

## Test report no. 020268-Dra

2. issue

orderer: Tapetenfabrik  
Gebr. Rasch GmbH & Co. KG  
Raschplatz 1  
D-49565 Bramsche

order from: 04.04.2002 – BR/CI

order: Tests of the fire behaviour according to DIN 4102-1: 1998-05,  
class B1, of wallpaper „expanded vinyl wallcovering, paintable  
on 65 g/m<sup>2</sup> non-woven substrate“

note: The test results relate to the behaviour of the test specimens of a  
product under the particular conditions of the test; they are not  
intended to be the sole criterion for assessing the potential fire  
hazard of the product in use.

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Notified Body No. 0764

### 1. Sampling

date: - / by orderer  
 delivery: 05.02.2002  
 number of samples: 1 roll  
 dimensions: 10,050 mm x 530 mm

### 2. Informations about the sample

name: „expanded vinyl wallcovering, paintable on 65 g/m<sup>2</sup> non-woven substrate“  
 item number: 171 716  
 thickness: 0.7 mm  
 weight per unit area: 133 g/m<sup>2</sup>

### 3. Review

All fire tests were carried out according to DIN 4102-1:1998-05. The wallpaper was pasted on plasterboards with a wallpaper paste.

table 1: character and location of tests

tests	amount of tests	lab
Brandschacht-test	1	MPA Hannover
single-flame source test	10	MPA Hannover



#### 4. fire tests

##### 4.1 Brandschacht-test

table 2: results of the Brandschacht-test

test		A
max. vertical flame spread time after beginning	cm min:s	50 00:15
melting and burning through time after beginning	min:s	no
flames on the reverse side of samples time after beginning	min:s	no
flaming droplets/particles		no
residual length		.
single values	cm	48
	cm	49
	cm	48
	cm	48
mean value	cm	48
max. smoke temperature time after beginning	°C min:s	111 04:19
subsequent fire	s	no
smoke intensity		
max. opacity of the smoke	%	3
integral value I	min*%	5

The development of smoke temperature is shown in fig. 1, the appearance of samples after burning in fig. 3.

The integral value  $I = \int_0^{10 \text{ min}} S \cdot dt$  was calculated from the curve in fig. 2.



