



**REPORT NUMBER: 100922095COQ-001A**  
ORIGINAL ISSUE DATE: November 6, 2012

**EVALUATION CENTER**  
Intertek Testing Services NA Ltd.  
1500 Brigantine Drive  
Coquitlam, B.C. V3K 7C1

**RENDERED TO**

Can-Cell Industries, Inc.  
14735 – 124<sup>th</sup> Avenue  
Edmonton, AB  
T5L 3B2

PRODUCT EVALUATED: HIBAR Spray-Applied Fire-Resistive Barrier  
EVALUATION PROPERTY: Thermal Protection

**Report of testing HIBAR spray-applied fire-resistive barrier for compliance with the applicable requirements of the following criteria: CAN/ULC S124-06, Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic.**

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**TEST REPORT**

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## 2 Introduction

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Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Can-Cell Industries, Inc., on a sample of HIBAR spray-applied fire-resistive barrier, to evaluate the thermal protection properties. Testing was conducted in accordance with CAN/ULC S124-06, *Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic*.

This evaluation began November 2, 2012 and was completed the same day. Testing was witnessed by Mr. Grant Kaminski representing Can-Cell Industries, Inc.

## 3 Test Samples

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### 3.1. SAMPLE SELECTION

Samples were submitted to Intertek directly by the client. All product descriptions and identifications were provided by Can-Cell Industries, Inc., and Intertek accepts no responsibility for any inaccuracies provided. Samples were not independently selected for testing. Samples were received at the Evaluation Center on October 24, 2012.

### 3.2. SAMPLE AND ASSEMBLY DESCRIPTION

Upon receipt of the samples at the Intertek Coquitlam laboratory the samples were placed in a conditioning room where they remained in an atmosphere of  $23 \pm 3^{\circ}\text{C}$  ( $73.4 \pm 5^{\circ}\text{F}$ ) and  $50 \pm 5\%$  relative humidity.

The test specimen consisted of HIBAR spay-applied fire-resistive barrier over 25 mm of 2 pcf closed cell foam applied to cement board. The thickness of the protective barrier was found to be an average of 2-1/4 in. The overall size of the test sample was 800 mm by 800 mm.

The HIBAR product was applied by contractors organized by Can-Cell Industries, Inc. on October 24, 2012.

## 4 Testing and Evaluation Methods

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### 4.1. TEST STANDARD

The products described in section 3.2 on this test report were tested in accordance with CAN/ULC S124-06.

This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire hazards or fire risk assessment of materials, products, or assemblies under actual fire conditions.

### 4.2. THE FIRE TEST

The temperatures inside the furnace are monitored by four equally spaced thermocouples. These readings were recorded by a Yokogawa data acquisition system (ID no. WH D3593/WH D3595) recorded every 30 seconds and displayed every 15 seconds. See Appendix B – Temperature Data.

The temperature inside the furnace followed the standard time-temperature curve as specified in CAN/ULC S101-07, *Standard Methods of Fire Endurance Tests of Building Construction and Materials*.

The furnace pressure was monitored throughout the fire test period. The furnace pressure was kept as close to atmospheric pressure as possible during the test. The incline manometer ID no. 1049 was used.

The temperature of the interface of the protective covering and the foamed plastic was monitored using five thermocouples, located at the center of the specimen and at the center of each quarter of the specimen. These temperatures were recorded at intervals not exceeding 1 min.

At the request of the client the test was continued for 45 min. This data is included in Appendix B – Temperature Data.

### 4.3. CLASSIFICATION

The following classifications have been included in order to accommodate the present requirements of the authorities having jurisdiction and are not intended to limit the acceptance conditions as they may be specified from time to time by those authorities. They should also not be regarded as sequential in merit. The best performance is represented by Classification A and the poorest by classification D. Classifications B and C are intermediate but not necessarily sequential.

#### **Classification A**

If the temperature rise at the interface of the protective cover and the foamed plastic at the end of 15 min has not exceeded 140°C (284°F) average or 180°C (356°F) at any one of the interface thermocouples, the protective cover shall be accorded a Classification of A.

#### **Classification B**

If the temperature rise at the interface of the protective cover and the foamed plastic at the end of 10 min has not exceeded 140°C (284°F) average or 180°C (356°F) at any one of the interface thermocouples, the protective cover shall be accorded a Classification of B.

#### **Classification C**

If the temperature rise at the interface of the protective cover and the foamed plastic at the end of 15 min has not exceeded 195°C (383°F) average or 250°C (482°F) at any one of the interface thermocouples, the protective cover shall be accorded a Classification of C.

#### **Classification D**

If the temperature rise at the interface of the protective cover and the foamed plastic at the end of 10 min has not exceeded 195°C (383°F) average or 250°C (482°F) at any one of the interface thermocouples, the protective cover shall be accorded a Classification of C.

