TEST REPORT

CUSTOMER NAME: **WUXI SUNGRASS SPORTS CO.,LTD**

ADDRESS: NO. 9 XICHANG ROAD, XIZHANG, WUXI, CHINA.

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

Sample Name	:	Artificial Grass
Product Specification	:	QDS-UB
Material and Mark	:	PE+PP
Other Information	:	sample description:Landscaping Artificial Grass
Date of Receipt	:	Jul 16, 2014
Testing Start Date	:	Jul 16, 2014
Testing End Date	:	Jul 29, 2014
Test result(s)	:	For further details, please refer to the following page(s)

Signed for
SGS-CSTC Standards Technical
Services （Shanghai）Co., Ltd.

Zano Lai

Zano Lai
Authorized signatory

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Test Item:

EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements—Part 1: Classification using data from reaction to fire tests, Class C_{fl}

I. Test conducted

This test was conducted as per EN 13501-1:2007+A1:2009 Fire classification of construction products and building elements — Part 1: Classification using data from reaction to fire tests. And the test methods as following:

1. EN ISO 9239-1:2010 Reaction to fire tests for floorings —Part 1: Determination of the burning behaviour using a radiant heat source.
2. EN ISO 11925-2:2010 Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: Single-flame source test.

II. Details of classified product

Color	Green

Mounting and fixing:

Fire cement board, with its density approximate 1800kg/m^3, thickness approximate 6mm, is as the substrate. The test specimens are fixed mechanically to the substrate with no cavity behind it.

III. Test results

Test method	Parameter	Number of tests	Results
EN ISO 9239-1	Critical flux (kW/m^2)	3	7.03
	Smoke (%×minutes)		398.3
EN ISO 11925-2 Exposure = 15 s	$Fs \leq 150$ mm	6	YES

IV. Classification and direct field of application

This classification has been carried out in accordance with **EN 13501-1:2007**.

a) Classification

The product, ARTIFICIAL GRASS, classification is as following,

Fire behaviour		Smoke production	
C_{fl}	—	s	1

Reaction to fire classification: C_{fl}—S1

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

b) Field of application

This classification for the submitted sample is valid for the following end use condition:

--- With all substrates classified A1 and A2

--- With mechanically fixing

--- No cavity

This classification is valid for the following product parameters:

---Characteristics of specimen as described in § II of this test report

Statement: 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.

Warning:

This classification report does not represent type approval or certification of the product.

The test laboratory has, therefore, play no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.

Annex A

Classes of reaction to fire performance for floorings

class	Test methods	Classification	Additional classification
A1[fl]	EN ISO 1182[a] and	$\Delta T \leq 30$℃, and $\Delta m \leq 50\%$, and t_f=0(i.e. no sustained flaming)	-
	EN ISO 1716	PCS≤2.0MJ/kg[a] and PCS≤2.0MJ/kg[b] and PCS≤1.4MJ/m²[c] and PCS≤2.0MJ/kg[d]	-
A2[fl]	EN ISO 1182[a] or — and	$\Delta T \leq 50$℃, and $\Delta m \leq 50\%$, and $t_f \leq 20$s	-
	EN ISO 1716	PCS≤3.0MJ/kg[a] and PCS≤4.0MJ/m²[b] and PCS≤4.0MJ/m²[c] and PCS≤3.0MJ/kg[d]	-
	EN ISO 9239-1[e]	Critical flux[f] ≥8.0kW/ m²	Smoke production[g]
B[fl]	EN ISO 9239-1[e] and	Critical flux[f] ≥8.0kW/ m²	Smoke production[g]
	EN ISO 11925-2[h] Exposure =15s	Fs≤150mm within 20 s	-
C[fl]	EN ISO 9239-1[e] and	Critical flux[f] ≥4.5kW/ m²	Smoke production[g]
	EN ISO 11925-2[h] Exposure =15s	Fs≤150mm within 20 s	-
D[fl]	EN ISO 9239-1[e] and	Critical flux[f] ≥3.0kW/ m2	Smoke production[g]
	EN ISO 11925-2[h] Exposure =15s	Fs≤150mm within 20 s	-

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E_{fl}	EN ISO 11925-2 [h] Exposure =15s	Fs≤150mm within 20 s	-
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.

Sample Photo:

- The test was performed by SGS internal laboratory.

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

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