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ASTM E 648 Critical Radiant Flux of "Moniflex as manufactured by Isoflex AB"

A Report To: **Ciucevich**
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Attention: Robert Ciucevich

Submitted By: Fire Testing

Report No. 11-002-682(F)(Revision 1)
2 pages + appendix

Date: October 15, 2013

ACCREDITATION To ISO/IEC 17025 for a defined Scope of Testing by the International Accreditation Service

SPECIFICATIONS OF ORDER

Determine critical radiant flux in accordance with ASTM E 648, as per our Proposal# 11-006-08128 RV1-S accepted September 22, 2011.

Note: This report supersedes 11-002-682(F) issued November 28, 2011. It is revised herein by request to reference the sample thickness in the identification section of the report.

IDENTIFICATION (Exova sample identification number 11-002-S0682)

Cellulose based insulation material, approximately 20 mm in thickness, identified as "Moniflex as manufactured by Isoflex AB".

TEST RESULTS

ASTM E 648-10e1
Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

	Distance Burned (mm)	Critical Radiant Flux (W/cm ²)	Standard Deviation	Coefficient of Variation
1:	0	DNI	-	-
2:	0	DNI	-	-
3:	200	<u>0.91</u>	-	-
	Average:	0.91	0.525	57.74

CONCLUSIONS

With an average critical radiant flux greater than 0.91 W/cm², the cellulose based insulation material identified in this report qualifies for use in commercial and institutional applications, as governed by the General Services Administration and Health, Education and Welfare in the United States as well as corridors, exitways and general areas, as governed by the New York and New Jersey Port Authority. The flooring system also meets the Federal Railroad Administration requirements for installation in rail cars and would be classified as a Class I material by many authorities having jurisdiction.

Note: This is an electronic copy of the report. Signatures are on file with the original report.

Marc Laniel,
Fire Testing.

Ian Smith,
Fire Testing.

Note: This report and service are covered under Exova Canada Inc. Standard Terms and Conditions of Contract which may be found on the Exova website (www.exova.com), or by calling 1-866-263-9268.

APPENDIX

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Summary of Test Procedure

ASTM E 648-10e1
 Critical Radiant Flux of Floor Covering Systems
Using a Radiant Heat Energy Source.

This procedure is used to measure the critical radiant flux of horizontally-mounted floor covering systems exposed to a flaming ignition source in a graded radiant heat energy environment, in a test chamber.

The radiant panel is calibrated to yield a heat flux gradient ranging from 1.1 W/cm² at the near end of the specimen to 0.1 W/cm² at the far end of the specimen.

The floor covering system (250 x 1070 mm) is mounted on the holder as specified by its end use (e.g. glued directly to cement board, clamped to cement board or clamped over an undercushion).

The system is admitted into the calibrated test chamber, and after a 5 minute pre-heat, is ignited by a pilot flame. The distance at which extinguishment takes place is measured, correlated with the heat flux at that point, and is reported as the critical radiant flux (CRF). This value represents the minimum radiant energy required to sustain propagation of flaming combustion along the surface of the material.

The higher the critical radiant flux, the more resistant the floor covering system is to flame propagation.

Typical Performance Requirements:

<u>Specifier</u>	<u>Minimum CRF (W/cm²)</u>	<u>Designated End-Use</u>
General Services Admin.(USA)	0.45 0.22	Institutional Commercial
Health, Education & Welfare (USA)	0.45 0.22	Institutional Commercial
New York & New Jersey Port Authority	0.50 0.40	Corridors, exitways General areas
Federal Railroad Administration	0.50	Rail Cars

Many authorities having jurisdiction refer to the following categories:

Class I - 0.45 W/cm² or greater

Class II - 0.22 W/cm² to 0.44 W/cm²