Warringtonfire Frankfurt GmbH
Industriepark Höchst, C369
D-65926 Frankfurt am Main
Germany

T : +49 (0) 69 305 3882
F : +49 (0) 69 305 17071
E : info.frankfurt@warringtonfire.com
W: www.warringtonfire.com

Test report No. 2019-2148

for applying of a required "Verwendbarkeitsnachweis"
issued 10.12.2019

Applicant: SIMONA AG
Teichweg 16

55606 Kirn

Date of order: **19.11.2019**
Date of sampling: ***no official sampling of the specimen by a representative of Warringtonfire Frankfurt GmbH***
Date of arrival: **13.11.2019**
Date of test: **09.12.2019**

Order

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

Description / designation of the test object

Produktname: SIMOPOR S

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".

DAkkS Deutsche Akkreditierungsstelle D-PL-18354-01-00

1. Description of the test material

1.1 Details of the customer:

Product name:	SIMOPOR S

Product description:

Trade name:	SIMOPOR S
Sample material:	Plate
Material type:	Hard foamed PVC
Production technique:	extruded
Total thickness:	1 to 19 mm
Total area weight:	0,6 and 11,4 kg/m²
Colour:	white
Intended end use of product:	Construction, advertising, exhibition construction
Surface to be tested:	Both sides are the same

1.2 By Warringtonfire Frankfurt GmbH determined values:

PVC

Colour:	white	white
Thickness:	1 mm	19,5 mm
Square weight:	697,78 g/m²	10,205 kg/m²

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.	Thickness:	1 mm
Sample B:	Material tested in production direction.	Thickness:	19,5 mm
Sample C:	Material tested in production direction.	Thickness:	19,5 mm
Sample D:	Material tested in production direction.	Thickness:	19,5 mm

Test results of the Brandschacht tests part 1						
line no.			Measurements test sample			
			A	B	C	D
1	no. test arrangement according to DIN 4102 part 15, table 1		1	1	1	1
2	flame height max. over lower sample edge	cm	50	80	80	80
	time [1)]	min : s	00:19	04:38	05:02	04:23
3	ascertainments on the front side Flaming/glowing time [1)]	min : s	00:07	00:07	00:07	00:07
4	melting / burning through time [1)]	min : s	00:11	07:56	08:00	08:16
5	ascertainments on the back side Flaming/glowing time [1)]	min : s	no	no	no	no
6	discolouring time [1)]	min : s	no	no	no	no
7	burning droplets begin [1)]	min : s	no	no	no	no
8	extent occasional dropping of material					
9	constant dropping of material					
10	separating from burning sample parts begin [1)]	min : s	no	no	no	no
11	occasional separating parts					
12	constant separating parts					
13	duration of burning on the sieve tray (max.)	min : s	no	no	no	no
14	influence on the burner flame by dropping of / separating material time [1)]	min : s	no	no	no	no
15	earlier end of test end of the fire scenario on the sample [1)]	min : s	no	no	no	no
16	time of a possible resulted test stop [1)]	min : s				

[1)] time from start of test

Test results of the Brandschacht tests part 2						
line no.			Measurements test sample			
			A	B	C	D
	flaming after end of test		no	no	no	no
17	duration		no	no	no	no
18	number of sample	min : s	no	no	no	no
19	front side of sample		no	no	no	no
20	backside of sample		no	no	no	no
21	flame length	cm	no	no	no	no
	glowing after end of test		--/--	--/--	--/--	--/--
22	duration	min . s	no	no	no	no
23	number of sample		no	no	no	no
	place of occurrence		no	no	no	no
24	lower sample part		no	no	no	no
25	upper sample part		no	no	no	no
26	front side of sample		no	no	no	no
27	backside of sample		no	no	no	no
	smoke density					
28	< 400 % x min		43	--/--	--/--	--/--
29	> 440 % x min		--/--	931	934	931
30	diagram in annex no.		1	2	3	4
	residual length					
31	single results	cm	50 / 50 49 / 49	24 / 24 25 / 23	26 / 18 24 / 26	24 / 26 25 / 25
32	average of the single results	cm	49	24	23	25
33	photo of the sample on page		5	5	5	5
	smoke temperature					
34	max. of the average results	°C	116	146	145	140
35	time [1)]	min : s	10:00	09:55	09:58	10:00
36	diagram in annex no.		1	2	3	4

[1)] time from start of test

Remarks: No more testing required at 1 mm thickness, as the residual length was >45 cm.

