

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.357  
Description: Hard armor sample

Sample No: 20211129-321B (M80 V0)  
Weight: 1.493 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       | 0.00177 | 2823              | 0.001771 | 2823                                                                                                                     | 2823             | P             | TL            | 37.3             |
| 2                                                                |            | 0.00179 | 2786              | 0.001795 | 2786                                                                                                                     | 2786             | P             | BR            | 37.9             |
| 3                                                                |            | 0.00179 | 2800              | 0.001786 | 2800                                                                                                                     | 2800             | P             | BL            |                  |
| 4                                                                |            | 0.00179 | 2789              | 0.001793 | 2789                                                                                                                     | 2789             | P             | ML            |                  |
| 5                                                                |            | 0.00178 | 2804              | 0.001783 | 2804                                                                                                                     | 2804             | P             | MR            |                  |
| 6                                                                |            | 0.00179 | 2789              | 0.001793 | 2789                                                                                                                     | 2789             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 5<br>Clay Drops: 17.8 mm, 18.4 mm, 18.9 mm<br>Clay Temp.: 101.0° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.355  
Description: Hard armor sample

Sample No: 20211129-321C (M80 V0)  
Weight: 1.48 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       | 0.00179 | 2800              | 0.001786 | 2800                                                                                                                     | 2800             | P             | TL            | 35.2             |
| 2                                                                |            | 0.00179 | 2801              | 0.001785 | 2801                                                                                                                     | 2801             | P             | BR            | 30.7             |
| 3                                                                |            | 0.00179 | 2800              | 0.001786 | 2800                                                                                                                     | 2800             | P             | BL            |                  |
| 4                                                                |            | 0.00178 | 2810              | 0.001779 | 2810                                                                                                                     | 2810             | P             | ML            |                  |
| 5                                                                |            | 0.00178 | 2809              | 0.00178  | 2809                                                                                                                     | 2809             | P             | MR            |                  |
| 6                                                                |            | 0.00179 | 2798              | 0.001787 | 2798                                                                                                                     | 2798             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 3<br>Clay Drops: 19.0 mm, 19.0 mm, 16.9 mm<br>Clay Temp.: 103.4° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.355  
Description: Hard armor sample

Sample No: 20211129-323B (M80 V0)  
Weight: 1.49 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       | 0.00179 | 2786              | 0.001795 | 2786                                                                                                                     | 2786             | P             | TL            | 36.2             |
| 2                                                                |            | 0.0018  | 2782              | 0.001797 | 2782                                                                                                                     | 2782             | P             | BR            | 36..3            |
| 3                                                                |            | 0.00179 | 2792              | 0.001791 | 2792                                                                                                                     | 2792             | P             | BL            |                  |
| 4                                                                |            | 0.00179 | 2801              | 0.001785 | 2801                                                                                                                     | 2801             | P             | ML            |                  |
| 5                                                                |            | 0.00179 | 2797              | 0.001788 | 2797                                                                                                                     | 2797             | P             | MR            |                  |
| 6                                                                |            | 0.00179 | 2793              | 0.00179  | 2793                                                                                                                     | 2793             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 5<br>Clay Drops: 17.8 mm, 18.4 mm, 18.9 mm<br>Clay Temp.: 101.0° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.362  
Description: Hard armor sample

Sample No: 20211129-323C (M80 V0)  
Weight: 1.48 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       | 0.00178 | 2803              | 0.001784 | 2803                                                                                                                     | 2803             | P             | TL            | 36.7             |
| 2                                                                |            | 0.00179 | 2796              | 0.001788 | 2796                                                                                                                     | 2796             | P             | BR            | 37.4             |
| 3                                                                |            | 0.00179 | 2796              | 0.001788 | 2796                                                                                                                     | 2796             | P             | BL            |                  |
| 4                                                                |            | 0.00179 | 2801              | 0.001785 | 2801                                                                                                                     | 2801             | P             | ML            |                  |
| 5                                                                |            | 0.00179 | 2795              | 0.001789 | 2795                                                                                                                     | 2795             | P             | MR            |                  |
| 6                                                                |            | 0.0018  | 2782              | 0.001797 | 2782                                                                                                                     | 2782             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 3<br>Clay Drops: 19.0 mm, 19.0 mm, 16.9 mm<br>Clay Temp.: 103.4° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.362  
Description: Hard armor sample

