

CLIENT: **CarbonZero LLC**
2825 Commerce Parkway
North Port, FL, 34289

Test Report Number : RJ6767F-2	Date: January 28, 2019
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SAMPLE ID: The client identified the following test material as:
CarbonZeroHPL Thin Laminate.

SAMPLING DETAIL: Test Samples were submitted to the Laboratory directly by the client. No sampling or sample preparation were observed by QAI staff.

DATE OF RECEIPT: Samples were received at QAI facilities on: December 3, 2018

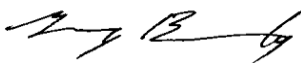
TESTING PERIOD: January 17, 2019 and January 17, 2019.

AUTHORIZATION: Testing was authorized by Ian Dill for proposal 18SP113005 signed January 11, 2019

TEST REQUESTED: Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with CAN ULC S102 - 10 "STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS AND ASSEMBLIES".

	<u>Flame Spread</u>	<u>Smoke Developed</u>
TEST 1 RESULTS:	18	11
TEST 2 RESULTS:	19	21
TEST 3 RESULTS:	21	13
AVERAGE ROUNDED:	20	15

Prepared By



Gregory Banasky
Senior Fire Technician

**Signed for and on behalf of
QAI Laboratories, Inc.**



Brian Ortega
Senior Analyst / Fire Technology

PREPARATION AND CONDITIONING:

The sample Material was delivered to QAI in pieces 24" wide by 96" long specimens. Three of these pieces were used for the test. The specimen was placed in the conditioning room (maintained at $73.4 \pm 5^\circ$ F and a relative humidity of $50 \pm 5\%$) for a minimum of 72 hours prior to testing.

MOUNTING METHOD:

The sample was supported during testing by 2" hexagonal mesh poultry netting running the length of the test chamber and 1/4" round metal rods placed at two foot intervals across the width of the test chamber. Prior to testing the samples were covered with 1/4" cement board as required in the test method.

CAN ULC S102 TEST RESULTS:**CLIENT: CarbonZero LLC****TEST DATE: 1/17/2019****TEST #1 OF 3:****SAMPLE ID:**

CarbonZeroHPL Thin Laminate.

SAMPLE IGNITION:

35 seconds

MAX FLAME FRONT:

3.7 Feet

TIME TO MAXIMUM SPREAD:

01:07 Minutes / Seconds

TEST DURATION: 10 minutes**SUMMARY: FLAME SPREAD: 18****SMOKE DEVELOPED: 11****OBSERVATIONS:**

Charring

PREPARATION AND CONDITIONING:

The sample Material was delivered to QAI in pieces 24" wide by 96" long specimens. Three of these pieces were used for the test. The specimen was placed in the conditioning room (maintained at $73.4 \pm 5^\circ$ F and a relative humidity of $50 \pm 5\%$) for a minimum of 72 hours prior to testing

CAN ULC S102 TEST RESULTS:

MOUNTING METHOD:

The sample was supported during testing by 2" hexagonal mesh poultry netting running the length of the test chamber and 1/4" round metal rods placed at two foot intervals across the width of the test chamber. Prior to

CLIENT: CarbonZero LLC **TEST DATE:** 1/17/2019

TEST #2 OF 3:

SAMPLE ID: CarbonZeroHPL Thin Laminate.

SAMPLE IGNITION: 36 seconds

MAX FLAME FRONT: 4.0 Feet

TIME TO MAXIMUM SPREAD: 01:12 Minutes / Seconds

TEST DURATION: 10 minutes

SUMMARY: FLAME SPREAD: 19
SMOKE DEVELOPED: 21

OBSERVATIONS:

Charring

PREPARATION AND CONDITIONING:

The sample Material was delivered to QAI in pieces 24" wide by 96" long specimens. Three of these pieces were used for the test. The specimen was placed in the conditioning room (maintained at $73.4 \pm 5^\circ$ F and a relative humidity of $50 \pm 5\%$) for a minimum of 72 hours prior to testing

