

# COMPRESSION RESISTANCE (SIDE TO SIDE)

|  |   |
|--|---|
| <b>NTS-Chesapeake Testing</b><br>4603B Compass Point Road<br>Belcamp, MD 21017 | Client: Ganex Limited<br>Job No.: PR154615<br>Test Date: 9/2/2023<br>Page No.: 1 of 2 |
| Manufacturer: Ganex Limited  | Sample ID: Shadow Armor Sys-07  |

| Sample   |   |   |
|--|---|---|
| Size: Large<br>Weight: 2.09 lbs.<br>Color: Green | Model: NA<br>Mfg. Date: NA<br>Lot No.: NA | Date Received: 8/26/2023<br>Via: UPS<br>Returned: UPS |

| Setup   |   |   |
|---|---|---|
| Temperature: 70 °F<br>Humidity: 41 %<br>Conditioning: Ambient | System Load Cell: 145143<br>Load Cell Cal Due: 11/5/2023<br>Scale Serial: AE79801510<br>Scale Cal Due: 12/19/2023 | Test System: Instron 3366<br>System Cal Due: 11/5/2023<br>Tester: Johnathan Harris<br>Test Location: Mechanical Lab |

## Applicable Standards or Procedures

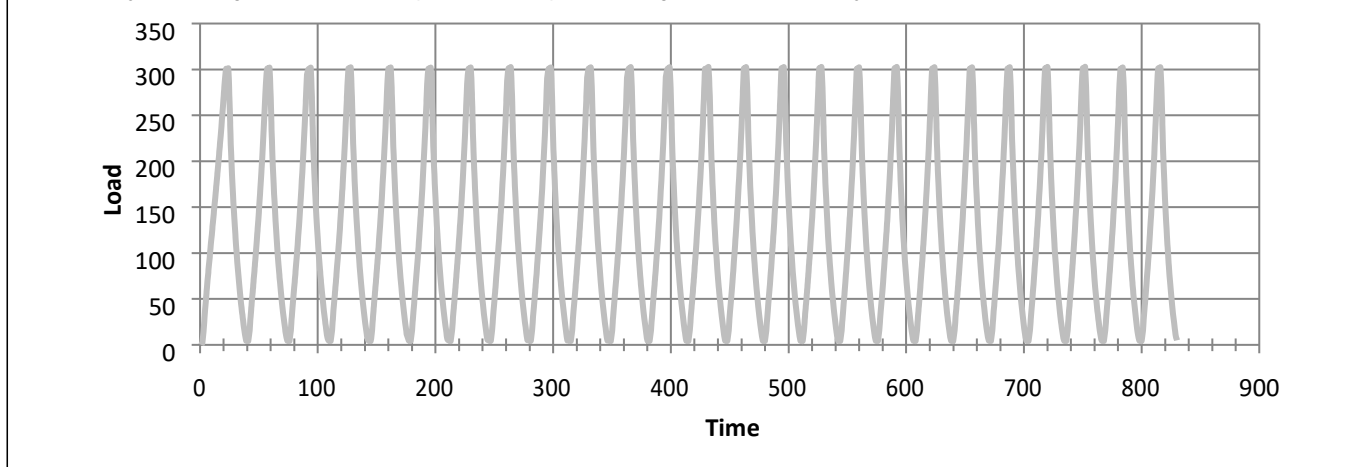
- (1) AR/PD 10-02 Rev A with Change 6
- (2) Customer Request

| Requirement Number | Inspection Pass/Fail | Inspection Requirement  |
|--------------------|----------------------|---|
| 1                  | Pass                 | There shall be no dimensional change in excess of 0.200-inch immediately (within 5 minutes) following compressions.   |
| 2                  | Pass                 | There shall be no dimensional change in excess of 0.125-inch immediately (within 24 ± 1 hour) following compressions. |
| 3                  | Pass                 | The shell shall exhibit no visible delamination, ply separation, distortion after the compressions.                   |