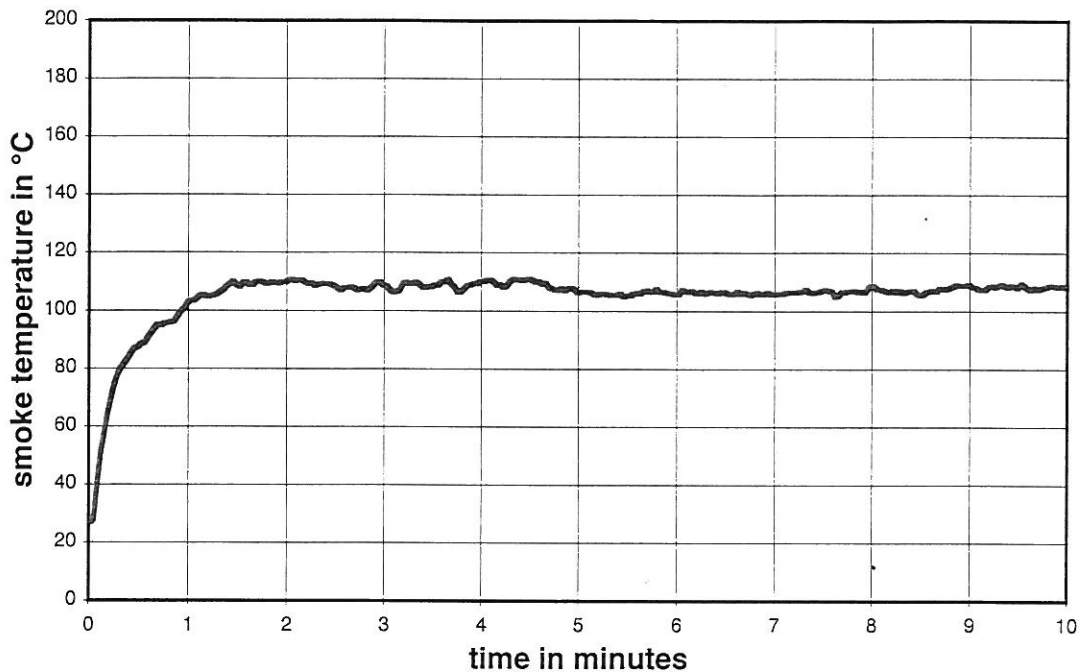


fig. 1: smoke temperature

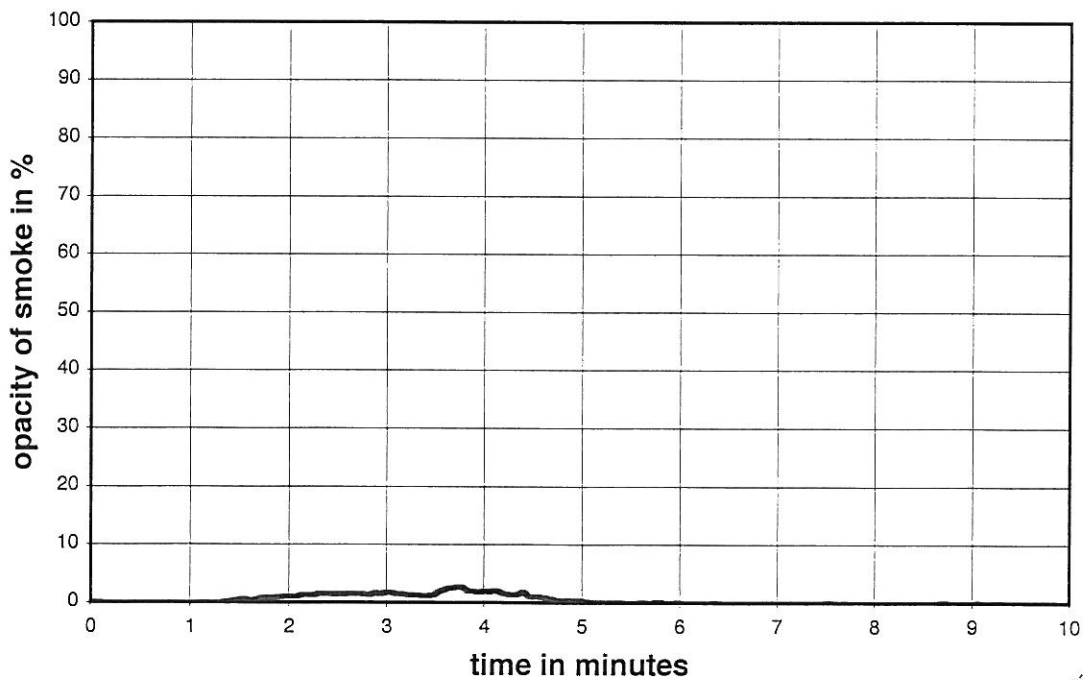


fig. 2: opacity of smoke



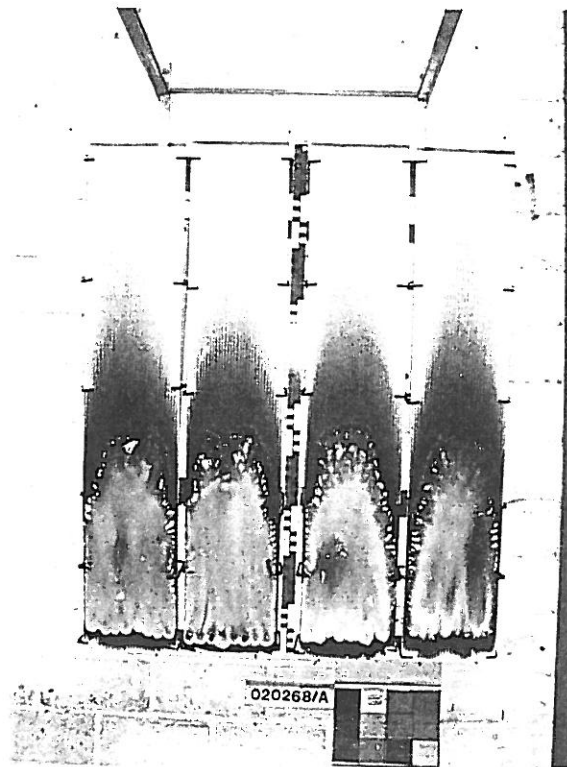


fig. 3: appearance of samples after 10 minutes burning



#### 4.2 Single-flame source test

The tests were carried out as edge flame attacks according to DIN 4102-1: 1998-05 clause 6.2.5.2 and as surface flame attacks according to DIN 4102-1: 1998-05 clause 6.2.5.3.

flame application time: 15 s

observation time: 20 s

number of tests: 5 + 5

requirement: max. vertical flame spread < 150 mm

table 3: results of the edge flame attack

position of flame application	edge					
specimen no.	1	2	3	4	5	
ignition occurs after	s	0.3	0.8	0.5	0.4	0.3
duration of flames	s	15.0	14.6	14.8	14.8	15.1
max. vertical flame spread	mm	20	10	20	20	10
smoke production	very low					
flaming droplets/particles	no ignition of the filter paper					

table 4: results of the surface flame attack

position of flame application	surface					
specimen no.	1	2	3	4	5	
ignition occurs after	s	1.6	2.6	2.5	2.5	2.3
duration of flames	s	13.7	12.7	12.9	12.9	13.1
max. vertical flame spread	mm	30	20	20	20	20
smoke production	very low					
flaming droplets/particles	no ignition of the filter paper					

## 5. summary

table 5: summary of test results

name		expanded vinyl wallcovering, paintable on 65 g/m <sup>2</sup> non-woven substrate
thickness	mm	0.7
weight per unit area	g/m <sup>2</sup>	133
<u>Brandschacht-test</u>		
max. vertical flame spread	cm	50
residual length	cm	48
max. smoke temperature	°C	111
max. opacity of smoke	%	3
max. integral value	min*%	5
flaming droplets/particles		no
<u>single-flame source test</u>		
max. flame spread	mm	30
flaming droplets/particles		no

## 6. Classification

The product „expanded vinyl wallcovering, paintable on 65 g/m<sup>2</sup> non-woven substrate“ in relation to its reaction to fire behaviour is classified:

**DIN 4102-1 – B1**

During the tests there were no flaming droplets/particles according to DIN 4102-1 clause 6.2.6.

## 7. Restrictions

This test report is valid until 31.03.2007.

Hannover, 24.06.2004

Head of fire laboratory



(ORR Dipl.-Ing. Restorff)