Removed red foil

2.1.2 Appearance of the specimen after the test:

Sample A

Sample B

Sample C

Sample D

2.3 Normal flammability test according to DIN 4102-1

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

Thickness: 1 mm

Sample-no. / Time from start of test	1	2	3	4	5
Ignition point [s]	1	1	1	1	1
Reaching the measuring mark within 20 seconds	no	no	no	no	no
Self-extinguishing of the flame [s]	14	13	14	13	14
Max. flame height [mm]	80	80	80	70	80
Time [s]	12	12	12	10	12
End of afterflaming [s]	-	-	-	-	-
End of afterglowing [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visual impression) low / moderate / strong	strong smoke development				
Separating from burning material	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: Removed red foil

Thickness: 19,5 mm

Sample-no. / Time from start of test	1	2	3	4	5
Ignition point [s]	1	1	1	1	1
Reaching the measuring mark within 20 seconds	no	no	no	no	no
Self-extinguishing of the flame [s]	15	15	15	15	15
Max. flame height [mm]	40	40	40	40	40
Time [s]	15	15	15	15	15
End of afterflaming [s]	-	-	-	-	-
End of afterglowing [s]	-	-	-	-	-
Flames extinguished after [s]	-	-	-	-	-
Smoke development (visual impression) low / moderate / strong	strong smoke development				
Separating from burning material	no	no	no	no	no
Time [s]	-	-	-	-	-

Remarks: Removed red foil

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, thickness 1 up to 19 mm and square weight.
The test was carried out in free hanging configuration.
The distance to other plane material must be more or equal then 40 mm.

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”.