Sample No: 20211129-325B (M80 V0)  
Weight: 1.50 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       | 0.00179 | 2787              | 0.001794 | 2787                                                                                                                     | 2787             | P             | TL            | 38.4             |
| 2                                                                |            | 0.00178 | 2814              | 0.001777 | 2814                                                                                                                     | 2814             | P             | BR            | 38.7             |
| 3                                                                |            | 0.00177 | 2818              | 0.001774 | 2818                                                                                                                     | 2818             | P             | BL            |                  |
| 4                                                                |            | 0.00178 | 2804              | 0.001783 | 2804                                                                                                                     | 2804             | P             | ML            |                  |
| 5                                                                |            | 0.00178 | 2814              | 0.001777 | 2814                                                                                                                     | 2814             | P             | MR            |                  |
| 6                                                                |            | 0.0018  | 2783              | 0.001797 | 2783                                                                                                                     | 2783             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 5<br>Clay Drops: 17.8 mm, 18.4 mm, 18.9 mm<br>Clay Temp.: 101.0° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.355  
Description: Hard armor sample

Sample No: 20211129-325C (M80 V0)  
Weight: 1.49 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       | 0.00179 | 2793              | 0.00179  | 2793                                                                                                                     | 2793             | P             | TL            | 38.7             |
| 2                                                                |            | 0.00178 | 2804              | 0.001783 | 2804                                                                                                                     | 2804             | P             | BR            | 28.2             |
| 3                                                                |            | 0.00178 | 2804              | 0.001783 | 2804                                                                                                                     | 2804             | P             | BL            |                  |
| 4                                                                |            | 0.00179 | 2800              | 0.001786 | 2800                                                                                                                     | 2800             | P             | ML            |                  |
| 5                                                                |            | 0.00179 | 2795              | 0.001789 | 2795                                                                                                                     | 2795             | P             | MR            |                  |
| 6                                                                |            | 0.00179 | 2786              | 0.001795 | 2786                                                                                                                     | 2786             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 1<br>Clay Drops: 18.0 mm, 19.2 mm, 18.1 mm<br>Clay Temp.: 103.0° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.364  
Description: Hard armor sample

Sample No: 20211129-326B (M80 V0)  
Weight: 1.49 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       | 0.00178 | 2806              | 0.001782 | 2806                                                                                                                     | 2806             | P             | TL            | 40.6             |
| 2                                                                |            | 0.00178 | 2807              | 0.001781 | 2807                                                                                                                     | 2807             | P             | BR            | 33.7             |
| 3                                                                |            | 0.00178 | 2802              | 0.001784 | 2802                                                                                                                     | 2802             | P             | BL            |                  |
| 4                                                                |            | 0.00179 | 2795              | 0.001789 | 2795                                                                                                                     | 2795             | P             | ML            |                  |
| 5                                                                |            | 0.00179 | 2796              | 0.001788 | 2796                                                                                                                     | 2796             | P             | MR            |                  |
| 6                                                                |            | 0.00178 | 2806              | 0.001782 | 2806                                                                                                                     | 2806             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 6<br>Clay Drops: 18.9 mm, 19.4 mm, 17.9 mm<br>Clay Temp.: 102.8° F. |                  |               |               |                  |

# S.M.S. TESTING

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

Client: Dayton Armor  
Date: 12/8/2021  
Project: R&D

### PANEL IDENTIFICATION

Manufacturer: Dayton Armor  
Size: MD  
Apex Thk.: 0.365  
Description: Hard armor sample

Sample No: 20211129-326C (M80 V0)  
Weight: 1.49 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       | 0.00179 | 2790              | 0.001792 | 2790                                                                                                                     | 2790             | P             | TL            | 39.2             |
| 2                                                                |            | 0.00179 | 2798              | 0.001787 | 2798                                                                                                                     | 2798             | P             | BR            | 39.3             |
| 3                                                                |            | 0.00179 | 2787              | 0.001794 | 2787                                                                                                                     | 2787             | P             | BL            |                  |
| 4                                                                |            | 0.0018  | 2781              | 0.001798 | 2781                                                                                                                     | 2781             | P             | ML            |                  |
| 5                                                                |            | 0.00179 | 2796              | 0.001788 | 2796                                                                                                                     | 2796             | P             | MR            |                  |
| 6                                                                |            | 0.00179 | 2799              | 0.001786 | 2799                                                                                                                     | 2799             | P             | TR            |                  |
| <b>REMARKS:</b><br><br>Shot in conjunction with RAZOR soft armor |            |         |                   |          | <b>MISC. TEST INFORMATION:</b><br><br>Clay Block ID: 1<br>Clay Drops: 18.0 mm, 19.2 mm, 18.1 mm<br>Clay Temp.: 103.0° F. |                  |               |               |                  |