

Unience Co., Ltd.

TEST REPORT

REPORT ISSUED TO

Unience Co., Ltd.
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SCOPE OF WORK

Report of testing FR Mineral Core for compliance with the applicable requirements of the following criteria: ASTM D-1929-16, Standard Test Method for Determining Ignition Temperature of Plastics.

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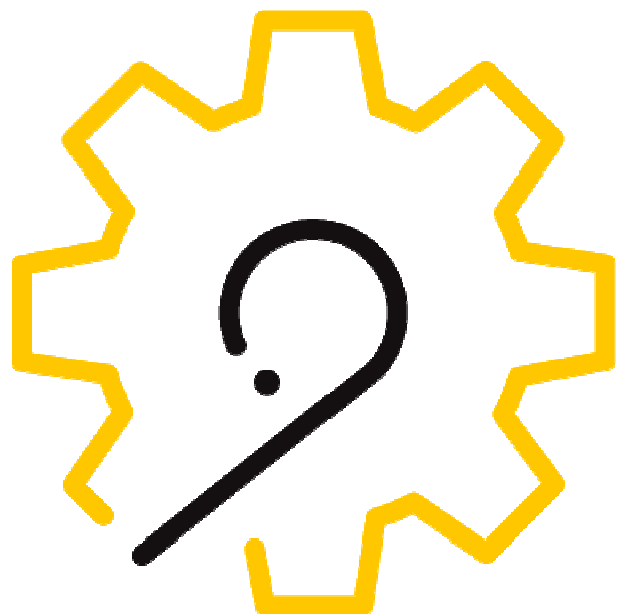
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TEST REPORT FOR UNIENCE CO., LTD.

Report No.:103258691

Date: November 29, 2017

The samples of FR Mineral Core submitted by Unience Co., Ltd. were tested in accordance with ASTM D-1929-16, Standard Test Method for Determining Ignition Temperature of Plastics.

The product test results are presented in Section 7 of this report.

Salvatore Balletta
TECHNICIAN
BUILDING PRODUCTS

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BUILDING PRODUCTS CANADA

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SECTION 1

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SECTION 2

OBJECTIVE

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Unience Co., Ltd. on samples of FR Mineral Core material to evaluate ignition properties. Testing was conducted in accordance with ASTM D-1929-16, Standard Test Method for Determining Ignition Temperature of Plastics. This evaluation began November 27, 2017 and was completed November 29, 2017.

SECTION 3

SAMPLE SELECTION

Intertek representative, Roy Lee, sampled and witnessed the production of the test samples on December 23, 2016. The sampling was conducted at Unience Co., Ltd. facility located at 46, Gwahaksaneop 1-ro, Oksan-myeon, Heungdeok-gu, Cheongju-si, Chungbuk, South Korea. The sampling report can be found under Unience Co., Ltd. Project G102779383. The sample material was received at the Evaluation Center on October 24, 2017.

SECTION 4

SAMPLE ASSEMBLY AND 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 sample material consisted of FR Mineral Core material measuring 20mm long by 20mm wide by approximately 3.30mm thick with a total weight of 3.0 ± 0.2 grams.

SECTION 5**TESTING AND EVALUATION METHODS****TEST STANDARD**

Testing was conducted on the FR Mineral Core material in accordance with ASTM D1929-16.

These test results relate only to the behavior of test specimens under the particular conditions of the test. They are not intended to be used, and shall not be used, to assess the potential fire hazards of a material in use.

SECTION 6**RESULTS AND OBSERVATIONS**

The following outlines the results achieved during testing of [insert product name/model] material in accordance with ASTM D1929-16

Table 1 FR Mineral Core ASTM D1929-16 Spontaneous Ignition Results

SAMPLE ID	INITIAL TEMPERATURE (°C)	TIME TO SMOKE GENERATION (seconds)	TEMPERATURE THAT SMOKE IS VISIBLE (°C)	IGNITION TEMPERATURE (°C)	TYPE OF COMBUSTION
1	440	N/A	N/A	N/A	N/A
2	450	N/A	N/A	N/A	N/A
3	460	494	456	460	Flaming
4	455	N/A	N/A	N/A	N/A

Table 2 FR Mineral Core ASTM D1929-10 Flash Ignition Results

SAMPLE ID	INITIAL TEMPERATURE (°C)	TIME TO SMOKE GENERATION (seconds)	TEMPERATURE THAT SMOKE IS VISIBLE (°C)	IGNITION TEMPERATURE (°C)	TYPE OF COMBUSTION
1	450	N/A	N/A	N/A	N/A
2	460	391	401	419	Flaming
3	455	388	407	413	Flaming
4	450	N/A	N/A	N/A	N/A

SECTION 7
CONCLUSION

Intertek has conducted testing for Unience Co., Ltd on a sample of FR Mineral Core material, to evaluate spontaneous and flash ignition properties. Testing was conducted in accordance with ASTM D-1929-16, Standard Test Method for Determining Ignition Temperature of Plastics. The 3.30mm thick FR Mineral Core material was found to have a spontaneous ignition temperature of 460°C (860°F) and a flash ignition temperature of 413°C (775°F).

The conclusions of this test report may be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

REVISION SUMMARY

DATE	PAGE	SUMMARY
November 29, 2017	All	