

TEST REPORT

Report No: 231001194-1.1 Date: 26.05.2021

Client

Silikal GmbH
Ostring 23
63533 Mainhausen

Subject

Fire behaviour testing of building products in accordance with DIN EN ISO 9239 – 1

Order Date: 18.03.2021

Sample Received from client: 15.03.2021

Test Date : 29.04.2021

Notified Body No: -0432-

Description / Designation of the Test Object

Floor coating system designated as "Silikal Kitchen System"

Description of the Underlying Test Procedures

DIN EN ISO 9239-1: "Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1:2010)"

The test results refer exclusively to the test object identified above and described on page 2. Test reports may only be published or reproduced without the consent of MPA NRW in their original form and content. Abbreviated reproduction of a test report is only permitted with the consent of MPA NRW.

This test report comprises 7 pages.



1 Description of the test materials

1.1 Information provided by the Client

Floor coating system designated as "Silikal Kitchen System"

The floor coating has the following build-up:

1. Primer Silikal R 52, application rate: 0.4 kg/m²
2. Alternative waterproofing Silikal RU320 pigmented, application rate: 1.3 kg/m²
3. Main layer Silikal R61 mixed 1: 2 with Silikal Filler SL, application rate: 5.0 kg/m²
4. Broadcast Silikal FM 3
5. Sealer Silikal R71, applied twice at 0.4 kg/m²

1.2 Values Determined by MPA NRW

For testing, coated fibre cement panels labelled "Silikal Kitchen System" were submitted. The fibre cement panels, according to DIN EN 13238, were provided to the client by MPA NRW.

Total dry application amount of the coating approx. 8202 g/m²
Colour of the coating: blue-grey

According to the client, the fibre cement panels were coated as follows:

1. Primer Silikal R 52, application rate: 0.48 kg/m²
2. Alternative waterproofing Silikal RU320 pigmented, application rate: 1.38 kg/m²
3. Main layer Silikal R61 mixed 1: 2 with Silikal Filler SL, application rate: 5.01 kg/m²
4. Excess quartz broadcast Silikal FM 3
5. Sealer Silikal R71, applied twice at 0.48 kg/m²

1.3 Conditioning of the Samples

Before testing, the samples were conditioned in accordance with DIN EN 13238.

2 Test Results

2.1 Times at which the flame front reached each 50 mm measurement point

Measurement Point (mm)	Associated Heat Radiation (kW/m ²)	Time to Reach the Measurement Point (seconds)			
		Sample 1	Sample 2	Sample 3	
50	≥ 11	331	355	359	
100	≥ 11	471	422	509	
150	10,1	600	557	580	
200	9,4	756	732	721	
250	8,4	885	823	897	
300	7,3	1230	996	1146	
350	6,3	1616	1300	1388	
400	5,4	--	1778	1731	
450	4,5	--		--	
500	3,8	--	--	--	
550	3,2	--	--	--	
600	2,7	--	--	--	
650	2,3	--	--	--	
700	2,0	--	--	--	
750	1,7	--	--	--	
800	1,5	--	--	--	
850	1,4	--	--	--	
900	1,3	--	--	--	
Time when the flames extinguished (sec)		--	--	--	
Maximum burning distance after flames extinguished (mm)		390	410	420	
End of test (sec)		1800	1800	1800	

2.2 Maximum Distance of the Flame Front from the Zero Point After Specified Times:

Flame Front (mm)	Max. Distance after 10 min (mm)	Heat Flow after 10 Min. HF 10 (kW/m ²)	Max. Distance after 20 min (mm)	Heat Flow after 20 Min. HF 20 (kW/m ²)	Max. Distance after 30 min (mm)	Heat Flow after 30 Min. HF 30 (kW/m ²)	Critical Heat-Flow CHF (kW/m ²)
Sample 1	150	10,1	290	7,5	390	5,6	5,6
Sample 2	160	10,0	340	6,5	410	5,2	5,2
Sample 3	160	10,0	330	6,7	420	5,0	5,0
Average	157	10,0	320	6,9	407	5,3	5,3

