



Determination of the ignitability according to EN ISO 11925-2:2002

Vinyl Siding



Requested by: Ply Gem Siding Group

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2615 Cambell Road
Sidney
OH 45365, United States of America

Order Email 25 October 2010 / Alan Hoying

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Assignment **Determination of the ignitability of a product**

Products The customer gave the following information about the products:
Products: **Vinyl Siding**
Manufacturer: Ply Gem Siding Group
Minimum thickness of products: 0,040 inch (Contractors Choice)
Maximum thickness of products: 0,048 inch (Board and Batten)

Samples Samples were chosen by the customer.
Date of delivery: 8 November 2010
Type of samples: samples of two products
Sample 1:
Thickness: about 1,02 mm (0,040 inch)
Width: about 260 mm (with tongue and groove)
Colour: light beige
Sample 2:
Thickness: about 1,22 mm (0,048 inch)
Width: about 210 mm (with tongue and groove)
Colour: light grey

Test specimens Test specimens were made by VTT Expert Services Ltd.

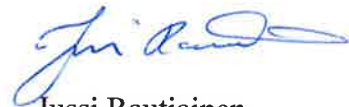
Date of test 15 December 2010 and 21 December 2010

Test method	EN ISO 11925-2:2002 <i>Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame - Part 2: Single-flame source test</i> (ISO 11925-2:2002) The description of the test method is presented in Appendix 1.
Deviation	Ambient humidity during the tests was 10 % (15 December 2010) and 13 % (21 December 2010). According to the standard EN ISO 11925-2:2002 it should be 50 ± 20 % RH. The deviation did not have an influence on the final results.
Results	The test results are shown in Appendix 2.
Note	The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

Espoo, 27 December 2010



Tiia Ryyänen
Team Leader



Jussi Rautiainen
Building Engineer

APPENDICES Appendix 1, method description
 Appendix 2, test results

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DESCRIPTION OF THE METHOD

EN ISO 11925-2:2002 *Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2:2002)*

The specimens

Three specimens lengthwise and three crosswise with the dimensions of 250 mm x 90 mm. Specimens of normal thickness 60 mm or less are tested using their full thickness. Specimens of normal thickness greater than 60 mm are reduced to a thickness of 60 mm. If the product is not essentially flat, the specimens can be tested in the form as in end use. Each different surface which can be exposed in practice shall be tested (surface exposure). For multilayer products greater than 10 mm thick, an additional set of tests is carried out with the specimen turned at 90° round its vertical axis and the flame impinging at the bottom edge of each different layer.

The specimens are conditioned prior to the test to constant mass at a temperature of $(23 \pm 2 \text{ }^\circ\text{C})$ and relative humidity of $(50 \pm 5 \text{ \%RH})$.

The ignition flame

The specimens are ignited with a 20 mm high propane gas flame. The burner is inclined at 45°. The flame is impinged on the bottom edge of the specimen (edge exposure) or 40 mm above the bottom edge (surface exposure).

The specimen is exposed to flame for 15 s or 30 s as required.

Test procedure

The conditioned specimens are fixed vertically in the frame. The occurrence of burning particles is observed with filter paper placed below the specimen. If the flame application time is 15 s, the total test duration is 20 s from the time at which the flame is first applied. If the flame application time is 30 s, the total test duration is 60 s from the time at which the flame is first applied.

For each test specimen it is recorded whether an ignition* occurs, whether the flame tip reaches 150 mm above the flame application point and the time at which this occurs and whether ignition of the filter paper occurs.

* ignition: flaming for a period greater than 3 s

TEST RESULTS

Test method: EN ISO 11925-2:2002

Products: **Vinyl Siding** - 0,040 inch / Contractors Choice
Vinyl Siding - 0,048 inch / Board and Batten

Flame application time: 15 s

Exposure conditions: surface and edge exposure (dge exposure was made only in lengthwise direction because there is no edge in the other direction)

Surface exposure:

Specimen	Ignition* of specimen	The flame tip reaches 150 mm	Ignition of the filter paper
1 ↑ ¹⁾	Yes	No	No
2 ↑ ¹⁾	Yes	No	No
3 ↑ ²⁾	Yes	No	No
4 → ¹⁾	Yes	No	No
5 → ¹⁾	Yes	No	No
6 → ²⁾	Yes	No	No

Edge exposure:

Specimen	Ignition* of specimen	The flame tip reaches 150 mm	Ignition of the filter paper
1 ↑ ¹⁾	Yes	No	No
2 ↑ ¹⁾	Yes	No	No
3 ↑ ¹⁾	Yes	No	No
4 ↑ ¹⁾	Yes	No	No
5 ↑ ¹⁾	Yes	No	No
6 ↑ ¹⁾	Yes	No	No

↑ and → lengthwise and crosswise direction of the product

- 1) Specimen of Vinyl Siding - 0,040 inch / Contractors Choice
 2) Specimen of Vinyl Siding - 0,048 inch / Board and Batten

* Flaming for a period greater than 3 s