



GUARDIAN

FIRE TESTING LABORATORIES, INC.

Testing & Listing

Engineering & Consulting Services

Field Labeling


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GL13108-B

Guardian Fire Testing Laboratories, Inc.
474 Hinman Ave.
Buffalo, NY 14216

Office Phone: 716 835 6880 Fax: 716 835 5682
Lab Phone: 716 877 2760
Email: gftli@earthlink.net
Web Site: www.firetesting.com

FIRE TEST REPORT: 4 Inch Tubular Structural Aluminum Column Fireproofing

 **CLIENT/MFG:** Johnson Portable Aluminum Extrusions
5178 Kasemeyer Rd.
Bay City, MI 48706

MODEL, NAME & NUMBER: Contego Fire Retardan Coating, 25 mils Thick, coating; 2 Coats of Rustoleum-Brown

STANDARDS TESTED TO: ASTM E-119-07a Floor/ceiling, NFPA 251, Small Scale Test CAN4-S101, No Load

REPORT NO: GL 13108-B

TEST DATE: 2/15/08

REPORT DATE: 2/18/08

TEST RESULTS: The column fell at 54 minutes.

REPORT PREPARED BY: GUARDIAN FIRE TESTING LABORATORIES, INC.
474 Hinman Ave.
Buffalo, NY 14216

1. General

- 1.1 Units of measurement used in this test are English: inches, feet and temperature degrees Fahrenheit.
- 1.2 The testing was conducted by Guardian Fire Testing Laboratories personnel at Guardian's fire testing lab at 474 Hinman Ave., Buffalo, NY. The assembly was constructed by Johnson personnel.
- 1.3 Guardian is an ISO 17025:2005 accredited fire testing laboratory.

2. Performance

This report presents the results of a 4 inch tubular aluminum column fire test conducted according to ASTM E-119. This report contains a description of the material evaluated, procedures used and the test results. The results listed apply only to the specimens tested, in the manner tested.

This assembly went 54 minutes before the aluminum column fell.

2.1 Construction

The 4 inch aluminum column was 1/8 inch, and it was coated with Contego intumescent coating with a 25 mil thickness.

3. Fire Endurance Test


- 3.1 The ASTM E-119 horizontal furnace was used for the fire endurance.
- 3.2 Four thermocouples were inserted into the column before the column was coated. The t/c's were at center height and at 90° from each other.
- 3.3 The test unit was placed in the horizontal furnace with column in a vertical position.
- 3.4 The furnace was ignited, and the temperature curve was followed.

4. Conclusions

The intumescent coating, Contego 25 mils thick, applied to the 4 inch aluminum column protected it for 54 minutes. The column's average temperature at 50 minutes was 1183° F.

There was no load applied.

Test Performed and Reported by:


R. Joseph Pearson
Fire Testing Engineer

Test Witnessed by:

Patrick Mudd
Fire Testing Chemist

**Contego 25 Mil Thickness
Column Thermocouples: Temperatures ° F**

Time Min.	West 7	East 8	South 9	North 10
0	47	47	47	47
5	450	325	388	392
10	683	586	624	666
15	796	708	746	792
20	903	824	861	904
25	1012	940	976	1065
30	1104	1046	1018	1107
35	1141	1081	1125	1145
40	1148	1109	1155	1153
45	1181	1152	1167	1188
50	1190	1162	1177	1198

Test Observations: Contego, 25 mils

Time (min.)

- 0 test start time 10:02 a.m.
- 6 coating is intumescing
- 25 coating has expanded and is white
- 35 no change, thickness is about 3/4"
- 54 column fell over