Frankfurt, the 10th December 2019

H. Anders
Tester in Charge

P. Scheinkönig
Prüfstellenleiter Bau-PVO

DAkkS
Deutsche
Akkreditierungsstelle
D-PL-18354-01-00

This Test report is valid until 08.12.2024.
The results of the tests relate only to the behaviour of the test specimen which is designated on the top.
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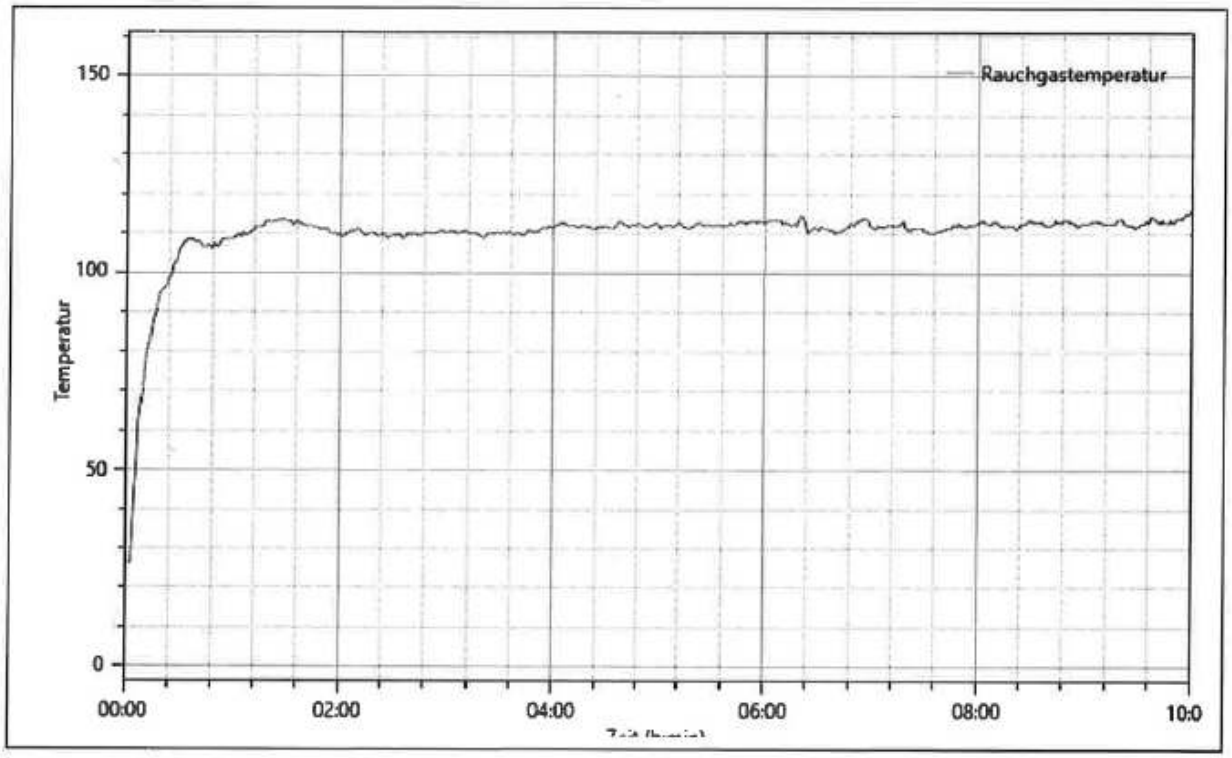
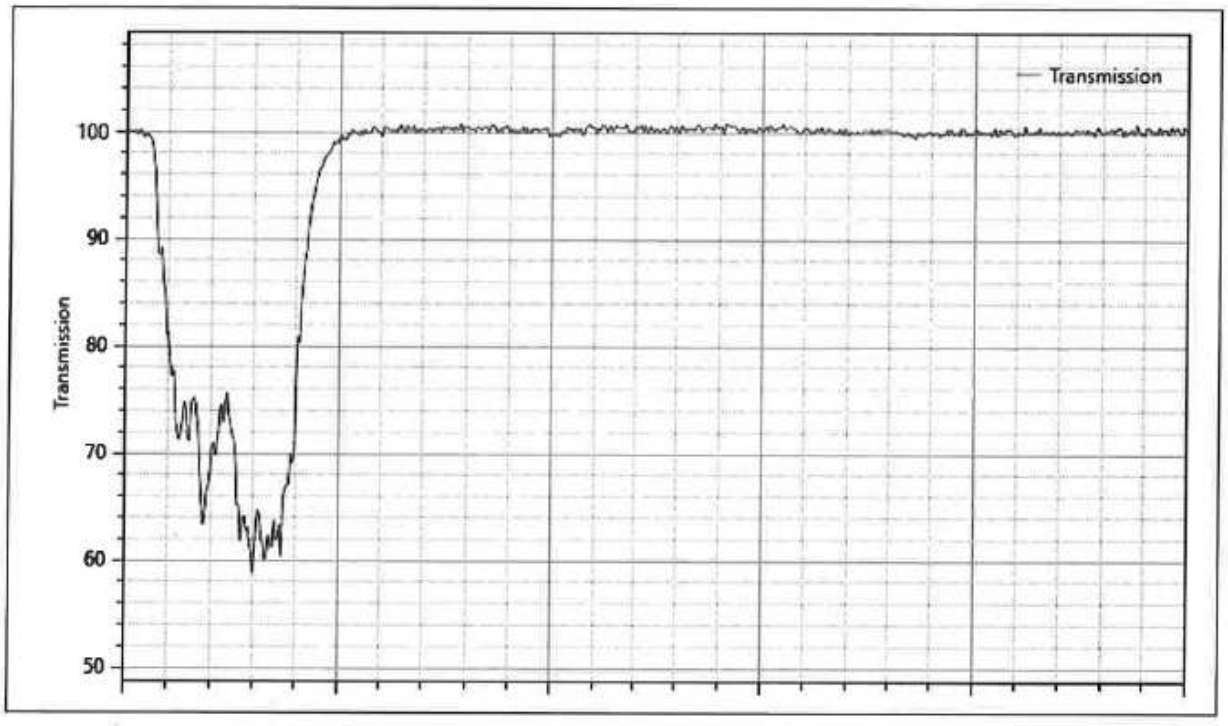
This test report is a translation of the German version 2019-2148 (issued 10.12.2019). In case of doubt only the German version is valid
This test report contains 8 pages and 4 annexes.

