Acrovyn®

Acrovyn 4000 Corner Guard Impact Testing

Architectural Testing

August 11, 2010
Revised September 24, 2010

Mr. Dave Laidacker
Construction Specialties, Inc.
4660 Paradise Road
P.O. Box 378
Milton, Pennsylvania 17847-0378

RE: CORNER GUARD IMPACT LOAD TEST SUMMARY

Dear Mr. Laidacker:

Construction Specialties, Inc. contracted Architectural Testing, Inc., an independent test laboratory, to witness testing of their New Acrovyn® 4000 SM-20N Corner Guards with both Aluminum and Regrind Retainers and a competitor's corner guard with aluminum retainer at the Milton, Pennsylvania facility. Ram-type impact tests in general accordance with Section 18 of ASTM F 476-84 (Reapproved 2002), *Standard Test Methods for Security of Swinging Door Assemblies* were conducted for the three products. Three samples of each product were mounted to 1/2" thick standard interior drywall corner sections over steel studs. Each individual sample was secured to a rigid mock wall structure and impacted at its center (99.2 lb impactor per Appendix X.1 of ASTM F 476) starting at a height of 3" (24.80 ft·lb) with subsequent impacts each incremented once by 3" (24.80 ft·lb) then additionally by 2" (16.54 ft·lb) until a failure occurred. Failure was defined as non-serviceability of the product and undesirable surface damage. Each product utilized a continuous rigid retainer comprised of either aluminum or vinyl. A summary of the evaluations is listed below.

Result	New Acrovyn® 4000 SM-20N Corner Guard - Aluminum Retainer	New Acrovyn® 4000 SM-20N Corner Guard - Regrind Retainer	Competitor Corner Guard - Aluminum Retainer
Failure Height	18"	12"	14"
Failure Type	Surface Deformation	Retainer Damage	Broke/Cut Cover

Full details of these tests are available in reports 98909.02-106-47 and 98909.03-106-47. If you have any questions regarding this test summary, please feel free to contact me at your convenience.

For ARCHITECTURAL TESTING, INC.

Digitally Signed by: Todd D. Burroughs

Todd D. Burroughs
Senior Project Engineer - Components / Materials Testing

TDB:tdb/nlb
cc: 98909.02, 98909.03

Acrovyn®

Acrovyn 4000 Handrail Impact Testing

Architectural Testing

August 11, 2010

Mr. Dave Laidacker
Construction Specialties, Inc.
4660 Paradise Road
P.O. Box 378
Milton, Pennsylvania 17847-0378

RE: HANDRAIL IMPACT LOAD TEST SUMMARY

Dear Mr. Laidacker:

Construction Specialties, Inc. contracted Architectural Testing, Inc., an independent test laboratory, to witness testing of their New Acrovyn® 4000 handrail and a competitor handrail at the Milton, Pennsylvania facility. Ram-type impact tests in general accordance with Section 18 of ASTM F 476-84 (Reapproved 2002), *Standard Test Methods for Security of Swinging Door Assemblies* were conducted for the two products. Three samples of each product were mounted to 1/2" thick standard interior drywall sections over steel studs. Each individual sample was secured to a rigid mock wall structure and impacted at its center (99.2 lb impactor per Appendix X.1 of ASTM F 476) starting at a height of 1" (8.27 ft·lb) with subsequent impacts each incremented by 2" (16.54 ft·lb) until a failure occurred. Failure was defined as cracking of the exposed drywall face or metal support damage resulting in non-serviceability of the product. Each product utilized a continuous rigid aluminum retainer. A summary of the evaluations is listed below.

Result	HRB-4CN	Competitor
Failure Height	19"	19"
Failure Type	None - still serviceable	

New Acrovyn® 4000 HRB-4CN

Competitor Model A

Full details of these tests are available in report 98909.01-106-47. If you have any questions regarding this test summary, please feel free to contact me at your convenience.

For ARCHITECTURAL TESTING, INC.

