Technical Construction File

TCF No.: GL-12001281 / 18.December.2012

Certificat Holder:	Wuxi Greenlawn Co., Ltd.
Address:	No.12,Xinhui Road,Beitang District,Wuxi,China
Manufacturer:	Wuxi Greenlawn Co., Ltd.
Address:	No.12,Xinhui Road,Beitang District,Wuxi,China
Equipment Name:	Artificial Grass
Equipment All Model:	G006
Major Model:	G006
Reviewed By :	yefeng chen
Prepared By:	Wuxi Greenlawn Co., Ltd.
Controlled by:	Beijing United Standard Product Testing & Technical Service Co.,Ltd No.2109,Building 401,WangJingYuan,Chaoyang District,Beijing City,China

Catalog Of The TCF

Part I: Description Of The Product

Equipment Name: Artificial Grass

Equipment All Model: G006

EUT Photographs

FULL VIEW PHOTO OF THE EQUIPMENT

Part II: EN 15330-1:2007 Test Report

TEST REPORT

Test Report No.: GL-1213

Certificat Holder:	Wuxi Greenlawn Co., Ltd.
Address:	No.12,Xinhui Road,Beitang District,Wuxi,China
Manufacturer:	Wuxi Greenlawn Co., Ltd.
Address:	No.12,Xinhui Road,Beitang District,Wuxi,China
Equipment Name:	Artificial Grass
Equipment All Model:	G006
Major Model:	G006
Test Standards:	EN 15330-1:2007
Test Engineer:	SHAOHUA DING
Verify Engineer:	LIN CHEN
Test Date:	13.December.2012
Issuance Date:	17.December.2012

This test report was conducted at the lab of Beijing TIRT Technology Service Co.,Ltd.

Test item	
Description :	Artificial Grass
Trademark :	NO
Model and/or type reference:	G006
Multi-Models: differ from model for **size only**	NO
Flame retardation:	PASS
ESD properties:	PASS
Manufacturer :	Wuxi Greenlawn Co., Ltd.

Clause	Requirement ⟟ Test	Result - Remark	Verdict
1	**Scope**		-
2	**Normative references**		-
3	**Terms and definitions**		-
4	**General**		-
4.1	**Resistance to artificial weathering**		-
4.1.1	**Colour fastness**		-
	When tested in accordance with EN 20105-A02 following artificial weathering in accordance with EN 14836,the change in colour of the weathered synthetic turf compared with an unaged test specimen of the synthetic turf shall be Grey Scale 4 or greater.		P
4.1.2	**Tensile strength**		-
	When tested in accordance with EN 13864 following artificial weathering in accordance with EN 14836, the tensile strength of the pile yarn(s) used to form the synthetic turf pile shall be within 50 % of the tensile strength of the unaged yarn.		P
4.2	**Water permeability**		-
	When tested in accordance with EN 12616, the water infiltration rate of surfaces designed to be permeable shall be equal to or greater than 180 mm/h.		P
4.3	**Joint strength**		-
4.3.1	**Stitched joints**		-
	When tested in accordance with Method 1 of EN 12228:2002, following immersion in hot water in accordance with EN 13744, the strength of stitched joints shall be equal to or greater than 1 000 N/100 mm.		P
4.3.2	**Bonded joints**		-
	When tested in accordance with Method 2 of EN 12228:2002, following immersion in hot water in accordance with EN 13744, the strength of bonded joints shall be equal to or greater than 25 N/100 mm except that, for surfaces intended for rugby, the minimum joint strength shall be 100 N/100 mm.		P
4.4	**Abrasion resistance of non-filled surfaces**		-
	When tested in accordance with EN 13672, the percentage mass loss after 2 000 cycles shall be equal to or less than 2 %.		P
5	**Surfaces designed primarily for hockey**		N/A

