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O100614-1157749-4

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AB Ludvig Svensson
51182 KINNA

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 “Mingel” 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: upholstery fabric called “Mingel”, consisting of 100 % Trevira CS. The product has a nominal thickness of 1.0 – 1.2 mm, a nominal area weight of 450 g/m², and the colour is black/grey.

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: INF1A
Location: Interior
Description: Furniture
Product name: Upholstery for passanger seats and head rest
Requirement Set: R21

Classification

The product described above, in relation to its reaction to fire behaviour, is classified according to EN 45545-2, Requirement Set R21; Hazard Levels HL1 and HL2.

*Reaction to fire classification: **R21; HL1/HL2***

Note

The classified product has not been tested as in end use condition. Only the cover fabric of a passenger seat was tested.

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Confidentiality level

C2 - Internal

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Field of application

This classification is valid for the following product parameters:

Nominal thickness: see product description.

Nominal area weight: see product description.

Composition: see product description.

This classification is valid for the following end use conditions:

Colour or pattern:

- Any colour or pattern

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



Susanne Blomqvist

Examined by



Per Thureson

Appendix

1. Basis for fire 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	Test report no	Issue date	Accredited test method
RISE	AB Ludvig Svensson	O100614-1157749	2022-12-06	ISO 5660-1
RISE	AB Ludvig Svensson	O100614-1157749-2	2022-12-06	EN ISO 5659-2 EN 17084, 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
<i>ISO 5660-1: 25 kW/m²</i> <i>(ref. O100614-1157749)</i>	3			
Maximum Average Rate of Heat Emission		MARHE	27 kW/m ²	R21; HL1/HL2/HL3
<i>ISO 5659-2: 25 kW/m² with pilot burner</i> <i>(ref. O100614-1157749-2)</i>	3			
Maximum specific optical density of smoke		D _s max	222	R21; HL1/HL2
<i>EN 17084, method 1: 25 kW/m² with pilot burner</i> <i>(ref. O100614-1157749-2)</i>	3			
Conventional index of toxicity, General products		CIT _G	0.03	R21; HL1/HL2/HL3

Appendix 1

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 R21, 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 R21 are summarized as follows:

<i>Test method</i>	HL1	HL2	HL3
<i>ISO 5660-1: 25 kW/m²</i>			
Maximum Average Rate of Heat Emission, MARHE (kW/m ²)	≤ 75	≤ 50	≤ 50
<i>ISO 5659-2: 25 kW/m², with pilot flame</i>			
Maximum specific optical density of smoke, D _s max	≤ 300	≤ 300	≤ 200
<i>EN 17084, method 1: 25 kW/m², with pilot flame</i>			
Conventional index of toxicity, General products, CIT _G	≤ 1.2	≤ 0.9	≤ 0.75

Verification

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Main document

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