CAN ULC S102 TEST RESULTS:**MOUNTING METHOD:**

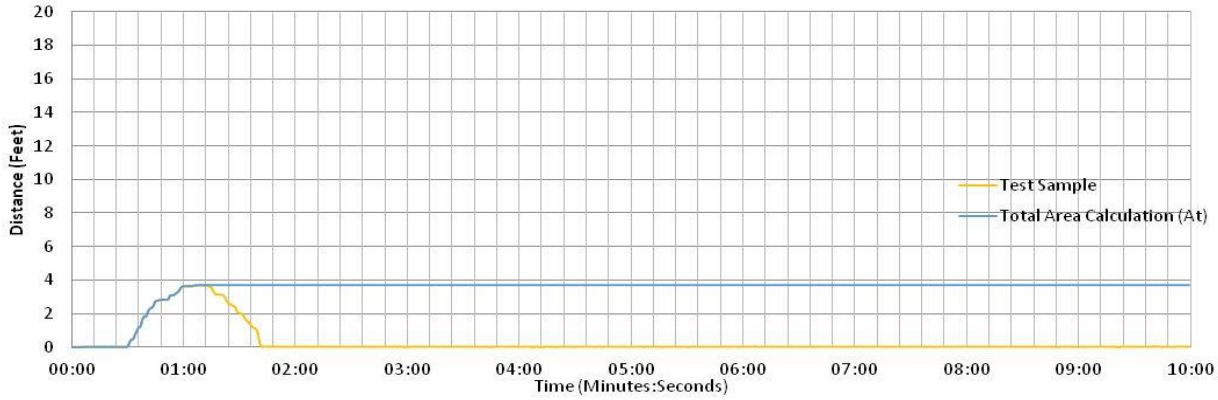
The sample was supported during testing by 2" hexagonal mesh poultry netting running the length of the test chamber and 1/4" round metal rods placed at two foot intervals across the width of the test chamber. Prior to

CLIENT: CarbonZero LLC**TEST DATE:** 1/17/2019**TEST #3 OF 3:****SAMPLE ID:** CarbonZeroHPL Thin Laminate.**SAMPLE IGNITION:** 38 seconds**MAX FLAME FRONT:** 3.9 Feet**TIME TO MAXIMUM SPREAD:** 1 minutes, 170seconds**TEST DURATION:** 10 minutes.**SUMMARY:** FLAME SPREAD: 21
SMOKE DEVELOPED: 13**OBSERVATIONS:**

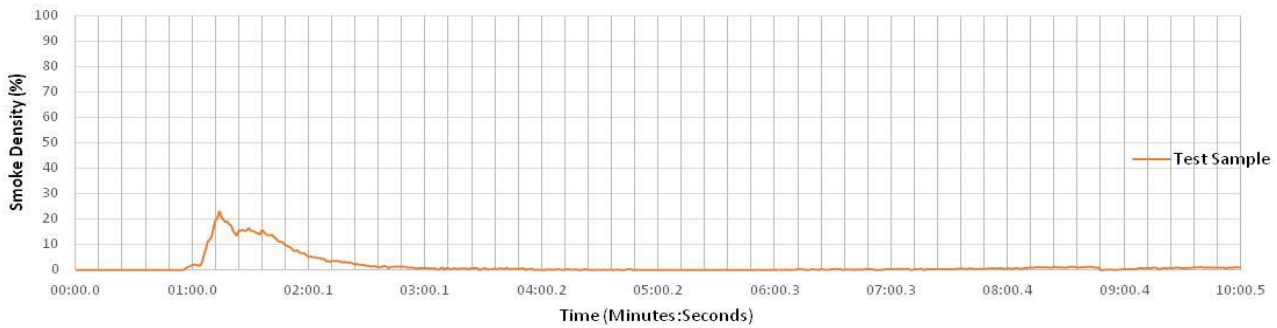
Charring

TEST #1 OF 3 GRAPHS:

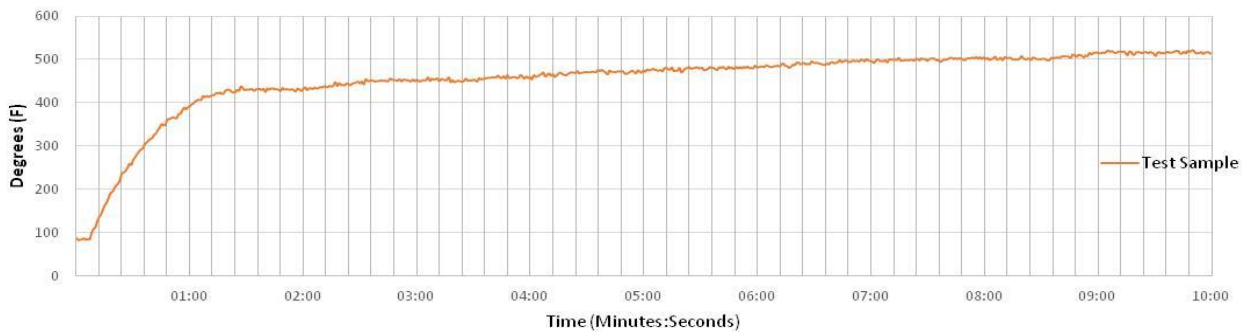
Flame Spread



Smoke Readings

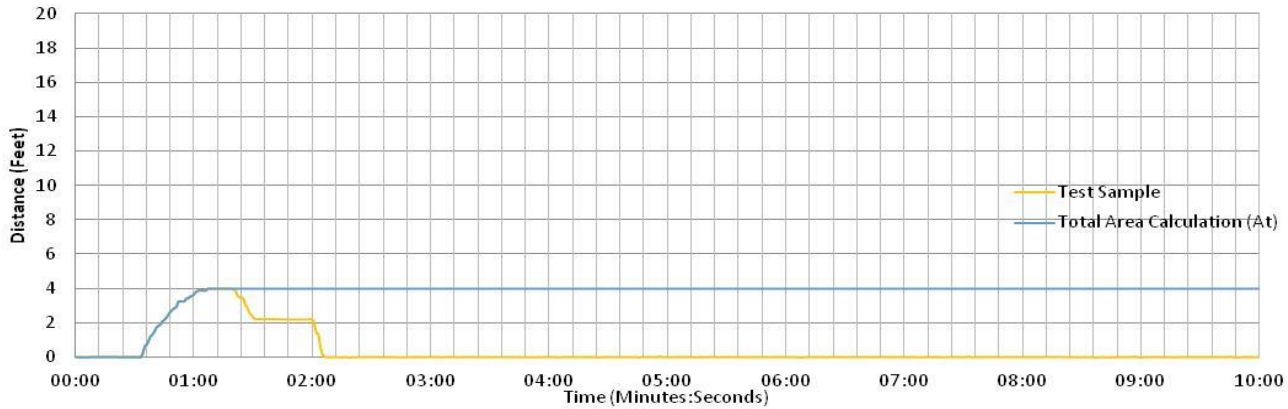


Temperature

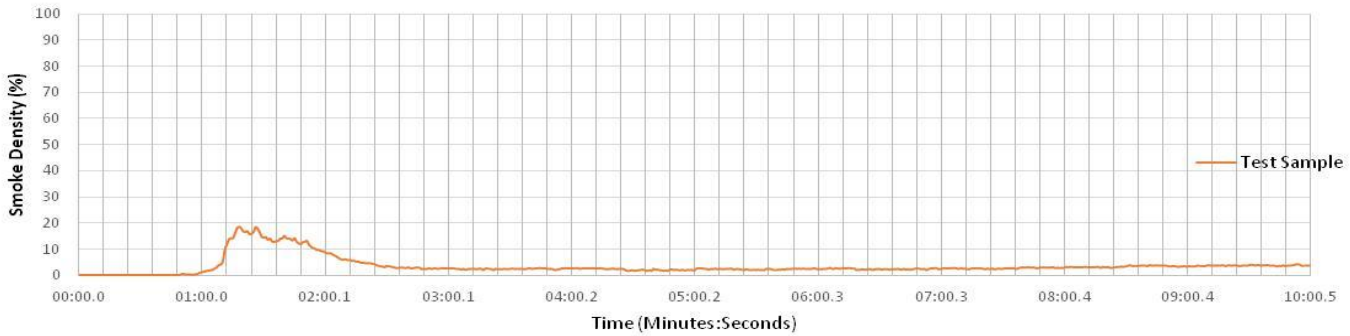


TEST #2 OF 3 GRAPHS:

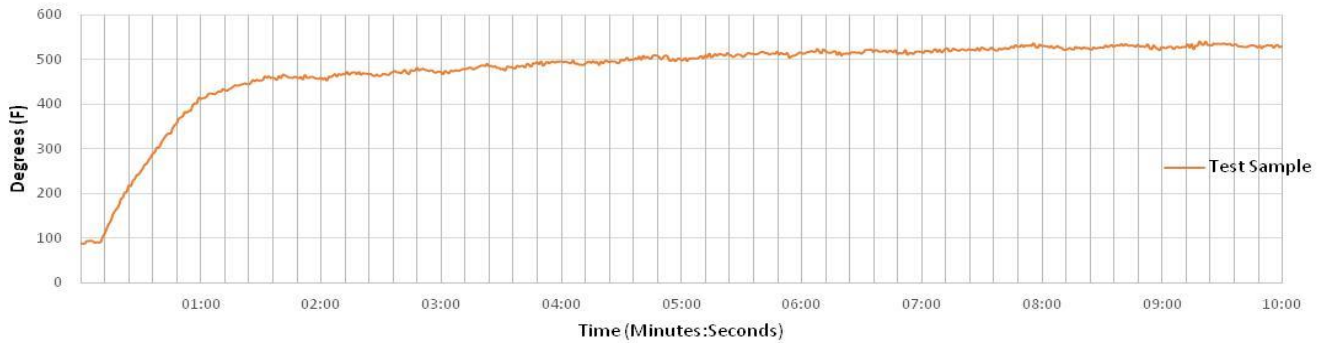
Flame Spread



Smoke Readings

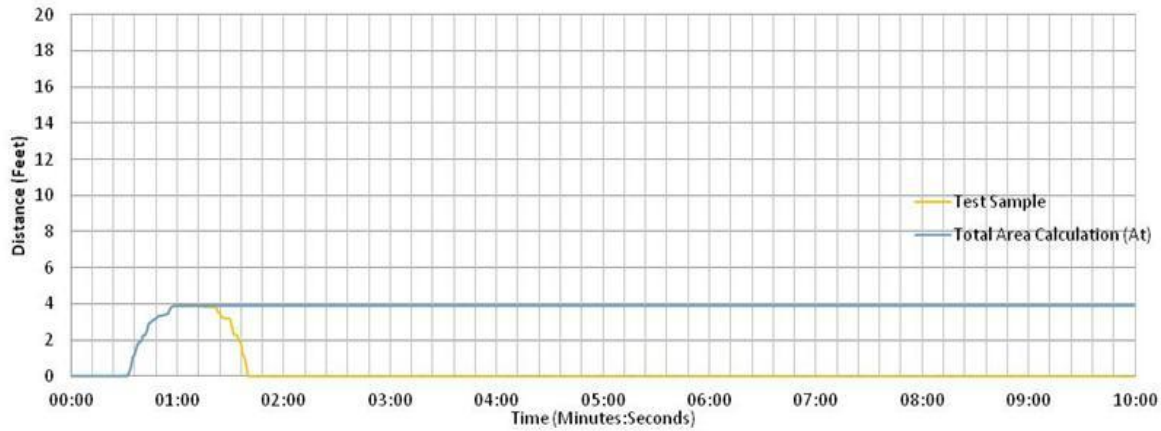


Temperature

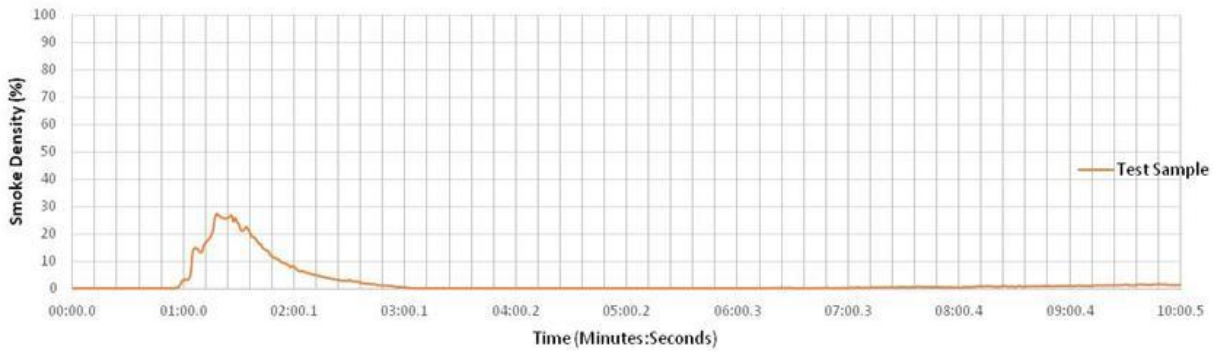


TEST #3 OF 3 GRAPHS:

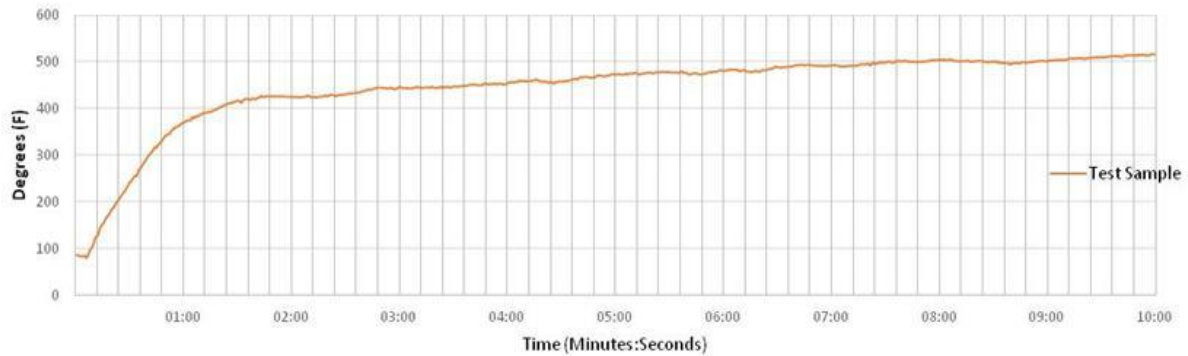
Flame Spread



Smoke Readings



Temperature



APPENDIX

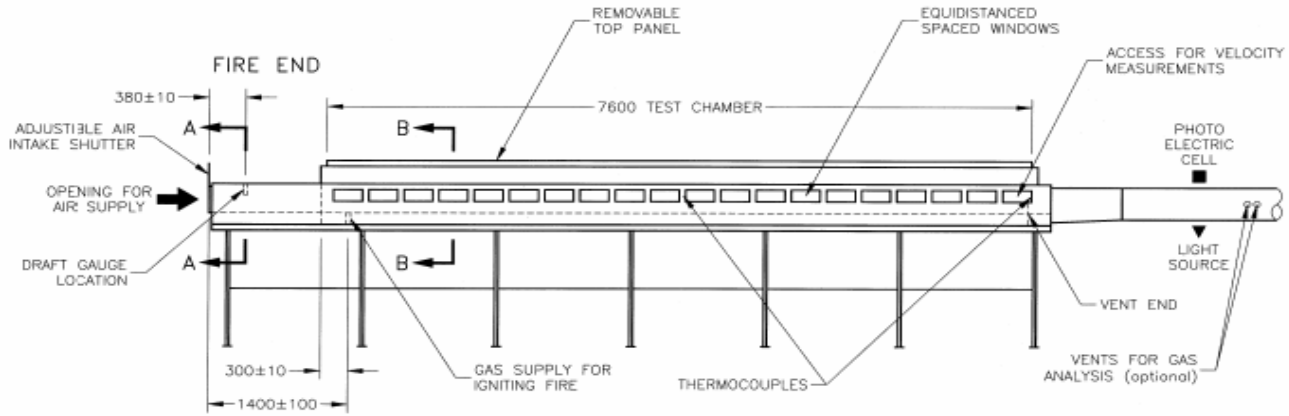


Diagram 1. Test Chamber side view showing critical dimensions.

