

# S.M.S. TESTING

## S.M.S. TESTING BALLISTIC R&D TEST SHEET V-50

Client: Dayton Armor  
Date: 1/26/2020  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: Medium  
Apex Thk.: .479 in.  
Description: Hard armor sample

Sample No: DA-RF2-8 (M855 V0)  
Weight: 2.95 lbs  
Layer count:  
Technician: Murray

### TEST METHOD

Shot Spacing: PER CUSTOMER  
Witness Panel: CLAY  
Backing Material: 5.5" CLAY/PLYWOOD  
Obliquity 0 DEG  
Conditioning: DRY

### TEST DISTANCE

Muzzle to Target: 17.0 FT  
Target to Witness: NA  
VS Screens 5  
Midpoint to Target: 8.2  
VR Screens

Temp: 74.6 F.  
BP: 28.88  
RH: 40%

### AMMUNITION

- 1) 5.56 x 45 M855 62gr.
- 2)
- 3)

### LOT # & MANUFACTURER

- 1) MIL
- 2)
- 3)

### POWDER

- 1) N120
- 2)
- 3)

### TEST STANDARD OR PROCEDURE

- 1) 3115 + 30 fps
- 2)
- 3)

| Shot No.                                               | Charge Wt. | Time 1  | Velocity 1 (ft/s) | Time 2   | Velocity 2 (ft/s)                                                                                                       | Velocity Average | Results P / C | Shot Location | Deformation (mm) |
|--------------------------------------------------------|------------|---------|-------------------|----------|-------------------------------------------------------------------------------------------------------------------------|------------------|---------------|---------------|------------------|
| 1                                                      | 21.3       | 0.00159 | 3148              | 0.001588 | 3148                                                                                                                    | 3148             | P             | apex          | 37.2             |
| 2                                                      | 21.3       | 0.00158 | 3157              | 0.001582 | 3161                                                                                                                    | 3159             | P             | right edge    | 32.4             |
| 3                                                      | 21.3       | 0.0016  | 3126              | 0.001599 | 3126                                                                                                                    | 3126             | P             | bot. left     | 36.8             |
| <b>REMARKS:</b><br><br>Sample tested as a stand alone. |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 6<br>Clay Drops: 24.6 mm, 26.2 mm, 27.0 mm<br>Clay Temp.: 99.7° F. |                  |               |               |                  |

# S.M.S. TESTING

## S.M.S. TESTING BALLISTIC R&D TEST SHEET V-50

Client: Dayton Armor  
Date: 1/26/2020  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: Medium  
Apex Thk.: .485 in.  
Description: Hard armor sample

Sample No: DA-RF2-9 (M855 V0)  
Weight: 2.96 lbs  
Layer count:  
Technician: Murray

### TEST METHOD

Shot Spacing: PER CUSTOMER  
Witness Panel: CLAY  
Backing Material: 5.5" CLAY/PLYWOOD  
Obliquity 0 DEG  
Conditioning: DRY

### TEST DISTANCE

Muzzle to Target: 17.0 FT  
Target to Witness: NA  
VS Screens 5  
Midpoint to Target: 8.2  
VR Screens

Temp: 74.6 F.  
BP: 28.88  
RH: 40%

### AMMUNITION

- 1) 5.56 x 45 M855 62gr.
- 2)
- 3)

### LOT # & MANUFACTURER

- 1) MIL
- 2)
- 3)

### POWDER

- 1) N120
- 2)
- 3)

### TEST STANDARD OR PROCEDURE

- 1) 3115 + 30 fps
- 2)
- 3)

| Shot No.                        | Charge Wt. | Time 1  | Velocity 1 (ft/s) | Time 2   | Velocity 2 (ft/s)                                                                 | Velocity Average | Results P / C | Shot Location | Deformation (mm) |
|---------------------------------|------------|---------|-------------------|----------|-----------------------------------------------------------------------------------|------------------|---------------|---------------|------------------|
| 1                               | 21.3       | 0.00158 | 3159              | 0.001583 | 3159                                                                              | 3159             | P             | apex          | 30.9             |
| 2                               | 21.3       | 0.00159 | 3154              | 0.001585 | 3154                                                                              | 3154             | P             | right edge    | 28.7             |
| 3                               | 21.3       | 0.0016  | 3117              | 0.001602 | 3121                                                                              | 3119             | P             | bot. left     | 32.1             |
| REMARKS:                        |            |         |                   |          | MISC. TEST INFORMATION:                                                           |                  |               |               |                  |
| Sample tested as a stand alone. |            |         |                   |          | Clay Block ID: 6<br>Clay Drops: 24.6 mm, 26.2 mm, 27.0 mm<br>Clay Temp.: 99.7° F. |                  |               |               |                  |

