

## TEST REPORT

No. : GZMR110509896

Date : May 27, 2011

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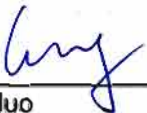
XUANCHENG FUMEIDA NEW MATERIALS CO., LTD.  
DONGSHAN ROAD, NORTH DISTRICT INDUSTRIAL PARK, XUANCHENG, ANHUI, CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : WPC DECKING  
Material : WOOD PLASTIC COMPOSITES(WPC)  
Spec. : 135X25X100MM  
Manufacturer : XUANCHENG FUMEIDA NEW MATERIALS CO.,LTD.  
SGS Ref No. : GP110420177,GZ1105054038/CHEM  
Test Performed : Selected test(s) as requested by applicant  
Date of Receipt : Apr 27, 2011  
Test Period : Apr 27, 2011 to May 24, 2010  
Test Result(s) : Please refer to the following page(s)

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

Signed for and on behalf of  
SGS-CSTC Ltd.

  
May Huo  
Engineer

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GZMR 0106745

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### Test Result(s):

Sample description: see the photo.

No.	Test item	Testing and Evaluation methods (according to EN 14041:2004)	Test and evaluation results
1	Clause 4.1 Reaction to fire	When declared, the floor covering shall be tested and classified according to the requirements of EN 13501-1 and resulting class and subclass shall be declared..... If it is decided to make no claim of reaction for fire performance, which marked class F, no testing is required.....	Class F fl
2	Clause 4.2 Content of pentachlorophenol (PCP)	Resilient, textile and laminate floor coverings shall not contain PCP or a derivative thereof as a component in the production process of the product or of its raw materials. In cases where verification is required, if the content is less than 0,1 % by mass by the method of Annex B(EN 12673:1999), this requirement shall be considered to be met.	N.D
3	Clause 4.3 Formaldehyde emission	Formaldehyde emission(in air): When formaldehyde-containing materials have been added to the product as a part of the production process,The product shall be tested and classified into one of two classes: E1 or E2.....	N.D Class E1
4	Clause 4.4 Water-tightness	Where required, resilient floor coverings shall meet the Requirements of EN 13553.	NPD

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

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No.	Test item	Testing and Evaluation methods (according to EN 14041)	Test and evaluation results
5	Clause 4.5 Slip resistance	<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:</p> $\mu = F/M$ <p>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 <math>\geq 0.30</math> 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>
6	Clause 4.6 Electrical behavior (static electricity)	<p>Clause 4.6.2.1 Antistatic floor coverings</p> <p>The body voltage, measured in accordance with EN 1815 :1997 for resilient and laminate floor coverings or ISO 6356 for textile floor coverings, shall not exceed 2,0 kV when tested at 23 °C±1 °C and (25±2) % relative humidity after conditioning the test specimens in the same atmosphere for seven days.</p>	NPD
	Clause 4.6.2.2 Electrical resistance	<p>Static dissipative floor coverings: The vertical resistance, measured in accordance with EN 1081 for resilient and laminate floor coverings or ISO 10965 for textile floor coverings, shall not exceed <math>10^9 \Omega</math></p> <p>Conductive floor coverings: The vertical resistance, measured in accordance with EN 1081 for resilient and laminate floor coverings or ISO 10965 for textile floor coverings, shall not exceed <math>10^6 \Omega</math>.</p>	

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

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No.	Test item	Testing and Evaluation methods (according to EN 14041)	Test and evaluation results
7	Clause 4.7 Thermal conductivity	When floor coverings are to be installed over an under-floor heating system the design thermal conductivity values given in EN 12524 shall be assumed for design calculation purposes. Alternatively, the thermal resistance measured in accordance with EN 12667 may be used. Test condition(EN 12667:2001): Mean temperature:25.79°C Temperature difference:19.33°C	NPD

**Note:**

1. The test item 5 has been subcontracted to the accredited laboratory.
2. N.D. = Not Detected (< MDL)
3. NPD=No performance Determined

**Test item No.1: Clause 4.1 Reaction to fire**

**Classification and direct field of application**

If it is decided to make no claim of reaction for fire performance, which marked class F, no testing is required, then in accordance with EN 13501-1:2007. The product, classification is as following,

<b>Fire behaviour</b>
<b>F<sub>n</sub></b>

Reaction to fire classification: F<sub>n</sub>

**Remark:** The classes with their corresponding fire performance are given in annex A.

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

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### Annex A

#### Classes of reaction to fire performance for floorings

class	Test methods	Classification	Additional classification
A1 <sub>n</sub>	EN ISO 1182 <sup>a</sup> 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 <sub>n</sub>	EN ISO 1182 <sup>a</sup> 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 <sup>e</sup>	Critical flux <sup>f</sup> $\geq 8.0\text{kW/m}^2$	Smoke productio <sup>g</sup>
B <sub>n</sub>	EN ISO 9239-1 <sup>e</sup> and	Critical flux <sup>f</sup> $\geq 8.0\text{kW/m}^2$	Smoke productio <sup>g</sup>
	EN ISO 11925-2 <sup>h</sup> Exposure = 15s	$F_s \leq 150\text{mm}$ within 20 s	-
C <sub>n</sub>	EN ISO 9239-1 <sup>e</sup> and	Critical flux <sup>f</sup> $\geq 4.5\text{kW/m}^2$	Smoke productio <sup>g</sup>
	EN ISO 11925-2 <sup>h</sup> Exposure = 15s	$F_s \leq 150\text{mm}$ within 20 s	-
D <sub>n</sub>	EN ISO 9239-1 <sup>e</sup> and	Critical flux <sup>f</sup> $\geq 3.0\text{kW/m}^2$	Smoke productio <sup>g</sup>
	EN ISO 11925-2 <sup>h</sup> Exposure = 15s	$F_s \leq 150\text{mm}$ within 20 s	-
E <sub>n</sub>	EN ISO 11925-2 <sup>h</sup> Exposure = 15s	$F_s \leq 150\text{mm}$ within 20 s	-

