

Report No. 3-253850

Applicant:

nora Qualitätswesen DE
Höhnerweg 2-4
69469 Weinheim
Germany

Test:**DIN EN ISO 9239 – 1: (November 2010)**

Material & Trade name	noraplan stone ed, Mix. 948, Color: 6603, Batch-No. 4180360000	
Date of Test	2014-05-28	
Mass per unit area	2.845	kg/m ²
Thickness	2.00	mm

Summary of the results		
Average critical flux	10.12	kW/m ²
Integral of the light attenuation (TLA- Smoke)	154.11	%*min
Classification acc. to EN 13501-1 (2010)	Bfl – s1	

Weinheim, den 11 Juni 2014

Gutfleisch

The report consists of 8 pages

1. Description of the test method

Fire testing of floor coverings. EN ISO 9239 – 1 (11 – 2010)

Determination of the burning behaviour using a radiant heat source.

2. Identification of the product

Obtain samples : 2014-04-16

Client: nora Qualitätswesen DE
Höhnerweg 2 - 4
69469 Weinheim
Germany

Manufacturer : nora systems GmbH
Höhnerweg 2 - 4
69469 Weinheim
Germany

Description of the material :

This description is based on information given by the sponsor.

These performed tests are of indicative nature only. No information on the tested products is included in this report.

Material No.	Sample	Substrate	Orientation
1	noraplan stone ed, Mix. 948, Color: 6603, Batch-No. 4180360000	6 mm fiber cement board	lengthwise
2	noraplan stone ed, Mix. 948, Color: 6603, Batch-No. 4180360000	6 mm fiber cement board	crosswise

3. Results and observations

Date of test: 2014-05-28

a) Test results :*Flame spread as in function of time*

Sample No.	1	2		
Flame spread (in mm)	Time to reach flame spread (in sec.)			
50				
100				
150				
200				
250				
300				
350				
400				
450				
500				
550				
600				
650				
700				
750				

b) Other data

Number of specimen	1	2			Average: 1-2
time (min)	Flame spread (mm)				
Flame spread after 10 min	210	100			
Flame spread after 20 min	210	100			
Flame spread after 30 min	210	100			
Final maximum flame spread distance (mm)	210	100			155.00
Self extinction sec.	750	720			
Test stopped at sec.	810	760			
Critical heat flux CHF (kW/m ²)	9.25	11.00			10.12
Heat flux after 30min (kW/m ²)	9.25	11.00			
Total light attenuation (%.min)	184,14	124,08			154.11

c) Observations

Number of specimen	1	2		
Transitory flaming (yes/no)	No	No		
Melting (yes/no)	No	No		
blistering (yes/no)	No	No		
Glowing combustion after flame-out Duration (sec)	0	0		
Location (Distance from reference in mm)	0	0		
Penetration of the flame through the substrate (yes/no)	No	No		

