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Bellaterra : May 6, 2016
Report number : **16/12140-806**
Petitioner reference : **STYLAM INDUSTRIES LIMITED**
SCO 14, Sector 7C, MADHYA MARG.
CHANDIGARH, INDIA
PIN: 160019

TEST REPORT

RECEIVED MATERIAL:

As of April 7, 2016, has been received in LGAI-Applus a sample pavement with the following references by the Petitioner:

LAMINATE FLOOR	
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REQUESTED TESTS:

- 1.- Determination of unpolished and polished slip/skid resistance value (USRV).
 - UNE-ENV 12633:2003, Annex A.
 - Technical Building Code, Section SUA-1 security against risk of falls.
- 2.- Taber Abrasion determination. UNE EN 13329:2007+ A1:2009, Annex E.

TESTS DATE: from 07/04/2016 to 24/04/2016.

RESULTS: See attached pages.

Responsible for Construction Materials
LGAI Technological Center S.A.

Technician Responsible
LGAI Technological Center S.A.

The results included in this document refer exclusively to the indicated materials and has been tested according to the specifications given.

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RESULTS:

1.- Determination of unpolished and polished slip/skid resistance value (USRV).

- UNE-ENV 12633:2003, Annex A.
- Technical Building Code, Section SUA-1 security against risk of falls.

The test was performed on a 126 mm net length, with wide shoe.
Temperature: 21°C.

Determination (Nº)	Slip resistance USRV value (R_d) (wet surface with water)		Class
1	28	Average: 27 USRV	1
2	26		
3	28		
4	25		

INFORMATION NOTE

According to the Technical Building Code, Section SU1 insurance against the risk of falls, making the test for resistance to sliding / slippage of pavements (USRV) with the wet surface with water as indicated by the UNE-ENV 12633:2003, provides the following classification:

Table 1.1; Classification of the soils according to their slipperiness

Slip resistance R_d	Class
$R_d \leq 15$	0
$15 < R_d \leq 35$	1
$35 < R_d \leq 45$	2
$R_d > 45$	3

Table 1.2; Class required soils depending on their location

Location and soil characteristics	Class
Interior dry areas:	
sloping surfaces <6%	1
sloping surfaces $\geq 6\%$ and stairs	2
Interior wet areas such as entrances to buildings from outer space ⁽¹⁾ , covered terraces, changing rooms, bathrooms, toilets, kitchens, etc.	
sloping surfaces <6%	2
sloping surfaces $\geq 6\%$ and stairs	3
Outdoor areas. pools ⁽²⁾ . Showers	3

⁽¹⁾ Except in the case of direct access to restricted areas.

⁽²⁾ Areas planned for barefoot users and at the bottom of the vessels, in areas where the depth does not exceed 1,5m.

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2.- Taber Abrasion determination. UNE EN 13329:2007+ A1:2009, Annex E.

Equipment used: TABER model 5150 Abraser.

Abrasive tapes: S-42

weight: (5,4 ± 0,2) N

Nº total cycles: starting point until reaching surface wear

Expression of results: initial attrition point (IP) and Classification according to indications from the norm.

Notes: initial attrition point IP is valued only in the grain of embossed that are the first to begin to wear down.

Classification AC3 (2000 cycles)	
Classification AC4 (4000 cycles)	
Value obtained:	Taber abrasion resistance (IP) : Classe AC3 (2650 cycles)

According to the standard 13329: 2007+ A1: 2009, the level of use:						
Domestic			Commercial			
Moderate	General	Intense	Moderate	General	Intense	Very intense
21	22	23	31	32	33	34
AC1	AC2	AC3		AC4	AC5	AC6
IP≥900 cycles	IP≥1500 cycles	IP≥2000 cycles		P≥4000 cycles	IP≥6000 cycles	IP≥8500 cycles
The initial wear point (IP) is the point which clearly manifest the disappearance of the printed design manifesting underlying face in 3 quadrants. The initial wear point is reached when there are areas in two quadrants of wear of at least 0,6mm2 each and begins to manifest wear and tear of area 0,6mm2 in the third quadrant. In the case of printed designs, sublayer is the background on which is printed the design. If plain colors is the first layer of different color.						

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Applus+, ensures that this work has been done within the requirements of our Quality System and Sustainability, having fulfilled the contractual and legal regulations.

As part of our improvement program, please let us pass on any comments they consider appropriate, contact the person responsible for signing that letter, or the Director of Quality of Applus +, at: satisfaccion.cliente@appluscorp.com.