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# Test report No. 200247-1

for applying of a required "Verwendbarkeitsnachweis" issued 10.03.2020

**Applicant:** Plastica Alfa S.p.a., C.da S.M.

Poggiarelli 95041 Caltagirone (CT), Italy

Date of order: 28.01.2020

Date of sampling: no official sampling of the specimen by a representative

of Warringtonfire Frankfurt GmbH

Date of arrival: 21.02.2020 Date of test: 06.03.2020

**Order** 

Testing of the flammability (building class B1) according to DIN 4102-1 (May 1998)

Description / designation of the test object

Product name: Alfaidro NOFIRE PP-RCT pipes and fittings

#### Description of the relevant test procedure

DIN 4102 part 1 (Mai 1998)

This test report does not replace the required "Verwendbarkeitsnachweis". It is only used for issuing the "Verwendbarkeitsnachweis".



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### 1. Description of the test material

### 1.1 Details of the customer:

Product name: Alfaidro NOFIRE PP-RCT pipes and fittings

Product description:

a) Main Components: composition of the pipes: PP-RCT/PPRGF/PP-RCT pipe and PP-RCT

fitting DN25

b) Thickness: b) Thickness of the pipe: 3.5 mm

c) Thickness of the fitting: 5.1 mm

d) Color: red

Intended end use of product: Fire-fighting sprinkler and hydrants systems

#### 1.2 By Warringtonfire Frankfurt GmbH determined values:

#### Plastic pipes with fittings

For the fire shaft test, 5 pipes with a distance of 10 mm longitudinally next to each other, mounted in 10 mm distance on a fibre cement plate with pipe clamps.

At a distance of about 200 mm from below, a fitting was installed in each pipe.

Colour: red

Specimen weight: 190 mm lang: 44,06 g Outside Ø: 25 mm

Inside Ø: 17,7 mm

Specimen weight 230 mm lang: 73,46 g Outside Ø Naht: 34,6 mm

with seam:

Outside Ø Rohr: 25 mm Inside Ø Rohr: 17,7 mm

Testing after storing 14- days under climatic conditions (23°C / 50 % rel. humidity).



### 2. Test results

# 2.1. Brandschachtprüfung according to DIN 4102-1

Sample A: Material tested in production direction.

	Test results of the Bra	<u>andschach</u>				
line		Measurements test sample				
no.			Α	В	С	D
1	no. test arrangement according to		1			
	DIN 4102 part 15, table 1					
2	flame height max. over	cm	50			
	lower sample edge time 1)	min : s	02:31			
3	ascertainments on the front side	111111111	02.01			
J	Flaming/glowing					
	time 1)	min : s	00:12			
4	melting / burning through					
	time 1)	min : s	no			
	ascertainments on the back side					
5	Flaming/glowing		no			
	time 1)	min:s				
6	discolouring		no			
	time 1)	min:s	no			
	burning droplets					
7	begin 1)	min : s	01:51			
	extent					
8	occasional dropping of material		no			
9	constant dropping of material		yes			
	separating from burning sample parts					
10	begin 1)	min : s	no			
11	occasional separating parts		110			
12	constant separating parts					
13	duration of burning		no			
	on the sieve tray (max.) influence on the burner flame by dropping	min:s				
	of / separating material		no			
14	time 1)	min : s	no			
17	earlier end of test	111111.5				
15	end of the fire scenario on the					
. •	sample 1)	min : s				
16	time of a possible resulted		no			
. •	test stop 1)	min : s				
	•					

<sup>1)</sup> time from start of test



	Test results of t	he Brandschach	t tests part	2		
line		Measurements test sample				
no.			Α	В	Ċ	D
17	flaming after end of test duration		01:41			
18	number of sample	min : s	2 ves			
19 20	front side of sample backside of sample		no			
21	flame length	cm	10			
	glowing after end of test duration		/			
22		min . s	no			
23	number of sample place of occurrence		no			
24	lower sample part		no			
25	upper sample part		no			
26	front side of sample		no			
27	backside of sample		no			
	smoke density		00			
28 29 30	< 400 % x min		90			
<u>29</u>	> 440 % x min		/			
30	diagram in annex no.		1			
21	residual length		53 / 54			
31	single results	cm	54 / 53			
32	average of the single results	cm	53			
33	photo of the sample on page		5			
	smoke temperature		110			
34	max. of the average results	°C	112			
35	time 1)	min : s	04:07			
36	diagram in annex no.		1 1			

<sup>1)</sup> time from start of test

As the residual length was > 45 cm during the Brandschacht test, no further tests were Remarks:

necessary according to DIN 4102-16.

Material attached to 10 mm thick fiber cement board.



# 2.1.2 Appearance of the specimen after the test:



Sample A



### 2.3 Normal flammability test according to DIN 4102-1

Test with edge ignition without deposit Flame application on: lower sample edge Edge ignition

Edge ignition

_ ⊏age ignition						
Sample-no.		1	2	3	4	5
Time from start of test						5
Ignition point [s]		1	1	1	1	1
Reaching the measuring ma within 20 seconds	ark	no	no	no	no	no
Self-extinguishing of the flar	ne [s]	15	15	15	15	15
Max. flame height	[mm]	30	30	30	30	30
Time	[s]	10	10	10	10	10
End of afterflaming	[s]	-	-	-	-	-
End of afterglowing	[s]	-	-	-	-	-
Flames extinguished after	[s]	-	-	-	-	-
Smoke development	low on	aaka dayala	nmont			
(visual impression)low / modera	ate / strong	low smoke development				
Separating from burning ma	terial	no	no	no	no	no
Time	[s]	-	-	-	-	-

#### Remarks:

Surface ignition Connecting seam (fitting)

Sample-no.		1	2	3	4	5
Time from start of test						
Ignition point [s]		1	1	1	1	1
Reaching the measuring mark within 20 seconds		no	no	no	no	no
Self-extinguishing of the flam	ne [s]	15	15	15	15	15
Max. flame height	[mm]	30	30	30	30	30
Time	[s]	10	10	10	10	10
End of afterflaming	[s]	ı	1	1	ı	-
End of afterglowing	[s]	ı	ı	ı	ı	-
Flames extinguished after	[s]	-	-	-	-	-
Smoke development (visual impression)low / moderate						
Separating from burning mat	no	no	no	no	no	
Time	[s]	_	-	-	-	-

### Remarks:



# 3. Appearance of the sample after the small burner test:





#### **Assessment**

The material described in chapter one fulfils the requirements of the building class B2 according to DIN 4102-1 (Mai 1998).

The determined test results show that the material also fulfils the requirements

#### of the building class B1

according to DIN 4102-1 (Mai 1998).

### Special note

The fire test result is only valid for the material described in chapter one in the tested colour, wall thickness and diameter, at 10 mm distance to other flat materials of the classes A1 and A2 according to DIN 4102-1 or DIN EN 13501-1. (raw density of ≥1800±200kg/m³).

The material wasn't tested after an outside storage.

In combination with other materials (for example coatings, deposits) the burning behaviour could be influenced unfavourable so that the classification above is not valid any longer. According to DIN 4102-1 the burning behaviour in combination with other materials has to be tested separately.

This test report does not replace the required "Verwendbarkeitsnachweis". It is only used for issuing the "Verwendbarkeitsnachweis".

This test report replaces the report 200247 issued 10.03.2020 (date of signature) which is no longer valid.

Frankfurt, the 22th April 2020

H. Anders Tester in Charge P. Scheinkönig Prüfstellenleiter Bau-PVO



This Test report is valid until 05.03.2025.

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

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# Annex 1 to the Test report No. 200247 issued 10.03.2020\_

# Sample A:



