



Acrovyn®

Acrovyn Profiles Impact Testing

ARCHITECTURAL TESTING INC.

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IMPACT TEST SUMMARY REPORT

Rendered to:

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Report No: ATI-6536
Test Date: 04/12/89
Report Date: 07/05/89

TEST PURPOSE: To test the impact resistance of four wall protection systems using a 99.2 pound bullet-shaped ram.

TEST PROCEDURE: The test specimens were evaluated in general accordance with ASTM F476-76, paragraph 18, "Impact Test". The ram was raised to increasing drop heights and released to produce impact energy (FT·LB_f) on the face of the test specimen. Each specimen was directly impacted at midspan between anchor locations.

TEST SPECIMENS:

1. Model SCR-64 surface mounted Acrovyn crash rail, distance between anchor locations was 16".
2. BG-10 Acrovyn bumper guard, distance between anchor locations was 16".
3. Model HRB-4C Acrovyn hand rail, distance between anchor locations was 32".
4. SM-10 Acrovyn surface mounted corner guard, distance between anchor locations was 18".

TEST SPECIMEN MOUNTING: Each profile was rigidly fastened to a steel channel using a through bolt connection at each anchor point. The steel channel was attached to a rigid substrate so the energy of the ram was absorbed solely by the test specimen.

TEST FINDINGS:

1. Each of the profiles subjected to the impact testing successfully resisted an impact of 45.5 ft-lbf minimum while producing no visual blemishes upon the Acrovyn cover surface and no deformations in the aluminum retainer.
2. The chart below indicates impactor weight and velocity combinations that produce an equivalent kinetic energy to that used for test:

Impactor Weight	Velocity	
lbs	fps	MPH
100	5.41	3.69
250	3.42	2.33
450	2.55	1.74
650	2.12	1.45
850	1.86	1.27

3. Each of the profiles experienced impacting beyond the 45.5 ft-lbf minimum. In all cases at a 100% increase in minimum impact, only a small permanent deformation occurred in the aluminum retainer. However, the profiles remained serviceable, both functionally and visually at this higher impact level.

ARCHITECTURAL TESTING, INC.

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To download details, specs & photos visit www.c-sgroup.com
For technical and design assistance call 800-233-8493.

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