## Results

| Maximum Load (lbf.)        |                  | Maximum Compression (in.)   |                                      |                  | Mode of Failure (If Applicable) |                                    |
|----------------------------|------------------|-----------------------------|--------------------------------------|------------------|---------------------------------|------------------------------------|
| 302.11                     |                  | 0.466                       |                                      |                  | NA                              |                                    |
| Pre Test Measurement (in.) | Date / Time      | Post Test (<5 minute) (in.) | Post Test Delta (<5 minute) (inches) | Date / Time      | Post Test (24 ±1 hour) (in.)    | Post Test Delta (24 ±1 hour) (in.) |
| 1.412                      | 9/2/2021 9:25 AM | 1.484                       | 0.072                                | 9/3/2021 9:30 AM | 1.460                           | 0.048                              |

Remarks:  
 Using a 2.50-inch diameter flat anvil, the test specimen was positioned so that the highest width dimension is aligned with the center of the top anvil. The sample was compressed at a rate of 12-inches per minute until a force of 300-pounds was reached followed by unloading the force to 5.0-pound and repeat testing for a total of 25 cycles.



# COMPRESSION RESISTANCE (TOP TO BOTTOM)

|  |   |
|--|---|
| <b>NTS-Chesapeake Testing</b><br>4603B Compass Point Road<br>Belcamp, MD 21017 | Client: Ganex Limited<br>Job No.: PR154615<br>Test Date: 9/1/2023<br>Page No.: 1 of 2 |
| Manufacturer: Ganex Limited  | Sample ID: Shadow Armor Sys-07  |

| Sample   |   |   |
|--|---|---|
| Size: Large<br>Weight: 2.09 lbs.<br>Color: Green | Model: NA<br>Mfg. Date: NA<br>Lot No.: NA | Date Received: 8/26/2021<br>Via: DHL<br>Returned: UPS |

| Setup   |  |   |
|---|--|---|
| Temperature: 69.3 °F<br>Humidity: 50 %<br>Conditioning: Ambient | System Load Cell: 145143<br>Load Cell Cal Due: 11/5/2023<br>Scale Serial: AE79801510<br>Scale Cal Due: 12/1/2023 | Test System: Instron 3366<br>System Cal Due: 11/5/2023<br>Tester: Johnathan Harris<br>Test Location: Mechanical Lab |

## Applicable Standards or Procedures

- (1) AR/PD 10-02 Rev A with Change 6
- (2) Customer Request

| Requirement Number | Inspection Pass/Fail | Inspection Requirement  |
|--------------------|----------------------|---|
| 1                  | Pass                 | There shall be no dimensional change in excess of 0.020-inch immediately (within 5 minutes) following compressions.   |
| 2                  | Pass                 | There shall be no dimensional change in excess of 0.020-inch immediately (within 24 ± 1 hour) following compressions. |
| 3                  | Pass                 | The shell shall exhibit no visible delamination, ply separation, distortion after the compressions.                   |

## Results

| Maximum Load (lbf.)        |                     | Maximum Compression (in.)   |                                      |                     | Mode of Failure (If Applicable) |                                    |
|----------------------------|---------------------|-----------------------------|--------------------------------------|---------------------|---------------------------------|------------------------------------|
| 417.14                     |                     | 0.109                       |                                      |                     | NA                              |                                    |
| Pre Test Measurement (in.) | Date / Time         | Post Test (<5 minute) (in.) | Post Test Delta (<5 minute) (inches) | Date / Time         | Post Test (24 ±1 hour) (in.)    | Post Test Delta (24 ±1 hour) (in.) |
| 3.727                      | 9/1/2021<br>8:30 AM | 3.737                       | 0.010                                | 9/2/2021<br>8:35 AM | 3.735                           | 0.008                              |

**Remarks:**  
 Using a 2.50-inch diameter flat anvil, the test specimen was positioned so that the highest width dimension is aligned with the center of the top anvil. The sample was compressed at a rate of 12-inches per minute until a force of 400-pounds was reached followed by unloading the force to 5.0-pound and repeat testing for a total of 25 cycles.

