REPORT

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Reference
O100746-1175869-10

Isoflex AB
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Reaction to fire classification according to EN 45545-2

(1 appendix)

Introduction

This classification report defines the reaction to fire classification assigned to the product called “Moniflex” described below in accordance with EN 45545-2:2020. Test reports and test results in support of classification, together with the classification criteria, are presented in appendix 1.

Product description

According to the client: Thermal acoustic insulation called “Moniflex”, consisting of layers of pleated sheets of FR cellulose acetate. The product has a nominal thickness of 10 – 60 mm, a nominal density of 13 kg/m^3 and the colour is transparent. Detailed product description is filed at RISE.

According to the standard EN 45545-2, table 2, the product is defined as a “Listed Product” to which the following parameters apply:

Product No:	IN15
Location:	Interior
Description:	Interiors
Product name:	Floor composites
Requirement Set:	R10

Basis for classification

A complete series of tests have been performed on the thickness with the poorest results in each test method. Indicative single tests have been performed on the other thickness.

According to paragraph 4.2 in EN 45545-2, products meeting the requirements at the maximum testable thickness shall be considered to comply with the requirement at greater thickness.

Classification

The product described above, in relation to its reaction to fire behaviour, is classified according to EN 45545-2, Requirement Set R10; Hazard Levels HL1, HL2 and HL3.

Reaction to fire classification: R10; HL1/HL2/HL3

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Field of application

This classification is valid for the following product parameters:

Nominal thickness: 10 – 60 mm.

Nominal density: 13 kg/m^3.

This classification is valid for the following end use conditions:

Substrates

- Steel sheet with nominal thickness ≥ 0.8 ± 0.2 mm.

Limitations

This classification document does not represent type approval or certification of the product.

The sample was delivered by the client. RISE, Fire and Safety was not involved in the sampling procedure.

RISE Research Institutes of Sweden AB
Fire and safety - Reaction to Fire Medium Scale Lab

Performed by

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Examined by

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Appendix

1 Basis for classification

Appendix 1

Basis for fire classification

1 Test reports & test results in support of classification

1.1 Test reports

This classification, according to EN 45545-2, is based on the test reports:

Laboratory	Client	Issue date	Test report no.	Accredited test method
RISE	Isoflex AB	2023-04-04	O100746-1175869-8	EN ISO 9239-1
RISE	Isoflex AB	2023-04-04	O100746-1175869-7	EN ISO 5659-2 and EN 17084:2018, Method 1

1.2 Test results

Mean values of the test results are summarized:

Test method	Number of tests	Parameter	Results, mean value	Compliance with Requirement Set; Hazard Level
ISO 9239-1 (ref. O100746-1175869-8)	3			
Critical Heat Flux		CHF	11 kW/m^2	R10; HL1/HL2/HL3
ISO 5659-2: 25 kW/m^2 with pilot burner (ref. O100746-1175869-7)	3			
Maximum specific optical density of smoke *EN 17084, method 1: 25 kW/m^2, with pilot burner (ref. O100746-1175869-7)*	3	D_s max	46	R10; HL1/HL2/HL3
Conventional index of toxicity, General products		CIT_G	0.01	R10; HL1/HL2/HL3

2 Reaction to Fire Classification

2.1 Reference for classification

According to EN 45545-2 “Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components”, to meet the set of material requirements according to table 5, requirement set R10, the product must fulfil the classification criteria for each test method tested as described below.

2.2 Classification criteria

Classification criteria according to Requirement Set R10 are summarized as follows:

Test method	HL1	HL2	HL3
ISO 9239-1			
Critical Heat Flux, CHF	≥ 4.5	≥ 6	≥ 8
ISO 5659-2: 25 kW/m², with pilot flame			
Maximum specific optical density of smoke, D_s max	≤ 600	≤ 300	≤ 150
EN 17084, method 1: 25 kW/m², with pilot flame			
Conventional index of toxicity, General products, CIT_G	≤ 1.2	≤ 0.9	≤ 0.75

Verification

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Document

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