Digitally Signed by: Todd D. Burroughs

Todd D. Burroughs
Senior Project Engineer - Components / Materials Testing

Acrovyn®

Acrovyn 4000 Crash Rail Impact Testing

Architectural Testing

January 3, 2011

Mr. Dave Laidacker
Construction Specialties, Inc.
4660 Paradise Road
P.O. Box 378
Milton, Pennsylvania 17847-0378

RE: CRASH RAIL IMPACT LOAD TEST SUMMARY

Dear Mr. Laidacker:

Construction Specialties, Inc. contracted Architectural Testing, Inc., an independent test laboratory, to witness testing of their New Acrovyn® SCR-48 Crash Rails at the Milton, Pennsylvania facility. Ram-type impact tests in general accordance with Section 18 of ASTM F 476-84 (Reapproved 2002), *Standard Test Methods for Security of Swinging Door Assemblies* were conducted for the two mounting styles. Three samples of each mounting style were installed on 5/8" thick standard interior drywall sections over steel studs. Each individual sample was secured to a rigid mock wall structure and impacted at its center (99.2 lb impactor per Appendix X.1 of ASTM F 476) starting at a height of 2" (16.53 ft·lb) with subsequent impacts each incremented by 2" (16.53 ft·lb) until a failure occurred. Failure was defined as cracking of the exposed drywall face or product damage resulting in non-serviceability of the product or 3/8" indentation. One product utilized a continuous rigid aluminum retainer and continuous polymer cushion, the other utilized a clip connection. A summary of the evaluations is listed below.

Result	Continuous Retainer Mount	Clip Mount
Failure Height	10"	8"
Failure Type	>3/8" indentation	Drywall Cracked - Cover Serviceable

SCR-48
Continuous Retainer

SCR-48
Clip Mount

Full details of these tests are available in report A4778.03-106-47. If you have any questions regarding this test summary, please feel free to contact me at your convenience.

For ARCHITECTURAL TESTING, INC.

Digitally Signed by: Todd D. Burroughs

Todd D. Burroughs
Senior Project Engineer - Components / Materials Testing

Acrovyn®

Acrovyn 4000 Crash Rail Impact Testing

Architectural Testing

January 3, 2011

Mr. Dave Laidacker
Construction Specialties, Inc.
4660 Paradise Road
P.O. Box 378
Milton, Pennsylvania 17847-0378

RE: CRASH RAIL IMPACT LOAD TEST SUMMARY

Dear Mr. Laidacker:

Construction Specialties, Inc. contracted Architectural Testing, Inc., an independent test laboratory, to witness testing of their New Acrovyn® SCR-64 Crash Rails at the Milton, Pennsylvania facility. Ram-type impact tests in general accordance with Section 18 of ASTM F 476-84 (Reapproved 2002), *Standard Test Methods for Security of Swinging Door Assemblies* were conducted for the two mounting styles. Three samples of each mounting style were installed on 5/8" thick standard interior drywall sections over steel studs. Each individual sample was secured to a rigid mock wall structure and impacted at its center (99.2 lb impactor per Appendix X.1 of ASTM F 476) starting at a height of 2" (16.53 ft·lb) with subsequent impacts each incremented by 2" (16.53 ft·lb) until a failure occurred. Failure was defined as cracking of the exposed drywall face or product damage resulting in non-serviceability of the product or 3/8" indentation. One product utilized a continuous rigid aluminum retainer and continuous polymer cushion, the other utilized a clip connection. A summary of the evaluations is listed below.

Result	Continuous Retainer Mount	Clip Mount
Failure Height	12"	6"
Failure Type	>3/8" indentation	Drywall Cracked

SCR-64
Continuous Retainer

SCR-64
Clip Mount

Full details of these tests are available in report A4778.02-106-47. If you have any questions regarding this test summary, please feel free to contact me at your convenience.

For ARCHITECTURAL TESTING, INC.

Digitally Signed by: Todd D. Burroughs

Todd D. Burroughs
Senior Project Engineer - Components / Materials Testing