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ASTM E 162 Surface Flammability 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(A)(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 surface flammability in accordance with ASTM E 162 as per our Proposal# 11-006-08128 RV1-S accepted September 22, 2011.

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

IDENTIFICATION

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

(Exova sample identification number 11-002-S0682)

TEST RESULTS

ASTM E 162-11a

Surface Flammability of Materials Using a Radiant Heat Energy Source. (Is = Flame Spread Index).

Note: In all cases, the material was supported in the sample holders using 1 inch hexagonal wire mesh.

	<u>Fs</u>	<u>Q</u>	<u>Is</u>	<u>Observations</u>
1:	1.0	2.0	2	Flame front progression to a maximum distance of
2:	1.0	2.0	2	2 inches.
3:	1.0	1.5	1	Running / dripping observed.
4:	1.0	2.2	2	No flaming running or flaming dripping observed.
Rounded Average:			0	
Specified Maximum:			35	No flaming running or flaming dripping permitted

CONCLUSIONS

The cellulose based insulation material identified in this report, meets The Federal Railroad Administration requirements as they pertain to surface flammability (ASTM E 162).

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

(1 Page)

Summary of Test Procedure

ASTM E 162-11aSurface Flammability of Materials Using a Radiant Energy Source.

Four specimens, 6 x 18 inches in size, are pre-dried for 24 hours at 60°C and conditioned to equilibrium at 50 ± 5% relative humidity and 23 ± 3°C before testing.

Each specimen is mounted into a holder and inclined at 30° from the vertical in front of a 12 x 18 inch gas-fired radiant panel. The orientation of the specimen is such that ignition is forced near its upper edge by a pilot flame, and the flame front progresses downwards.

A factor derived from the rate of progress of the flame-front and the rate of heat liberation by the material under test is calculated as follows and then reported after rounding the average of the tests to the nearest multiple of 5:

$$I_s = F_s \cdot Q$$

Where: I_s is the flame spread index

F_s is the flame spread factor

Q is the heat evolution factor

Transit authorities generally specify a maximum I_s acceptance criterion of 35 for general applications, with no flaming running or dripping allowed.