

Warringtonfire Frankfurt GmbH ist vom Eisenbahn-Bundesamt (EBA) unter der Ident. Nr. 031/09/07 als sachkundige Prüfstelle für Vorbeugenden Brandschutz in Schienenfahrzeugen nach DIN 5510 zertifiziert.

Test report No. 2019-1840

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Applicant: JP Air Tech
Skiffervej 2
DK-4990 Sakskøbing
Denmark

Date of order: 14.08.2019
Date of sampling: no official sampling by a representative of
Warringtonfire Frankfurt GmbH
Date of arrival: 20.08.2019
Date of test: 22.08.2019

Order

Testing of the fire behaviour of materials according to DIN 5510-2:2009-05 (DIN 53 438-3 (6/84)) for use in rail vehicles of public passenger transport.

Description / designation of the test object

Product name: JX240ALU-B-FR

Description of the relevant test procedure

DIN 53 438-2 (6/84) edge ignition

DIN 53 438-3 (6/84) surface ignition

DIN 5510-2: 2009-05

1. Description of the test material

1.1 Details of the customer:

Product name: JX240ALU-B-FR

Face to be tested: diagonal surface structure and Aluminized side (silver look)

Product description:

- a) Main Components: 100% Bico Polyester
- b) Thickness: 0,54 mm
- c) Grossweight: 240 g/m²
- d) Color: White
- e) Coated flame retardant
- f) Aluminized to be electro conductive.
- g) Material is sold as roll goods or pleat packs. If sold as roll goods customer will pleat the material. The pleat packs are used to build filter cartridges.

Intended end use of product: Filter cartridges

1.2 At the specimen preparation by Warringtonfire Frankfurt GmbH determined values:

JX240ALU-B-FR

Colour: grey

Thickness: 0,55 mm

Surface weight: 263,15 g/m²

Testing after acclimate storage at 23°C and 50% humidity.

2. Test results:

DIN 53 438-2 (6/84) edge ignition

Ignition area: sample edge

Ignition time: 15 [s]

Length direction:

Specimen no.	1	2	3	4	5
Ignition time [s]	1	1	1	1	1
Reaching the measuring mark (150 mm) within 20 seconds	no	no	no	no	no
Reaching the measuring mark (150 mm) time [s]	-	-	-	-	-
Self extinguishing of the flame [s]	8	6	9	10	6
Max. flame height [mm] ¹	15	15	10	10	15
Time [s]	5	5	5	5	5
After flame time [s]	-	-	-	-	-
After glow time [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visuell impression) low / moderate/ strong	low smoke development				
Burning parts	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: none

DIN 53 438-2 (6/84) edge ignition

Ignition area: sample edge

Ignition time: 15 [s]

Cross direction:

Specimen no.	1	2	3	4	5
Ignition time [s]	1	1	1	1	1
Reaching the measuring mark (150 mm) within 20 seconds	no	no	no	no	no
Reaching the measuring mark (150 mm) time [s]	-	-	-	-	-
Self extinguishing of the flame [s]	8	10	14	10	11
Max. flame height [mm] ¹	10	15	15	10	10
Time [s]	5	10	10	5	5
After flame time [s]	-	-	-	-	-
After glow time [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visuell impression) low / moderate/ strong	low smoke development				
Burning parts	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: none

2.1 Test results:

DIN 53 438-3 (6/84) surface ignition
Ignition area: 40 mm above lower sample edge
Ignition time: 15 [s]

Length direction:

Specimen no.	1	2	3	4	5
Ignition time [s]	2	2	2	2	2
Reaching the measuring mark (150 mm) within 20 seconds	no	no	no	no	no
Reaching the measuring mark (150 mm) time [s]	-	-	-	-	-
Self extinguishing of the flame [s]	8	7	11	14	8
Max. flame height [mm] ¹	40	40	45	45	40
Time [s]	10	10	10	10	10
After flame time [s]	-	-	-	-	-
After glow time [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visuell impression) low / moderate/ strong	low smoke development				
Burning parts	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: none

DIN 53 438-3 (6/84) surface ignition
Ignition area: 40 mm above lower sample edge
Ignition time: 15 [s]

Cross direction:

Specimen no.	1	2	3	4	5
Ignition time [s]	2	2	2	2	2
Reaching the measuring mark (150 mm) within 20 seconds	no	no	no	no	no
Reaching the measuring mark (150 mm) time [s]	-	-	-	-	-
Self extinguishing of the flame [s]	10	14	12	9	14
Max. flame height [mm] ¹	40	40	40	40	40
Time [s]	10	10	10	10	10
After flame time [s]	-	-	-	-	-
After glow time [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visuell impression) low / moderate/ strong	low smoke development				
Burning parts	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: none

2.3 Appearance of the material after the tests:



3. Assessment

The in section 1 described material fulfils the requirements of the **class K1** according to DIN 53 438-2 (6/84) surface ignition and **class F1** according to DIN 53 438-3 and thus the requirements according to DIN 5510-2:2009-05-4.2.2 to the flammability **class S 1**.


Classification according to DIN53 438-2	
Assessment criteria	class
The top mark is not achieved from the tip of the flame (the specimen extinguish before by itself)	K1
The tip of the flame of the burning specimen reaches the upper mark in 20 or more seconds	K2
The tip of the flame of the burning specimen reaches the upper mark in less than 20 seconds	K3
Classification according to DIN53 438-3	
Assessment criteria	class
The top mark is not achieved from the tip of the flame (the specimen extinguish before by itself)	F1
The tip of the flame of the burning specimen reaches the upper mark in 20 or more seconds	F2
The tip of the flame of the burning specimen reaches the upper mark in less than 20 seconds	F3

4. Special comment

The fire test result is valid only for in section 1 described material.

If combined with other materials the burning behaviour can be influenced unfavourably so that the classification above is not valid any more. The burning behaviour in composition with other materials has to be tested separately.

Frankfurt, the 23.08.2019


R. Berger
Tester in charge


P. Scheinkönig
Senior Test Officer



The Validity of the Audit report shall apply on 21.08.2022 according to DIN 5510-2 (2009-05), unless otherwise regulated by the authorisation authority.

The results of the tests relate only to the behaviour of the test specimen which is designated on the top.

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This test report is a translation of the German version 2019-1886 (issued 23.08.2019). In case of doubt only the German version is valid

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