# S.M.S. TESTING

## S.M.S. TESTING BALLISTIC R&D TEST SHEET V-50

Client: Dayton Armor  
Date: 1/26/2020  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: Medium  
Apex Thk.: .481 in.  
Description: Hard armor sample

Sample No: DA-RF2-10 (M855 V0)  
Weight: 2.95 lbs  
Layer count:  
Technician: Murray

### TEST METHOD

Shot Spacing: PER CUSTOMER  
Witness Panel: CLAY  
Backing Material: 5.5" CLAY/PLYWOOD  
Obliquity 0 DEG  
Conditioning: DRY

### TEST DISTANCE

Muzzle to Target: 17.0 FT  
Target to Witness: NA  
VS Screens 5  
Midpoint to Target: 8.2  
VR Screens

Temp: 74.6 F.  
BP: 28.88  
RH: 40%

### AMMUNITION

- 1) 5.56 x 45 M855 62gr.
- 2)
- 3)

### LOT # & MANUFACTURER

- 1) MIL
- 2)
- 3)

### POWDER

- 1) N120
- 2)
- 3)

### TEST STANDARD OR PROCEDURE

- 1) 3115 + 30 fps
- 2)
- 3)

| Shot No.                        | Charge Wt. | Time 1  | Velocity 1 (ft/s) | Time 2   | Velocity 2 (ft/s)                                                                 | Velocity Average | Results P / C | Shot Location | Deformation (mm) |
|---------------------------------|------------|---------|-------------------|----------|-----------------------------------------------------------------------------------|------------------|---------------|---------------|------------------|
| 1                               | 21.3       | 0.00159 | 3139              | 0.001591 | 3142                                                                              | 3141             | P             | apex          | 39.1             |
| 2                               | 21.3       | 0.0016  | 3133              | 0.001596 | 3133                                                                              | 3133             | P             | right edge    | 33.3             |
| 3                               | 21.3       | 0.0016  | 3133              | 0.001595 | 3134                                                                              | 3134             | P             | bot. left     | 37.1             |
| REMARKS:                        |            |         |                   |          | MISC. TEST INFORMATION:                                                           |                  |               |               |                  |
| Sample tested as a stand alone. |            |         |                   |          | Clay Block ID: 6<br>Clay Drops: 24.6 mm, 26.2 mm, 27.0 mm<br>Clay Temp.: 99.7° F. |                  |               |               |                  |

# S.M.S. TESTING

## S.M.S. TESTING BALLISTIC R&D TEST SHEET V-0

Client: Dayton Armor  
Date: 4/6/2022  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: NA  
Description: Hard armor sample

Sample No: DA-RF2-S-1 (M80 V0)  
Weight: 3.25 lbs  
Layer count: NA  
Technician: Murray

### TEST METHOD

Shot Spacing: PER CUSTOMER  
Witness Panel: CLAY  
Backing Material: 5.5" CLAY/PLYWOOD  
Obliquity 0°  
Conditioning: DRY

### TEST DISTANCE

Muzzle to Target: 17.0 FT  
Target to Witness: NA  
VS Screens 5  
Midpoint to Target: 8.2  
VR Screens

Temp: 65.3° F.  
BP: 28.79  
RH: 45%

### AMMUNITION

- 1) 7.62 X 51 M80 147 GR SJLC
- 2)
- 3)

### LOT # & MANUFACTURER

- 1) MILITARY
- 2)
- 3)

### POWDER

- 1) N133
- 2)
- 3)

### TEST STANDARD OR PROCEDURE

- 1) 2780+30 fps
- 2)
- 3)

| Shot No.                               | Charge Wt. | Time 1  | Velocity 1 (ft/s) | Time 2   | Velocity 2 (ft/s)                                                                                                    | Velocity Average | Results P / C | Shot Location | Deformation (mm) |
|----------------------------------------|------------|---------|-------------------|----------|----------------------------------------------------------------------------------------------------------------------|------------------|---------------|---------------|------------------|
| 1                                      | 40.5       | 0.0018  | 2784              | 0.001796 | 2784                                                                                                                 | 2784             | P             | MR            | 39.1             |
| 1                                      |            | 0.00179 | 2786              | 0.001795 | 2786                                                                                                                 | 2786             | P             | BL            | 31               |
| <b>REMARKS:</b><br>Shot as stand alone |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br>Clay Block ID: 5<br>Clay Drops: 24.0 mm, 24.3 mm, 25.2 mm<br>Clay Temp.: 102.7° F. |                  |               |               |                  |