Clause	Requirement ⟟ Test	Result - Remark	Verdict
6	**Surfaces designed primarily for football**		N/A
7	**Surfaces designed primarily for rugby union**		N/A
8	**Surfaces designed primarily for tennis**		N/A
9	**Surfaces designed for multi-sports use**		-
9.1	**General**		-
	Synthetic turf surfaces designed for multi-sports use shall conform to the requirements given in clause 4 and those in 9.2 to 9.7.Test pieces shall be prepared in accordance with EN 12229 and the manufacturer instructions prior to testing.Wet test pieces shall be prepared in accordance with the procedure given in Annex C.		P
9.2	**Vertical ball rebound**		-
9.2.1	**General**		-
	The surface shall conform to the requirements given in 9.2.2, 9.2.3 or 9.2.4, as appropriate, depending on the sports to be played on the surface.		P
9.2.2	**Football and/or rugby**		-
	When tested in accordance with EN 12235 using a football under both dry and wet conditions, the vertical ball rebound shall be between 45 % and 85 %.		P
9.2.3	**Hockey**		-
	When tested in accordance with EN 12235 using a hockey ball under both dry and wet conditions, the vertical ball rebound shall be less than 90 %.		P
9.2.4	**Tennis**		-
	When tested in accordance with EN 12235 using a tennis ball under both dry and wet conditions, the vertical ball rebound shall be greater than 80 %.		P
9.3	**Ball roll**		-
9.3.1	**General**		-
	The surface shall conform to the requirements given in 9.3.2 or 9.3.3, as appropriate, depending on the sports to be played on the surface.		P
9.3.2	**Football**		-
	When tested in accordance with EN 12234 using a football under both dry and wet conditions, the ball roll shall be between 5,0 m and 10,0 m.		P
9.3.3	**Hockey**		-

Clause	Requirement ⟟ Test	Result - Remark	Verdict
	When tested in accordance with EN 12234 using a hockey ball under both dry and wet conditions, the ball roll shall be between 5,0 m and 15,0 m.		P
9.4	**Shock absorption**		-
	When tested in accordance with EN 14808 under both dry and wet conditions, the shock absorption shall be classified as in Table 2.		P

Table 2 — Classification of shock absorption for multi-sports surfaces

Force reduction (%)	Classification
15 to 24	SA 1
25 to 34	SA 2
35 to 44	SA 3
45 to 54	SA 4
55 to 60	SA 5
61 to 80	SA 6

NOTE 1 If football is the priority sport, the shock absorption should be Class SA5 or SA6.

NOTE 2 For general sports training (non-contact), hockey and physical education, the shock absorption should typically be Class SA3 or SA4.

NOTE 3 If tennis is to be played, the shock absorption should typically be Class SA1 or SA2.

NOTE 4 If rugby is to be played on the surface, the shock absorption should be Class SA6.

Clause	Requirement ⟟ Test	Result - Remark	Verdict
9.5	**Rotational resistance**		-
9.5.1	**Surfaces designed for the use of studded footwear**		-
	When tested in accordance with EN 15301-1, using the studded test foot under both dry and wet conditions,the rotational resistance shall be between 25 Nm and 50 Nm.		P
9.5.2	**Surfaces designed not for the use of studded footwear**		-
	When tested in accordance with EN 15301-1, using the dimpled rubber test sole profile under both dry and wet conditions, the rotational resistance shall be between 25 Nm and 50 Nm.		P
9.6	**Angled ball behaviour**		-
	The angled ball behaviour of multi-sports surfaces designed for tennis shall conform to 8.3.		P
9.7	**Resistance to simulated use of surfaces designed to allow the use of studded footwear**		-

Clause	Requirement ⟟ Test	Result - Remark	Verdict
	Following simulated use conditioning for 5 200 cycles in accordance with EN 15306 using the studded rollers,the surface shall conform to the requirements (i.e. have the same classification) as in 9.2.2, 9.4 and 9.5.		P
	Following simulated use conditioning for 12 200 cycles in accordance with EN 15306 using the studded rollers,the vertical ball rebound, shock absorption and rotational resistance values of the surface when measured using the test methods detailed in 9.2.2, 9.4, and 9.5 shall be recorded and provided by the manufacturer or supplier (see clause 10).		P
	Separate tests specimens shall be used to assess the effects of 5 200 cycles and 12 200 cycles simulated use.		P
	As the size of the test pieces produced by the apparatus described in EN 15306 is smaller than the test pieces specified in EN 12234, EN 14808 and EN 15301-1, the test pieces used shall conform to the requirements given in EN 15306. No test shall be carried out within 50 mm of the edge of the test piece or within 50 mm of where another test has been carried out.		P
10	**Information to be provided by the manufacturer or supplier**		-
	The manufacturer or supplier shall supply at least the following information:		-
	a) number and date of this European Standard, i.e. EN 15330-1:2007; b) manufacturer's or supplier's identification; c) complete identification of the surface, together with the supporting layers, and in-fill (see AnnexF); d) results of the tests relevant to the type of surface being supplied.		P

End of this report

Part III:Declaration of Conformity

EC Declaration of Conformity

WE, Wuxi Greenlawn Co., Ltd.

No.12,Xinhui Road,Beitang District,Wuxi,China

Product Type: Artificial Grass

Product Model: G006

The product has been assessed by the application of the following standards:

EN 15330-1:2007

Issue place and date	Company stamp and Signature of authorized personnel