Calibration results

Last calibration date : 13.05.2014

Calibration valid until: Last calibration date + 1 month

Heat flux distribution onto the calibration board

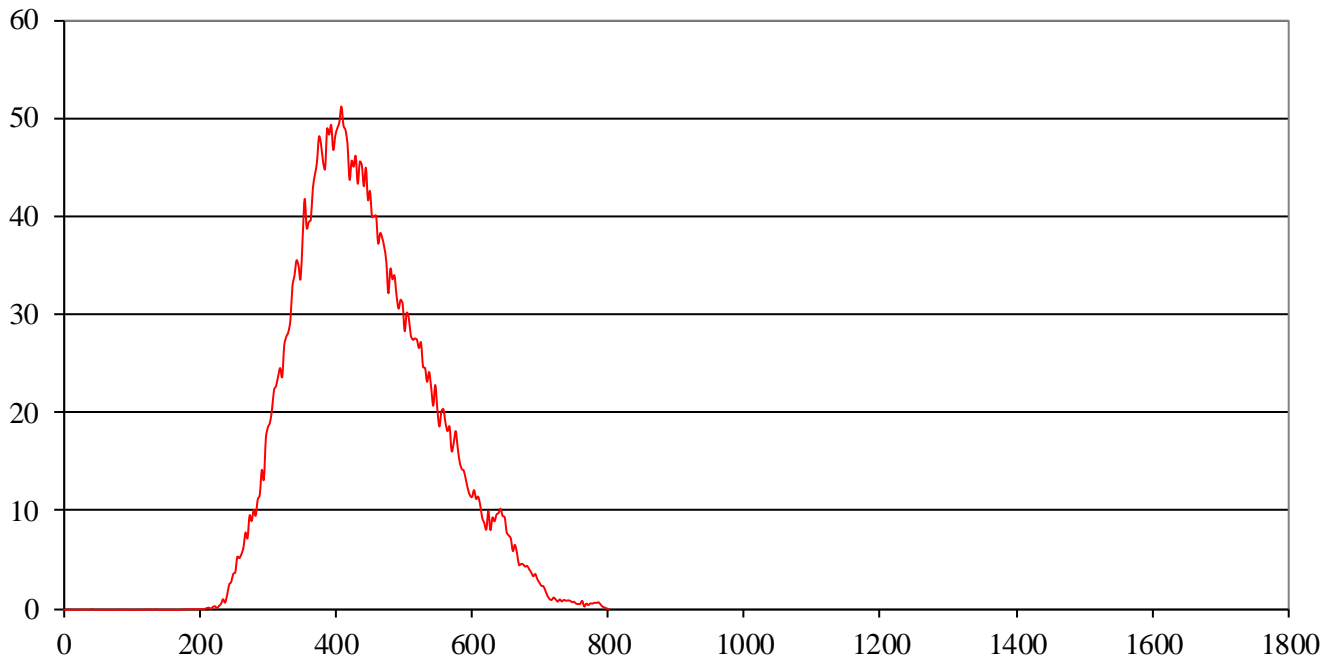
Distance to zero point of calibration board (mm)	Measured heat flux (kW/m ²)	Required heat flux (kW/m ²)
110	11.14	10,9 ± 0,4
210	9.25	9,2 ± 0,4
310	6.99	7,1 ± 0,4
410	5.01	5,1 ± 0,2
510	3.49	3,5 ± 0,2
610	2.47	2,5 ± 0,2
710	1.78	1,8 ± 0,2
810	1.40	1,4 ± 0,2
910	1.09	1,1 ± 0,2