2.3 Observations During the Test:

Sample 1	None
Sample 2	None
Sample 3	None

2.4 Smoke Density Test Results:

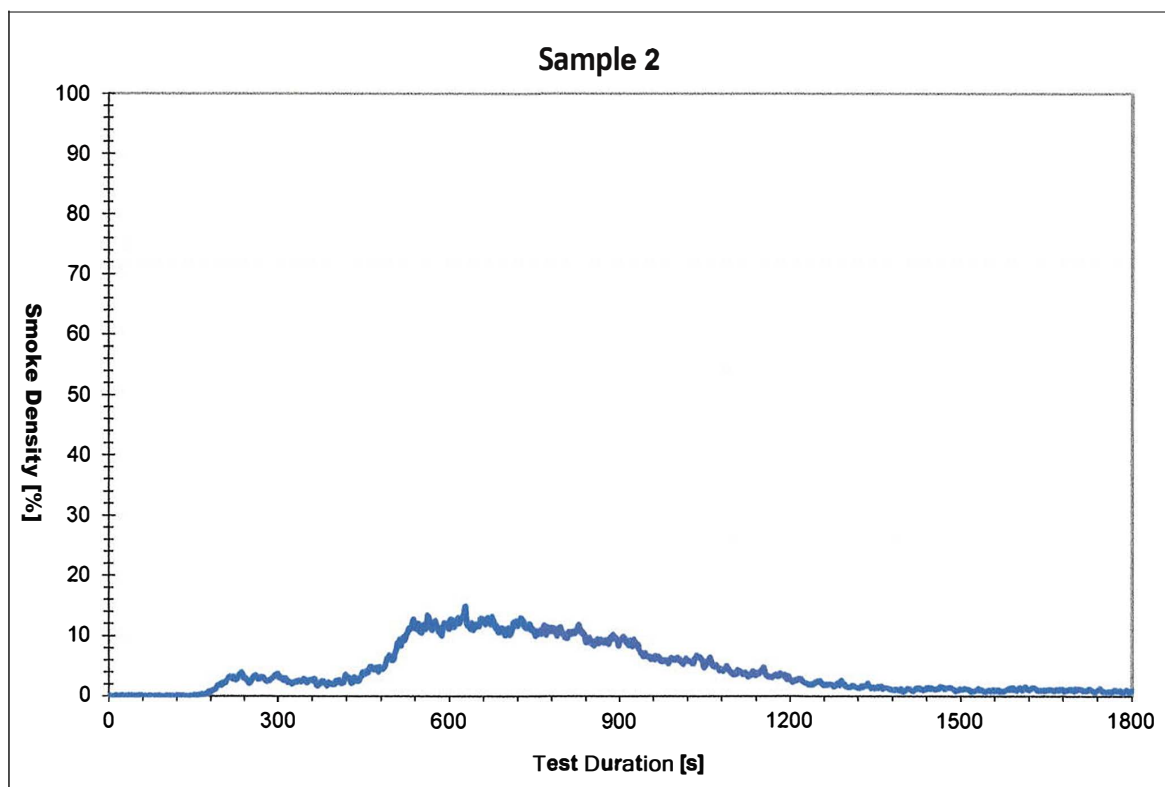
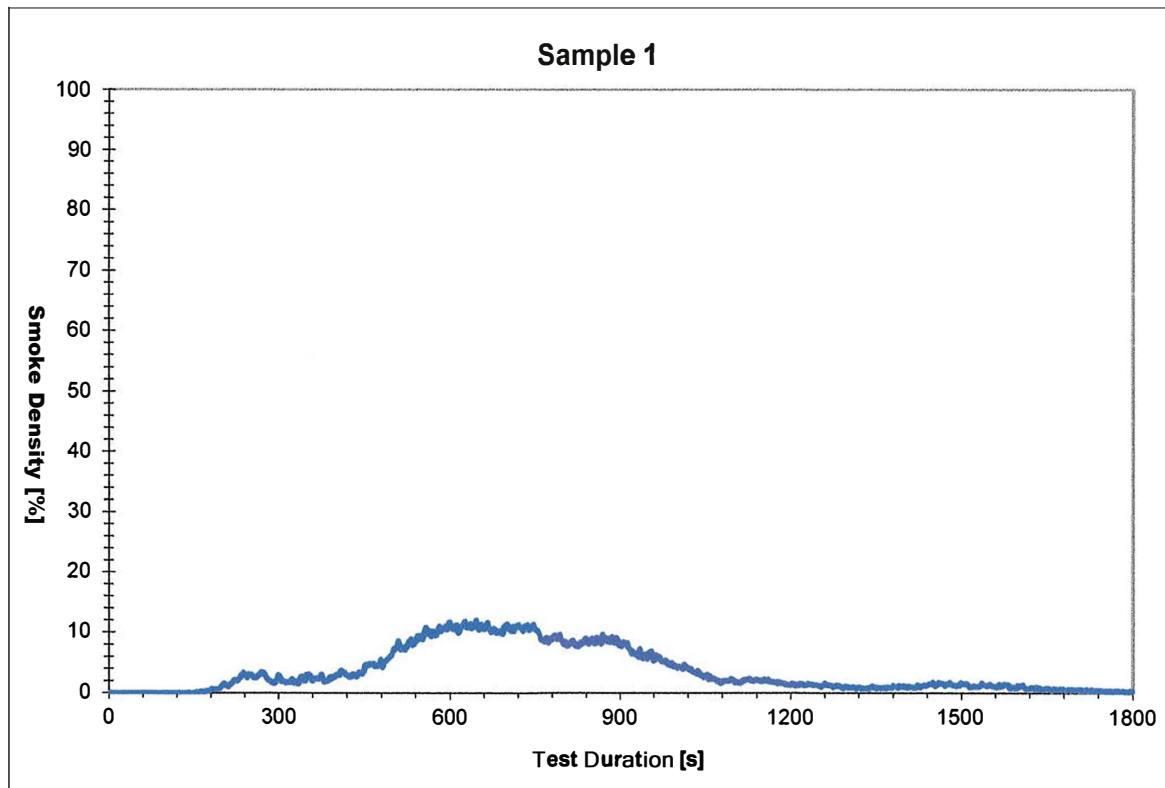
Sample	1	2	3	Average
Smoke Density (%*min)	108	130	125	121

