



Testing & Listing
Engineering & Consulting Services

Field Labeling

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GL13108-A

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 Retardant Coating, 50 mils thick, 2 Coats Of
Rustoleum White

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

REPORT NO: GL 13108-A

TEST DATE: 2/15/08

REPORT DATE: 2/18/08

TEST RESULTS: The column fell at 124 minutes.
Column's average temperature at 60 minutes was 883° F.

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 124 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 50 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 until late in the test. The Column fell at 124 minutes.
- 3.5 The test column's average temperature at 60 minutes was 883° F.

4. Conclusions

The intumescent coating, Contego 50 mils thick, applied to the 4 inch aluminum column protected it for 124 minutes. The column's average temperature at 60 minutes was 883° 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 50 Mil Thickness
Column Thermocouples: Temperatures ° F

Time Min.	West 1	North 2	East 3	South 4
0	40	39	39	40
5	184	184	172	176
10	394	387	363	361
15	496	493	481	484
20	546	541	529	531
25	575	573	562	564
30	614	609	597	600
35	645	646	628	632
40	694	690	674	677
45	737	735	721	727
50	791	787	772	776
55	835	832	817	822
60	894	889	872	876
65	942	939	925	930
70	1014	1005	984	987
75	1056	1049	1031	1036
80	1085	1078	1059	1063
85	1101	1095	1076	1080
90	1111	1105	1086	1089
95	1124	1119	1101	1104
100	1130	1124	1107	1108
105	1136	1132	1113	1115
110	1141	1136	1117	1119
115	1147	1143	1130	1125
120	1154	1149	1130	1132

883 avg. @ 60 minutes

124 Minutes: Test Terminated

Test Observations:

Time (min.)

- 0 test start time 10:02 a.m.
- 6 coating starting to intumesce
- 25 column coated with black char
- 35 column's corners char turning white
- 53 char is all white
- 70 some small pieces of white char falling off
- 80 no change
- 105 no change
- 124 column fell