Annex 1 to the Test report No. 2019-2148 issued 10.12.2019

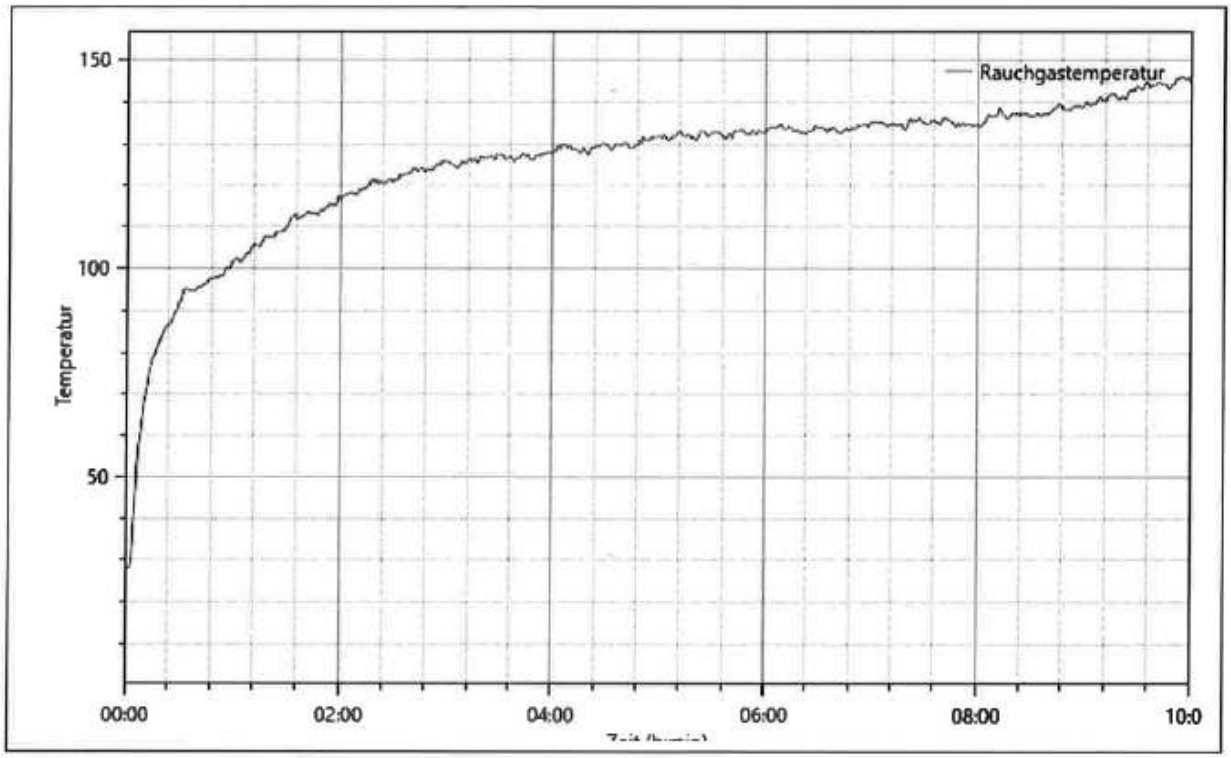
Sample A:

