

# ALFREX, LLC LETTER REPORT

## **SCOPE OF WORK**

ULC-S135:2004-(REAFFIRMED 2016), STANDARD TEST METHOD FOR THE DETERMINATION OF COMBUSTIBILITY PARAMETERS OF BUILDING MATERIALS USING AN OXYGEN CONSUMPTION CALORIMETER (CONE CALORIMETER) ON ALFREX PLATE

## **REPORT NUMBER**

104375589MID-001A

# **TEST DATE(S)**

08/13/20

ISSUE DATE [REVISED DATE]

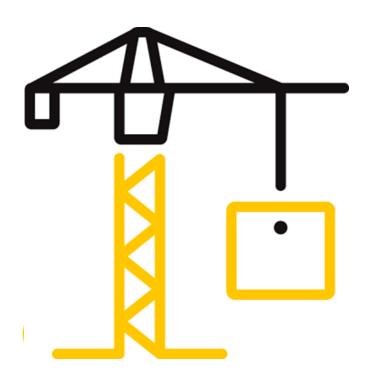
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## **PAGES**

4

#### **DOCUMENT CONTROL NUMBER**

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LETTER REPORT FOR ALFREX LLC

Report No.: 104375589MID-001A

Date: 08/13/20

#### **REPORT ISSUED TO**

ALFREX, LLC 943 Gainesville Hwy. Building 100-4000

Buford, GA 30518

**Subject:** Summary letter report for full report 104375589MID-001 on Alfex Plate.

8431 Murphy Drive Middleton, WI 53562 Telephone: 608-836-4400 Facsimile: 608-831-9279 www.intertek.com/building

Dear Julia Jun,

This letter report summarizes the results of our evaluation of Alfrex Plate to the requirements contained in the following standards:

The specimens were evaluated in accordance with the following:

**ULC-S135:2004-(REAFFIRMED 2016),** Standard Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter); Underwriters Laboratories of Canada.

National Building Code Canada 2015 Volume 1 Noncombustible Material Section 3.3.5.1:

- 1) Except as permitted by Sentences (2) to (4) and Articles 3.1.5.2. to 3.1.5.24., 3.1.13.4. and 3.2.2.16., a building or part of a building required to be of noncombustible construction shall be constructed with noncombustible materials. (See also Subsection 3.1.13. for the requirements regarding the flame-spread rating of interior finishes.)
- 2) Notwithstanding the definition of noncombustible materials stated in Article 1.4.1.2. of Division A, a material is permitted to be used in noncombustible construction provided that, when tested in accordance with ULC-S135, "Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter)," at a heat flux of 50 kW/m²,
  - a) its average total heat release is not more than 3 MJ/m<sup>2</sup>,
  - b) its average total smoke extinction area is not more than 1.0 m2, and
  - the test duration is extended beyond the time stipulated in the referenced standard until it is clear that there is no further release of heat or smoke.
- 3) If a material referred to in Sentence (2) consists of a number of discrete layers and testing reveals that the surface layer or layers protect the underlying layers such that complete combustion of the underlying layers does not occur, the test shall be repeated by removing the outer layers sequentially until all layers have been exposed during testing, or until complete combustion has occurred.
- 4) The acceptance criteria for a material tested in accordance with Sentence (3) shall be based on the cumulative emissions from all layers, which must not exceed the criteria stated in Clauses (2)(a) and (b).

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#### LETTER REPORT FOR ALFREX LLC

Report No.: 104375589MID-001A

Date: 08/13/20

#### **SUMMARY**

Intertek Building & Construction (B&C) was contracted by Alfrex, LLC to perform testing in accordance with ULC S135, Standard Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter (Cone Calorimeter), on their Alfrex Plate. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at Intertek test facility in Middleton, WI.

Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens (where required by Certification or Accreditation bodies), or other pertinent project documentation, will be retained for the entire test record retention period.

## **SECTION 1**

#### **TESTING**

The pre-painted aluminium panels with black on one surface and gray on the other surface were cut to  $100 \times 100$  mm by the client. The black surface was the exposed surface that was tested. Specimens were conditioned to moisture equilibrium (constant mass) at an ambient temperature of  $23 \pm 3^{\circ}$ C and a relative humidity of  $50 \pm 5\%$ . The cone calorimeter test was run as written in ULC S135 section 8 – Procedure. The cone calorimeter calculations were performed as written in ULC S135 section 10 – Calculations.

## **SECTION 2**

## **CONCLUSION**

The black pained surface of the material passed the National Building Code Canada 2015 Volume 1 for noncombustible material section 3.3.5.1. The materials' total heat release was not more than 3  $MJ/m^2$ , with an average value of 0.7  $MJ/m^2$ . The materials' average total smoke extinction area was not more than 1.0  $m^2$ , with an average value of 0.3  $m^2$ .

There were no deviations to the ULC \$135 standard.

For INTERTEK B&C:

COMPLETED BY: Bryan Bowman REVIEWED BY: Mark Crawford

TITLE: Chemist TITLE: Engineering Team Lead

Bype Bowman SIGNATURE:

DATE: 09/01/20 DATE: 09/01/20

Please note: this Letter Report does not represent authorization for the use of any Intertek certification marks.



LETTER REPORT FOR ALFREX LLC

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## **SECTION 3**

**REVISION LOG** 

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