



TEST REPORT

No. : GZMR110509896

Date : May 27, 2011

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Annex A

Classes of reaction to fire performance for floorings

class	Test methods	Classification	Additional classification
A1 _n	EN ISO 1182 ^a and	$\Delta T \leq 30^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t_f = 0$ (i.e. no sustained flaming)	-
	EN ISO 1716	$\text{PCS} \leq 2.0 \text{MJ/kg}^a$ and $\text{PCS} \leq 2.0 \text{MJ/kg}^b$ and $\text{PCS} \leq 1.4 \text{MJ/m}^2^c$ and $\text{PCS} \leq 2.0 \text{MJ/kg}^d$	-
A2 _n	EN ISO 1182 ^a or	and $\Delta T \leq 50^\circ\text{C}$, and $\Delta m \leq 50\%$, and $t_f \leq 20\text{s}$	-
	EN ISO 1716		
	EN ISO 9239-1 ^e	Critical flux ^f $\geq 8.0 \text{kW/m}^2$	Smoke productio ^g
B _n	EN ISO 9239-1 ^e and	Critical flux ^f $\geq 8.0 \text{kW/m}^2$	Smoke productio ^g
	EN ISO 11925-2 ^h Exposure = 15s	$F_s \leq 150 \text{mm}$ within 20 s	-
C _n	EN ISO 9239-1 ^e and	Critical flux ^f $\geq 4.5 \text{kW/m}^2$	Smoke productio ^g
	EN ISO 11925-2 ^h Exposure = 15s	$F_s \leq 150 \text{mm}$ within 20 s	-
D _n	EN ISO 9239-1 ^e and	Critical flux ^f $\geq 3.0 \text{kW/m}^2$	Smoke productio ^g
	EN ISO 11925-2 ^h Exposure = 15s	$F_s \leq 150 \text{mm}$ within 20 s	-
E _n	EN ISO 11925-2 ^h Exposure = 15s	$F_s \leq 150 \text{mm}$ within 20 s	-

*****To be continued*****

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F _{fl}	No performance determined
^a	For homogeneous products and substantial components of non-homogeneous products.
^b	For any external non-substantial component of non-homogeneous products.
^c	For any internal non-substantial component of non-homogeneous products.
^d	For the product as a whole.
^e	Test duration = 30 min.
^f	Critical flux is defined as the radiant flux at which the flame extinguishes or the radiant flux after a test period of 30 min, whichever is the lower (i.e. the flux corresponding with the furthest extent of spread of flame).
^g	s1 = Smoke ≤ 750 % minutes; s2 = not s1.
^h	Under conditions of surface flame attack and, if appropriate to the end use application of the product, edge flame attack.

Test item No.2: Clause 4.2 Content of pentachlorophenol (PCP)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Pentachlorophenol	mg/kg	EN14041:2004 ANNEX B & EN12673:1999, GC-MS	N.D.	5.0

Note:

1. N.D. = Not Detected (< MDL)
2. MDL = Method Detection Limit

Test item No.3: Clause 4.3 Formaldehyde Emission (In air)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Formaldehyde Emission (In air)	mg/m ³	EN 717-1:2004, UV-Vis	N.D.	0.080

Note:

1. N.D. = Not Detected (< MDL)
2. MDL = Method Detection Limit
3. mg/m³ = milligramme per cubic meter

Reference Information (EN14041:2004(E) requirement):

Formaldehyde class E1: ≤0.124 mg/m³

Formaldehyde class E2: >0.124 mg/m³

*****To be continued*****

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Test item No.5: Clause 4.5 Slip resistance

Test Item(s)	Test Method (Reference)	Result
Dynamic coefficients of friction	<p>The test was conducted in accordance with EN 13893:2002. Sliders made from the defined material and having a definite shape are loaded to impose a specified force on the floor covering. The loaded sliders are pulled parallel to the surface of floor covering at constant speed 0.2m/s to 0.3m/s. The horizontal force applied to pull the sliders is recorded over the length of a trace at least 0.30m. And the results were calculated by the formulae below: $\mu = F/M$ F—is the average horizontal force (in Newton). M— is the total vertical load on the sliders (in Newton).</p> <p>When declared, the floor covering intended to be used in dry and non-contaminated conditions shall have a dynamic coefficient of friction of ≥ 0.30 when tested ex-factory under dry conditions per EN 13893:2002 and shall be declared as technical class DS.....</p>	<p>Dynamic coefficients of friction: 0,36 Class DS per EN 14041</p> <p>Tested surface: front view (see sample photo A.1, along the length of board)</p>

Note: The test item No.5 has been subcontracted to the accredited laboratory.

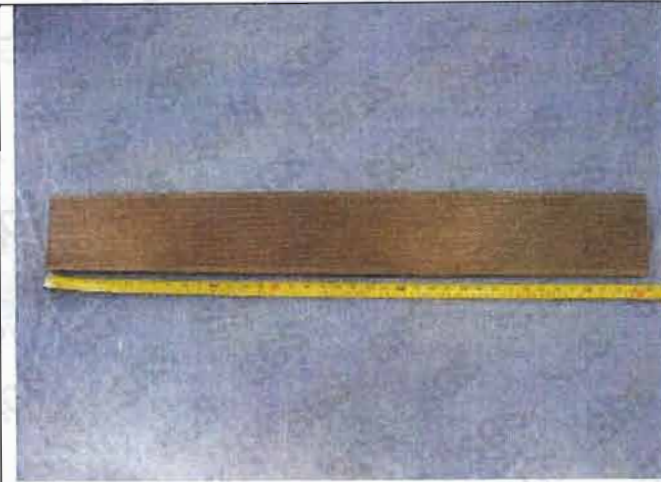
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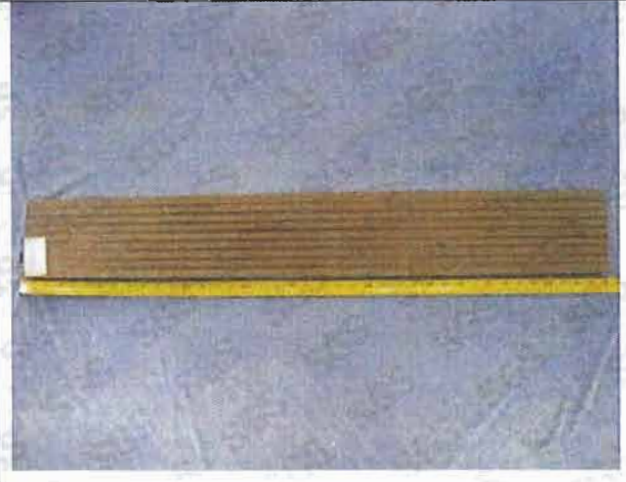
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Sample photo:



A.1 Front view
Photo for Test item No.5



A.2 Back view
Photo for Test item No.5



A.3 Section view
Photo for Test item No.5



Photo for Test item No.2 and No.3

*****End of report*****

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