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, 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 tie’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
<table>
<thead>
<tr>
<th>Time (Min.)</th>
<th>West 7</th>
<th>East 8</th>
<th>South 9</th>
<th>North 10</th>
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<td>47</td>
<td>47</td>
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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