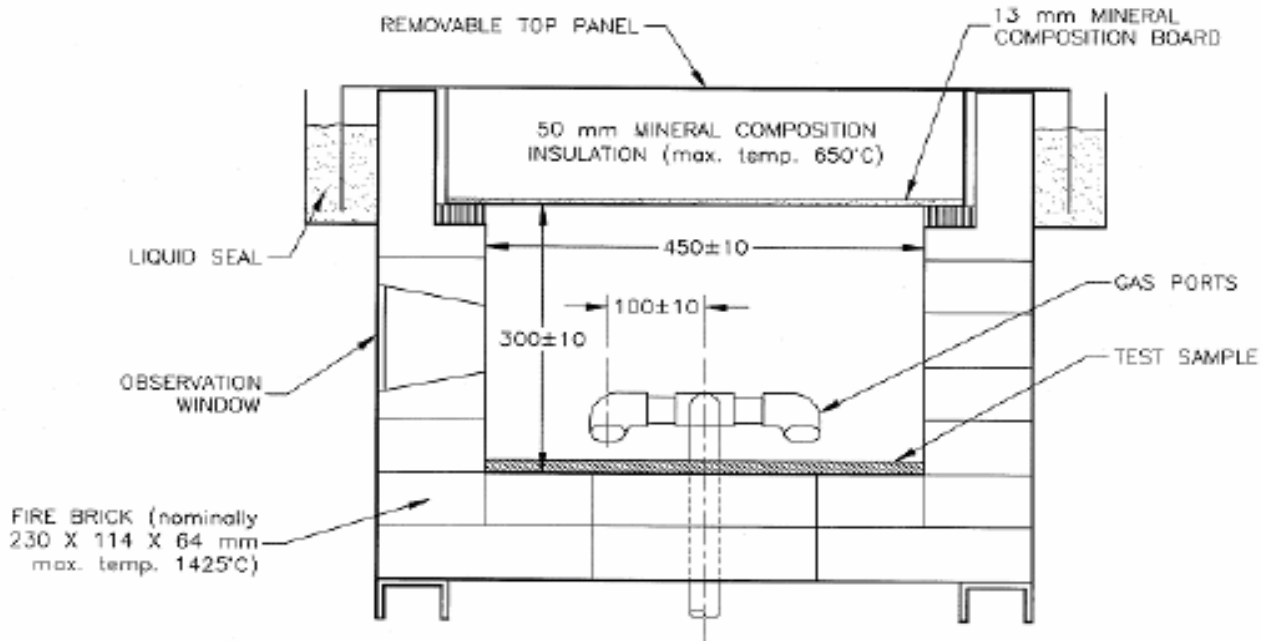


Diagram 2. Test Chamber looking down chamber showing critical dimensions.

Photo Missing

Photo 1. Unexposed Surface of Specimen Tested

*****<<<END OF TEST REPORT>>>*****