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

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F <sub>fl</sub>	No performance determined
<sup>a</sup>	For homogeneous products and substantial components of non-homogeneous products.
<sup>b</sup>	For any external non-substantial component of non-homogeneous products.
<sup>c</sup>	For any internal non-substantial component of non-homogeneous products.
<sup>d</sup>	For the product as a whole.
<sup>e</sup>	Test duration = 30 min.
<sup>f</sup>	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).
<sup>g</sup>	s1 = Smoke ≤ 750 % minutes; s2 = not s1.
<sup>h</sup>	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 <sup>3</sup>	EN 717-1:2004, UV-Vis	N.D.	0.080

Note:

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

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

Formaldehyde class E1: ≤0.124 mg/m<sup>3</sup>

Formaldehyde class E2: >0.124 mg/m<sup>3</sup>

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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:  <math>\mu = F/M</math>                      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 <math>\geq 0.30</math> 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.

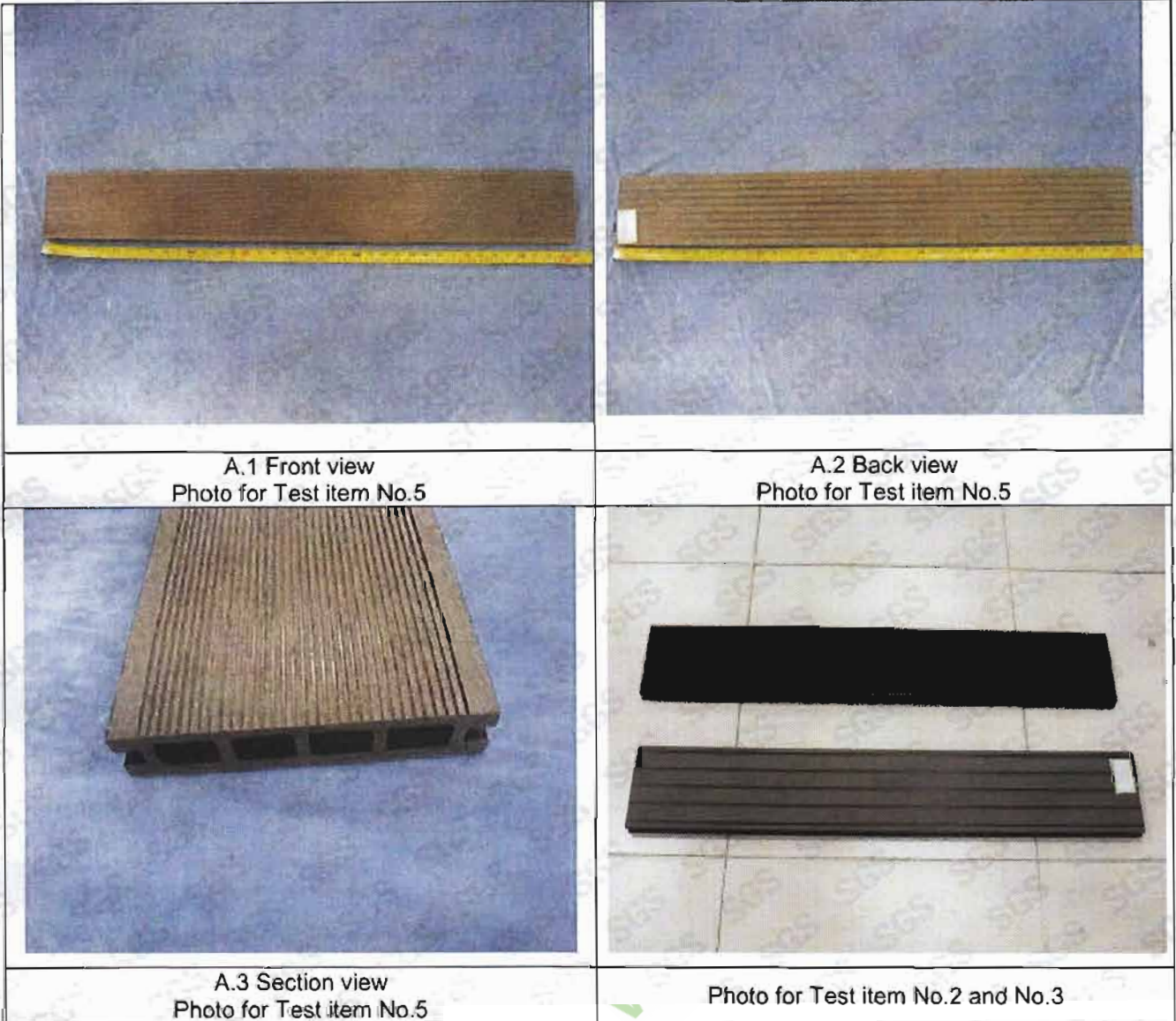
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Sample photo:



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

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