Black body temperature of the radiant panel : 531.37 °C

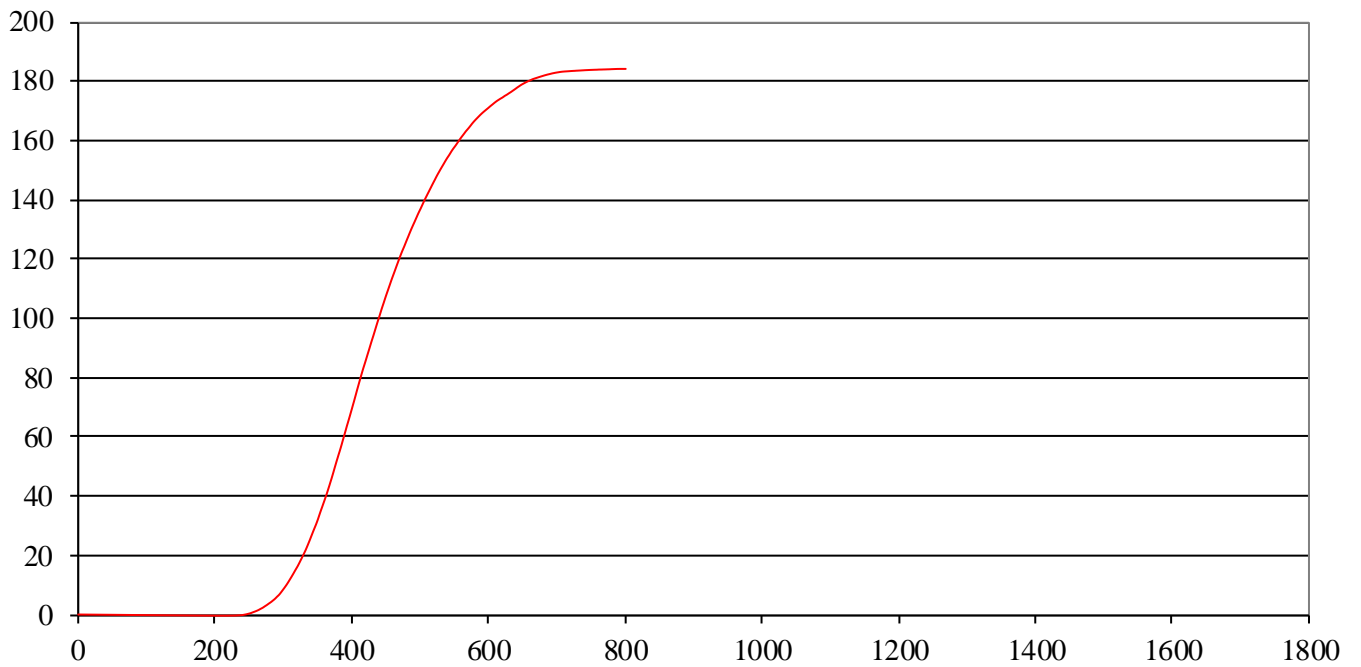
Temperature of the chamber : 131.51 °C

Graphs of the smoke generation for sample 1

Smoke density (%)

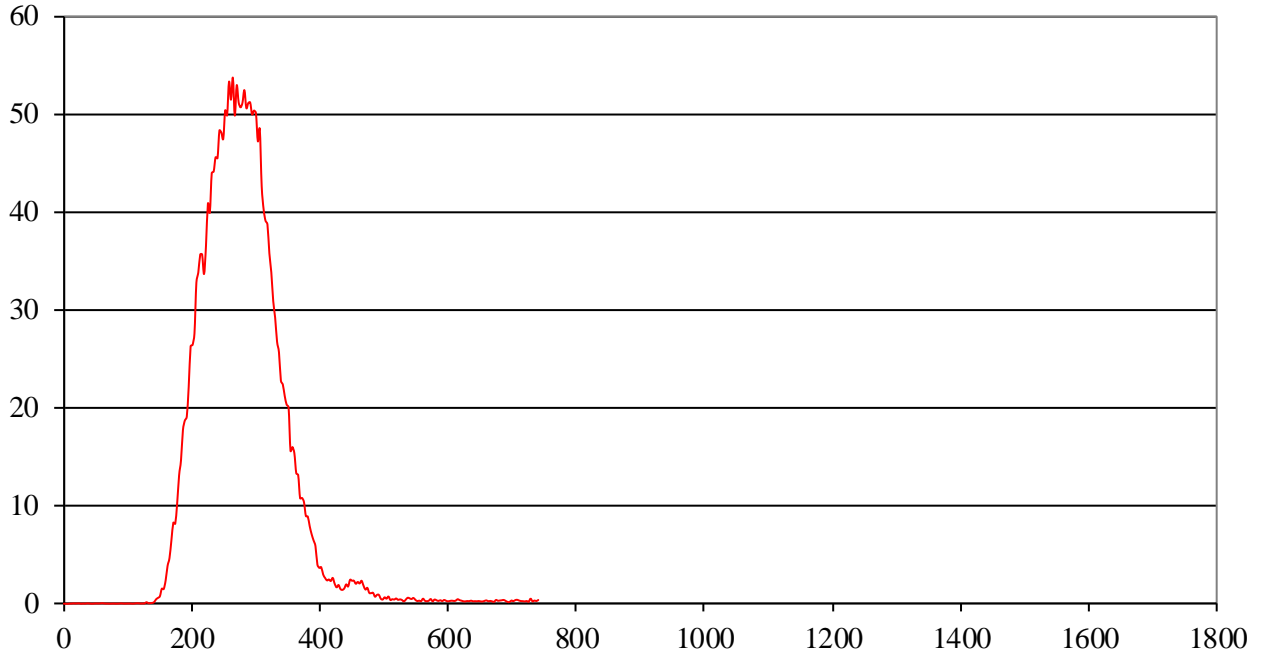


Total LA (%.min)



Graphs of the smoke generation for sample 2

Smoke density (%)



Total LA (%.min)

