See remarks    | Hardness: NA   | Returned: DHL           |  |
|                            | Plies/Laminates: NA  |                         |  |

|                                    |                                    |                        |  |
|------------------------------------|------------------------------------|------------------------|--|
| <b>Setup</b>                       |                                    |                        |  |
| Shot Spacing: Per Customer Request | Primary Vel. Screens: 15 ft, 35 ft | Range No.: Range 1     |  |
| Witness Panel: 0.02 in, 2024-T3 Al | Primary Vel. Location: 25 ft       | Temp: 69.9 °F          |  |
| Obliquity: 0                       | Range to Target: 45 ft             | BP: 30.18 inHG         |  |
| Backing Material: NA               | Target to Witness: 6 in            | RH: 34 %               |  |
| Condition: Ambient                 |                                    | Barrel/Gun: CDS-0217   |  |
|                                    |                                    | Gunner: J. McDowell    |  |
|                                    |                                    | Recorder: Craig Thomas |  |

|                             |                           |          |
|-----------------------------|---------------------------|----------|
| <b>Ammunition</b>           |                           |          |
| Projectile                  | Lot No.                   | Powder   |
| (1) : 14.5 mm B-32, 975.0gr | Lot No. : Russian Unknown | H4831    |
| (2) : 20-mm, 830-grain FSP  | Lot No. : PTI 022007      | IMR 7828 |
| (3) : 7.62x54Rmm API, 155gr | Lot No. : Unknown         | N 140    |

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| <b>Applicable Standards or Procedures</b> |
| (1) Per Customer Request                  |

| Shot No. | Ammo | Time 1 (µs) | Vel. 1 (ft/s) | Time 2 (µs) | Vel. 2 (ft/s) | Avg Vel. (ft/s) | Striking Vel. (ft/s) | Penetration | Footnotes |
|----------|------|-------------|---------------|-------------|---------------|-----------------|----------------------|-------------|-----------|
| 1        | 1    | 7017        | 2850          | 7018        | 2850          | 2850            | 2842                 | None        |           |
| 2        | 1    | 6490        | 3082          | 6491        | 3081          | 3081            | 3073                 | None        |           |
| 3        | 1    | 6276        | 3187          | 6277        | 3186          | 3186            | 3178                 | None        | (a)       |
| 4        | 1    | 6317        | 3166          | 6317        | 3166          | 3166            | 3158                 | None        |           |
| 5        | 2    | 6372        | 3139          | 6375        | 3137          | 3138            | 3045                 | None        |           |
| 6        | 2    | 5388        | 3712          | 5391        | 3710          | 3711            | 3603                 | None        |           |
| 7        | 2    | 5513        | 3628          | 5515        | 3626          | 3627            | 3521                 | None        |           |
| 8        | 3    | 6734        | 2970          | 6736        | 2969          | 2970            | 2969                 | None        | (b)       |
| 9        | 3    | 6741        | 2967          | 6743        | 2966          | 2966            | 2965                 | None        | (b)       |
| 10       | 3    | 6753        | 2962          | 6755        | 2961          | 2961            | 2960                 | None        | (b,c)     |
| 11       | 3    | 6592        | 3034          | 6596        | 3032          | 3033            | 3032                 | None        | (b)       |
| 12       | 3    | 6149        | 3253          | 6152        | 3251          | 3252            | 3251                 | None        | (b)       |

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| <p><u>Remarks:</u></p> <p>Ceramic panel; Weight: 59.93 lbs, Dimensions: 23.75 x 23.75 inch</p> <p>Four corner thickness: 0.982, 0.987, 0.988, 0.988 inch</p> <p>Dyneema Panel #1: Weight: 8.36 lbs, Dimensions: 23.75 x 23.75 inch</p> <p>Four corner thickness: 0.434, 0.425, 0.428, 0.423 inch</p> <p>Dyneema Panel #2: Weight: 8.45 lbs, Dimensions: 23.75 x 23.75 inch</p> <p>Four corner thickness: 0.430, 0.429, 0.426, 0.432 inch</p> <p>Aluminum panel: Weight: 27.77 lbs, Dimensions: 23.75 x 23.75 inch</p> <p>Four corner thickness: 0.497, 0.498, 0.498, 0.499 inch</p> | <p><u>Footnotes:</u></p> <p>Panel struck by customer 5 times with a 16 pound sledge hammer before test with sample mounted in fixture with no apparent damage to the panel.</p> <p>14.5-mm Projectiles supplied by customer</p> <p>(a) The Liba ceramic cylinder was pushed in by the projectile and stayed intact</p> <p>(b) All shots place on contact valley between ceramic cylinders</p> <p>(c) Shot number 3 was placed on exactly the same impact as shot number 2</p> <p>No signs of incendiary damage on sample surface</p> |
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