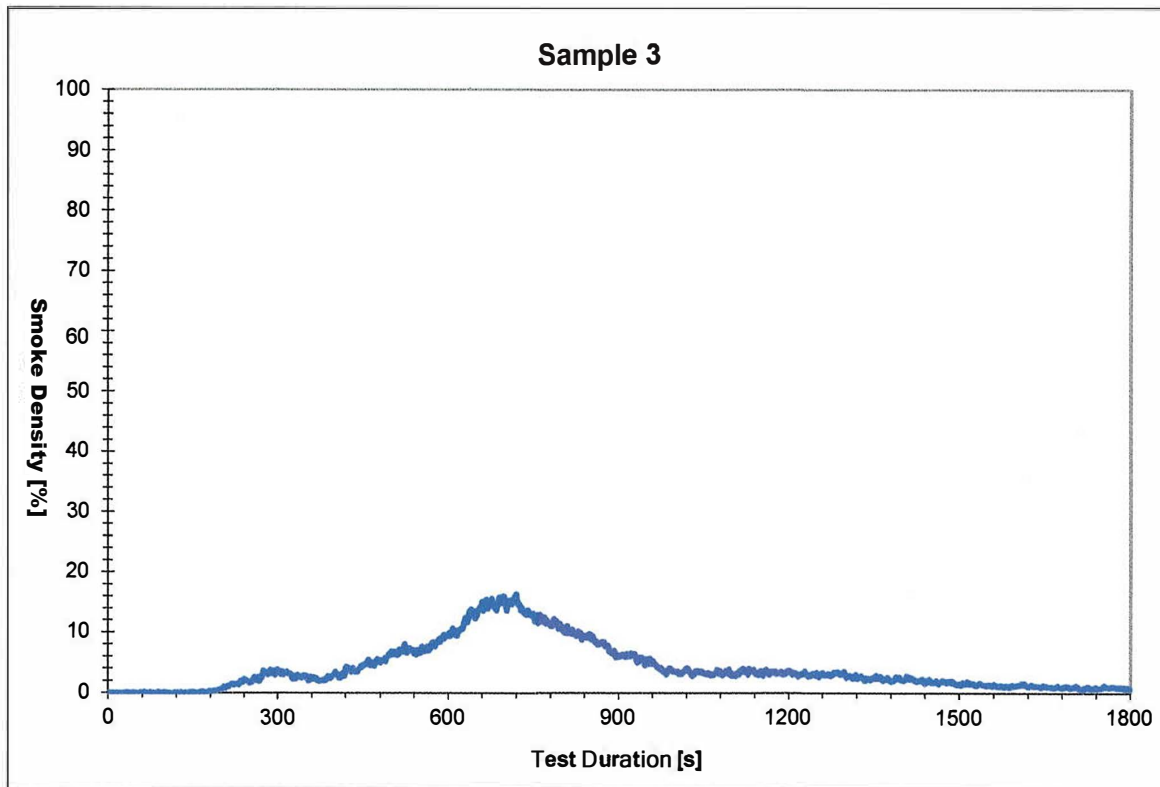
2.5 Appearance of the Samples after the Test



Apperance of Samples 1 - 3

2.6 Smoke Development Graphs





3 Important Note

The test results apply only to the behaviour of the samples of a building product under the specific test conditions during testing; they are not to be understood as the sole criterion for evaluating the potential fire hazard of the building product in actual applications.

Erwitte, 26.05.2021

Im Auftrag

Dipl.-Ing. Rademacher
(Leiter der Prüfstelle)



Dipl.-Ing. Olaf Rickert
(Sachbearbeiter)