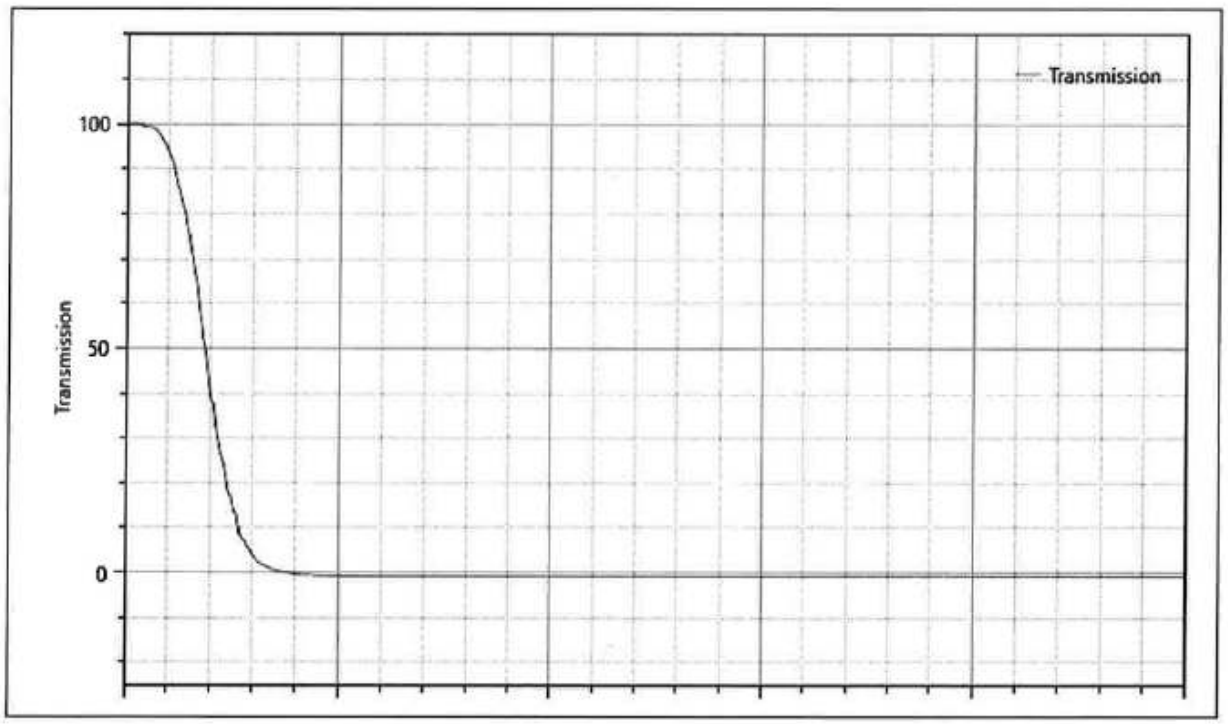




Annex 2 to the Test report No. 2019-2148 issued 10.12.2019

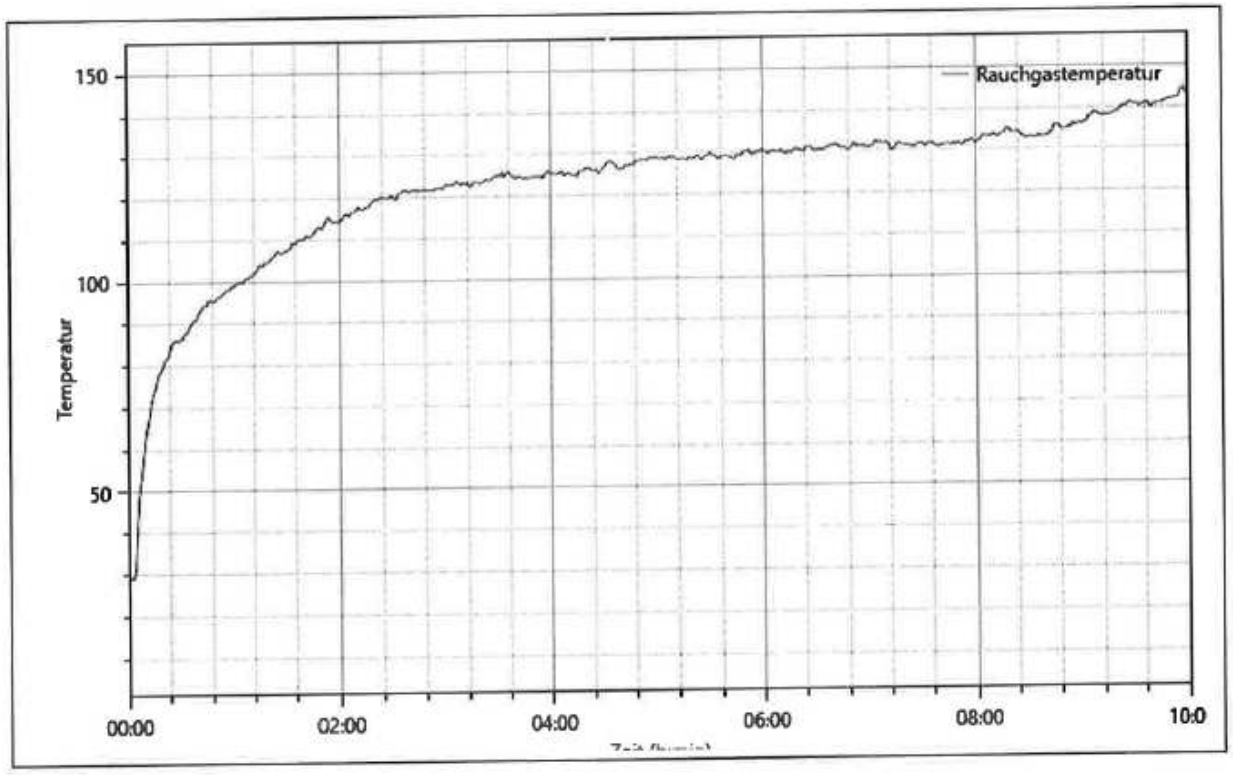
Sample B:

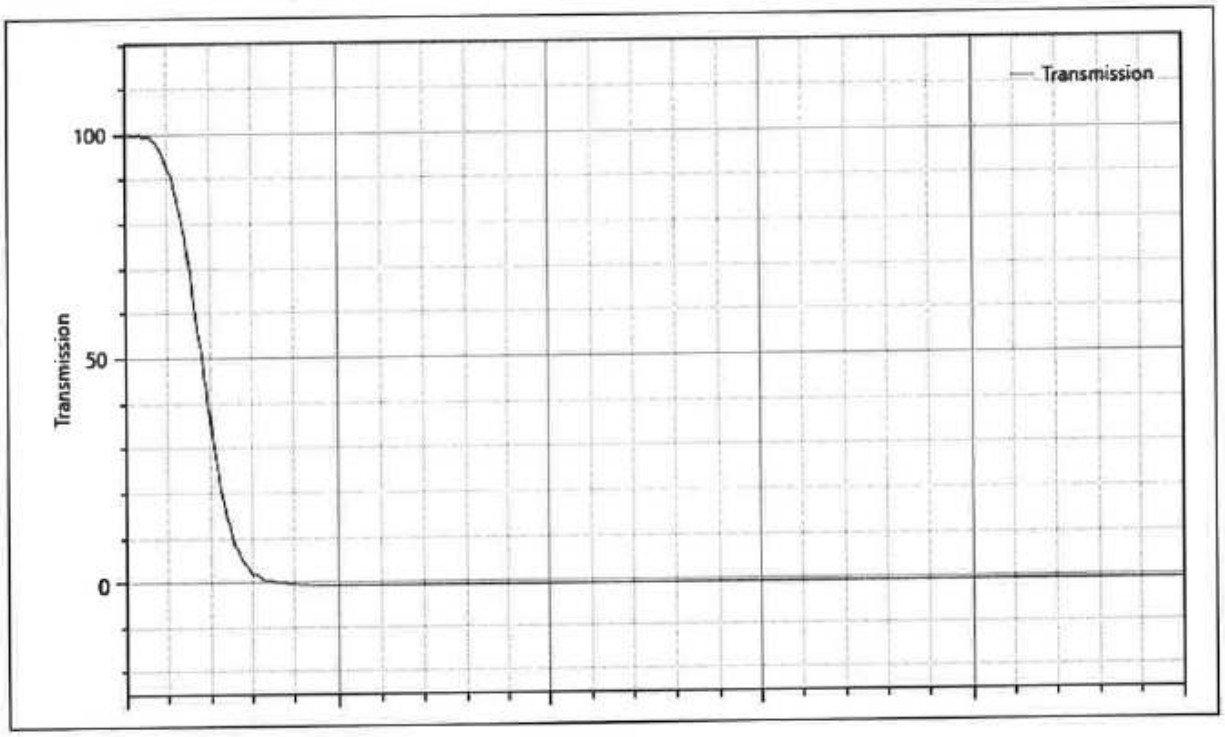




Annex 3 to the Test report No. 2019-2148 issued 10.12.2019

Sample C:





Annex 4 to the Test report No. 2019-2148 issued 10.12.2019

Sample D: