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**PRELIMINARY DRAFT REPORT**

**Determination of Non-Combustibility of  
"Fiberton UHPC (Ultra High Performance Concrete)"**

A Report To:	<b>Exterior Technologies Group</b> 109 Dupont Street Toronto, ON, Canada M5R 1V4
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## 1.0 ACCREDITATION

ISO/IEC 17025 for a defined Scope of Testing by the American Association for Laboratory Accreditation (A2LA), Certificate Number: 6524.03.

## 2.0 SPECIFICATIONS OF ORDER

Test for non-combustibility in accordance with CAN/ULC-S114:2018 "*Standard Method of Test for Determination of Non-Combustibility in Building Materials*", as per Element Quotation No. 23-002-461435 dated June 16, 2023.

### 2.1 History of Revision

This is the original.

## 3.0 SAMPLE IDENTIFICATION (Element sample identification number 23-002-S0330-1)

Concrete panel material, identified as:  
"Fiberton UHPC (Ultra High Performance Concrete)"

## 4.0 SUMMARY OF TEST PROCEDURE

A specimen of known mass, measuring 50 mm long, 38 mm wide and 38 mm thick, is placed inside an electrically heated tube furnace stabilized at 750°C. A material is considered to be non-combustible if it meets all the following criteria:

- A) The mean of the maximum temperature rise for the three (or more) specimens of the sample during the test does not exceed 36 Celsius degrees; and
  - B) There is no flaming of any of the three (or more) specimens during the last 14.5 minutes of the test; and
- Note: Any surface flash, transitory flaming or sustained flaming constitutes flaming for the purposes of this requirement.
- C) (i) The maximum weight loss of any of the three (or more) specimens during the test does not exceed 20 percent; or
  - (ii) The maximum weight loss of any of the three (or more) specimens during the test does not exceed 22 percent and the following two criteria are met for any of the three (or more) specimens during the test:
    - (a) The temperature above the specimen shall not rise above the stabilized furnace temperature at any time during the test; and
    - (b) No flaming from the specimens shall be observed at any time during the test.

## 5.0 SAMPLE PREPARATION

The material was received in sections, each approximately 38 mm x 38 mm x 11 mm. Each test specimen consisted of a stack of 5 supplied sections wired together. The test specimens were dried at a temperature of  $60 \pm 3^{\circ}\text{C}$  for a 24 h to 48 h period and were allowed to cool to room temperature in a dry atmosphere (desiccator cabinet) prior to testing.

## 6.0 SUMMARY OF TEST RESULTS

### SAMPLE: "Fiberton UHPC (Ultra High Performance Concrete)"

Date of Material Receipt	2023-08-29/09-12
Date of Test	2023-09-06/28
CAN/ULC-S114:2018 Test Result:	Pass
CAN/ULC-S114 Classification:	Non-combustible

**7.0 TEST RESULTS****CAN/ULC-S114:2018**

Standard Method of Test for Determination of Non-Combustibility in Building Materials

**SAMPLE: "Fiberton UHPC (Ultra High Performance Concrete)"**

Trial	Maximum Temperature Rise (°C)	Flaming During Last 14.5 minutes?	Specimen Initial Weight (g)	Specimen Final Weight (g)	Percent Weight Loss
1	**	No	174.63	162.23	<b>7.10</b>
2	**	No	182.95	170.02	<b>7.07</b>
3	**	No	163.48	152.58	<b>6.67</b>
Mean:	**	-	-	-	-
Specified Maxima	36 (mean)	No	-	-	20.0 (individual)

\*\* The temperature never exceeded the initial stabilized furnace temperature

**8.0 OBSERVATIONS**

In all cases, visible smoke was observed at approximately 50 seconds after the test samples were inserted into the furnace. Smoke production continued for approximately 9 minutes.

**9.0 CONCLUSIONS**

The concrete panel material identified in this report meets all of the specified criteria and therefore can be classified "Non-combustible", as defined by CAN/ULC-S114.

**Note: This is a preliminary draft copy of the report. For information purposes only.**

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