

## TEST REPORT

Order no: 09.09.2022

Signature:

SL/Z-677/EN45545-R26/0801a/2022

Police, 07.11.2022

### Test method:

1. EN 60695-11-10:2014 - Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods.
2. EN 45545-2:2020. Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behavior of materials and components

**Content of request:** Tests according to EN 45545-2:2020 - requirement R26  
EN 60695-11-10:2014. Method B; V-0

**Sponsor:** Impakt S.A.  
ul. Stanisława Lema 16  
62-050 Mosina  
Poland

**Material:** Polyamide 66 (PA66)

**Composition:** Lanberg AC-WS01-USB2-E, AC-WS01-USB2-F, AC-WS01-USB2-E-B, AC-WS01-USB2-F-B

**Manufacturer/supplier:** Impakt S.A.  
ul. Stanisława Lema 16  
62-050 Mosina  
Poland

**Assessment:** “V-0 @ 3,0 mm” class according to EN 60695-11-10:2014.  
The tested product fulfils the requirement of R26 according to EN 45545-2:2020 for hazard level HL1, HL2 and HL3.

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Without the written consent of the Sychta Laboratory the report can be copied only in one piece.

Report applies only to the sample tested and is not necessarily indicative of the qualities of apparently identical or similar products.

**Content of test report:** four pages with signature and numbers.

## 1. EN 60695-11-10 - Test method B - Vertical Burning Test

Test conditions - temperature of 19 °C, and relative humidity of 64 %

Thickness of tested material 2,9-3,0 mm

Exposure time of pilot burner flame - 20 s (2 x 10 s).

Table 1. The first set of 5 samples "as received" conditioned > 48 h under temperature of 23±2°C and relative humidity of 50±5 %

Name of measured quantity	Unit	Specimen no					Test results
		1	2	3	4	5	
Afterflame time after first flame application, $t_1$	s	1	1	1	1	1	<b>1</b>
Afterflame time after second flame application, $t_2$	s	1	1	1	1	1	<b>1</b>
Total afterflame time for any condition set ( $t_1$ plus $t_2$ for the 5 specimens), s	s	2	2	2	2	2	<b>10</b>
Afterglow time after second flame application, $t_3$	s	0	0	0	0	0	<b>0</b>
Afterflame plus afterglow time for each individual specimen after the second flame application ( $t_2+t_3$ ), s	s	2	2	2	2	2	<b>2</b>
Specimens burn up to the holding clamp	YES/NO	NO	NO	NO	NO	NO	NO
Specimens drip flaming particles that ignited the cotton indicator	YES/NO	NO	NO	NO	NO	NO	NO

Table 2. The first set of 5 samples after oven conditioned – 168 ± 2 h - temperature 70±2°C

Name of measured quantity	Unit	Specimen no					Test results
		1	2	3	4	5	
Afterflame time after first flame application, $t_1$	s	1	0	0	1	1	<b>1</b>
Afterflame time after second flame application, $t_2$	s	1	1	1	1	1	<b>1</b>
Total afterflame time for any condition set ( $t_1$ plus $t_2$ for the 5 specimens), s	s	2	1	1	2	2	<b>8</b>
Afterglow time after second flame application, $t_3$	s	0	0	0	0	0	<b>0</b>
Afterflame plus afterglow time for each individual specimen after the second flame application ( $t_2+t_3$ ), s	s	2	1	1	2	2	<b>2</b>
Specimens burn up to the holding clamp	YES/NO	NO	NO	NO	NO	NO	NO
Specimens drip flaming particles that ignited the cotton indicator	YES/NO	NO	NO	NO	NO	NO	NO

**Remarks:** none.



Fig. 1. Appearance of the samples after the tests

## 2. Assessment and evaluation - EN 60695-11-10 - Test method B

Criteria conditions	Test result	V-0	V-1	V-2	Materials classifications
Afterflame time for each individual specimen $t_1$ or $t_2$ , s	1	$\leq 10$	$\leq 30$	$\leq 30$	V-0 @ 3,0 mm
Total afterflame time for any condition set ( $t_1$ plus $t_2$ for the 5 specimens), s	10	$\leq 50$	$\leq 250$	$\leq 250$	
Afterflame plus afterglow time for each individual specimen after the second flame application ( $t_2+t_3$ ), s	2	$\leq 30$	$\leq 60$	$\leq 60$	
Afterflame or afterglow of any specimen up to the holding clamp, YES/NO	NO	NO	NO	NO	
Cotton indicator ignited by flaming particles or drops, YES/NO	NO	NO	NO	YES	

## 3. Final findings

Requirement	Method/norm	Measured quantity	Unit	Measured value	Critical value			Crossing coefficient		
					HL1	HL2	HL3	HL1	HL2	HL3
R26	T17 EN 60695-11-10	Vertical small flame test	-	V0	V0	V0	V0	-	-	-

The tested product fulfils the requirement of R26 according to EN 45545-2:2020 for hazard level HL1, HL2 and HL3.

#### 4. Remaining required information

**Date of receipt of samples:** 24.11.2022

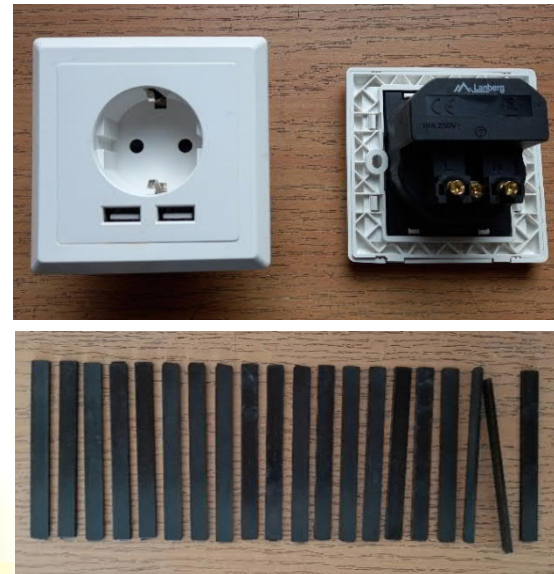
**Sampling:** sponsor took and delivered samples.

**Description of the test material:** plastic in black colour, described as "Polyamide 66 (PA66)", thickness of 2,9-3,0 mm and weight per unit area 4,6 kg/m<sup>2</sup>. Sponsor took and delivered 20 samples with dimensions of 128,0-130,x12,9-13,1 mm. Laboratory prepared samples for the tests.

**Conditioning of specimens:** >24 h at temperature of 15-35 °C and relative humidity of 45-75 %

**Declarations:**

1. The test results relate to the behaviour of the test specimens under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the products in use.
2. The information provided on the first page of the report concerning the scope of research and identification of the tested object/objects were provided by the Sponsor.



**Operator:**  
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Date and place of test - 27.10 and 04.11.2022, Police