## 5 Testing and Evaluation Results

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### 5.1. RESULTS AND OBSERVATIONS

<b>TIME (min.)</b>	<b>OBSERVATIONS</b>
10:00	No physical changes, Maximum temperature is 87°F
15:00	No physical changes, Maximum temperature is 154°F
20:00	No physical changes, Maximum temperature is 182°F
30:00	No physical changes, Maximum temperature is 193°F
45:00	No physical changes, Maximum temperature is 193°F

## 6 Conclusion

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The sample of HIBAR spray-applied fire-resistive barrier, submitted by Can-Cell Industries, Inc., therefore qualified for Classification A, as described in section 4.3 of this report, when tested in accordance with CAN/ULC S124-06, *Standard Method of Test for the Evaluation of Protective Coverings for Foamed Plastic*.

The conclusions of this test report may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

### INTERTEK TESTING SERVICES NA LTD.

Tested and  
Reported by:

  
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Scott Leduc, EIT  
Technician – Construction Products Testing

Reviewed by:

  
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Greg Philp.  
Reviewer – Fire Testing

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## APPENDIX A

Photographs



Exposed Side Prior to the Fire Test



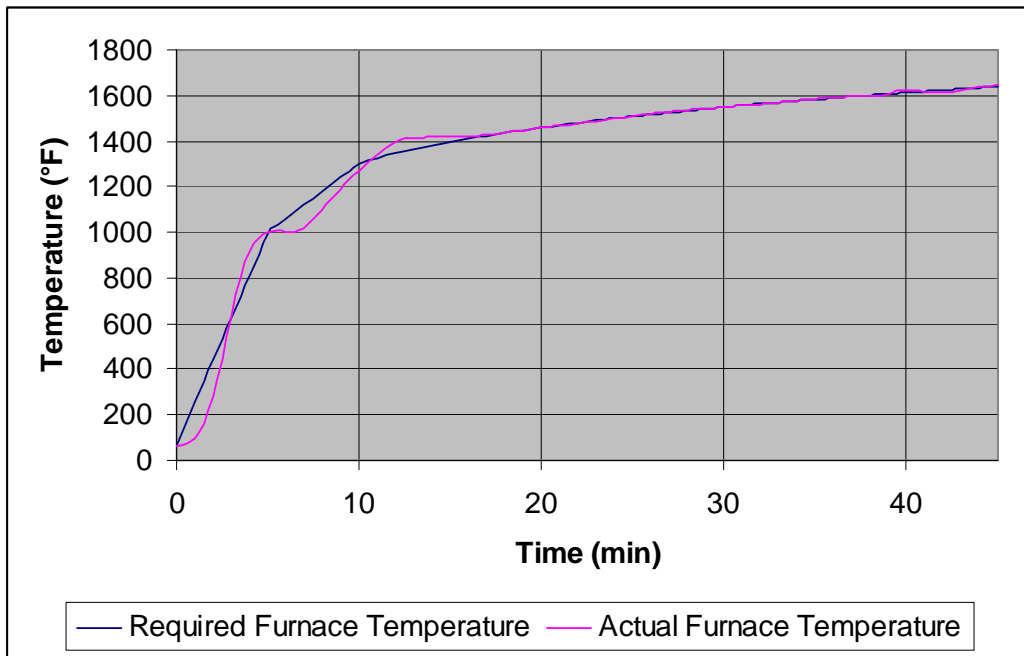
Exposed Side After the Fire Test



## APPENDIX B

Temperature Data

**TIME TEMPERATURE CURVE  
 AVERAGE TEMPERATURE OF FURNACE DURING THE FIRE TEST**



**INTERFACE THERMOCOUPLE READINGS**

Time (min)	TC #1	TC #2	TC #3	TC #4	TC #5
0	57	58	58	57	58
1	57	58	58	58	58
2	57	58	58	58	58
3	58	58	58	58	58
4	58	59	58	58	59
5	58	59	59	58	59
6	59	59	61	59	59
7	62	59	65	59	60
8	67	60	70	61	60
9	75	60	77	64	62
10	85	61	87	68	64
11	98	62	98	74	69
12	112	64	111	83	74
13	127	66	126	94	82
14	139	70	141	106	92
15	148	74	154	118	103
16	155	81	164	129	113
17	161	89	172	138	125
18	167	98	177	145	135
19	172	108	180	151	145
20	177	117	182	157	152

INTERFACE THERMOCOUPLE READINGS

Time (min)	TC #1	TC #2	TC #3	TC #4	TC #5
21	181	124	184	163	158
22	184	139	186	170	163
23	186	159	187	177	169
24	188	170	188	181	175
25	189	177	189	185	181
26	190	181	190	187	185
27	191	185	190	188	187
28	191	187	191	189	189
29	192	189	191	190	190
30	193	190	192	190	191
31	194	191	192	191	192
32	194	191	193	191	192
33	194	191	193	191	192
34	195	192	193	191	192
35	195	192	193	191	192
36	195	192	194	191	192
37	195	193	194	191	193
38	195	193	194	191	193
39	195	193	194	191	193
40	195	194	194	191	194
41	195	194	194	192	194
42	195	194	194	192	194
43	194	194	194	191	194
44	194	193	193	191	194
45	193	193	193	191	193

## REVISION SUMMARY

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November 6, 2012	--	Original Issue Date