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The test report attached verifies the fire performance for Armstrong Sheet Flooring. The product tested is representative of, but may not be identical to the product you are purchasing. Changes in product formulation that occur for a variety of reasons may cause fluctuations in results. The above referenced data is representative of the current formulation of these products. Specifications and interpretation of fire test methods are subject to ongoing development. To assure that the information continues to be current, it is suggested that you request product certification for a specific project. The certification will reference the current applicable independent laboratory test reports.

Report On
Critical Radiant Flux of Floor-Covering Systems
Using a Radiant Heat Energy Source
As Determined By
ASTM E 648 Test Method

PREPARED FOR:

Armstrong Flooring Inc.

Lancaster, PA

TEST NUMBER: FRP-987R

Armstrong Luxury Vinyl Tile - Parallel 20

Date of Issue:
4/13/2016

Date of Revision:
2/10/2017

ACCREDITED
TL-224

I. SCOPE

This report contains the reference to the test method, purpose, test procedure, preparation and conditioning of test samples, description of materials, test and post test observation data, and test results.

II. TEST METHOD

The test was conducted in accordance with ASTM Designation E 648, "Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source." The test is also described by NFPA No. 253.

III. PURPOSE

The purpose of the test is to determine the critical radiant flux of horizontally-mounted floor covering systems exposed to a flaming ignition source in a graded radiant heat energy environment maintained in a test chamber. The specimen may be mounted over underlayment, a simulated concrete structural floor, bonded to a simulated structural floor, or otherwise mounted in a typical and representative way.

The test method provides a basis for estimating one aspect of fire exposure behavior for floor covering systems. The imposed radiant flux is designed to simulate the thermal radiation levels likely to impinge on the floors of a building whose upper surfaces are heated by flames and/or hot gases from fully developed fire in an adjacent room or compartment. The method was developed to simulate an important fire exposure component of fires which may develop in corridors or exit ways of buildings and is not intended for routine use in estimating flame spread behavior of floor covering in building areas other than corridors or exit ways.

IV. TEST PROCEDURE

The basic elements of the test chamber are: 1) an air-gas, fueled radiant heat energy panel inclined at 30° to and directed at 2) a horizontally-mounted floor covering system specimen. The radiant panel generates a radiant energy flux distribution ranging along the 100-cm length of the test specimen from a nominal maximum of 1.0 watts/cm2 to a minimum of 0.1 watts/cm2. The test is initiated by open flame ignition from a pilot burner. The distance burned to flame-out is converted to watts/cm2 and reported as **critical radiant flux**.

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Report on Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source as Determined by the ASTM E 648 Flooring Radiant Panel

Test Number:	FRP-987R	Test Date:	04/08/16

Report Prepared For:	**Armstrong Flooring Inc. Lancaster, PA**
Material Tested:	**Armstrong Luxury Vinyl Tile - Parallel 20**

Sample Information:

Detailed Product Description: Pattern J6205. Product Source: Lancaster LVT Plant.

Sample Preparation: The material was adhered to a 1/4" cement board backer using Armstrong S-288 adhesive. Samples were selected and prepared by Armstrong.

Sample Selection By:	Manufacturer	**Flux Profile Run Date:**	04/08/16
Number of Samples:	3	**Conditioning Days:**	11
Surface Exposed:	Surfaces (Faces Only)	**Sample Color:**	Brown
Average Thickness (in.):	0.345	**Average Weight (lbs):**	**6.75**

Test Data

	Burn 1	Burn 2	Burn 3
Preheat Time (min):	5:00	5:00	5:00
Starting Temp. (°C):	139	138	138
Burn Length (cm):	9.1	8.6	11.0
Time to Max Burn Length (min):	10.05	10.21	10.56

Test Results

	Burn 1	Burn 2	Burn 3
Critical Radiant Flux (W/cm2):	**0.97**	**0.98**	**0.95**

Average Critical Radiant Flux (W/cm2):	0.97
Standard Deviation:	0.01
Coefficient of Variation:	1.39%

Observations:	Blistering of the sample face during the five minute preheat.
Remarks:	Sample weights and thicknesses include the 1/4" cement board backer. Revision 02/10/17: Armstrong World Industries Inc. changed to Armstrong Flooring Inc.
Conclusions:	The product is classified as Class I (Critical Radiant Flux > 0.45 W/cm2) by NFPA 101.
Test Operator:	CK

Report Prepared By:

Manager of Fire Testing – Engineer

Report Reviewed By:

Director – HPVA Laboratories