TEST REPORT
EN 13845
Resilient floor coverings – Polyvinyl chloride floor coverings with particle based enhanced slip resistance - Specification

Report Number. .....:	EBSZ241111178S
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Applicant's name.....:	[redacted]
Address .....:	
Test specification:	
Standard.....:	EN 13845:2017
Test procedure .....:	CE-CPR
Non-standard test method……..:	N/A
Test Report Form No.....:	EN 13845_trf
Test Report Form(s) Originator ....:	EurBer
Master TRF.....:	Dated 2024-05

General disclaimer:
The test results presented in this report relate only to the object tested.
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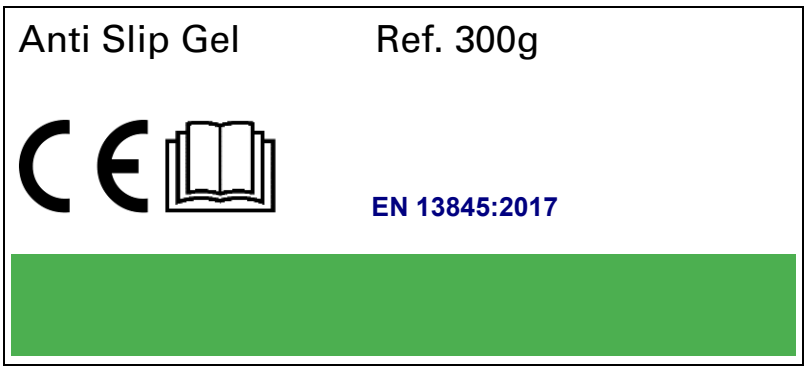
Test item description .....:	Anti Slip Gel
Trade Mark .....:	
Manufacturer.....:	[redacted]
Model/Type reference .....:	300g, 500g, 1000g
Technical data .....:	--

Marking



CE marking min. 5mm height.

Labels for all models are in the same design except type designations, above label for representing the other models.

Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement .....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing .....:	
Date of receipt of test item.....:	2024-Oct-31
Date (s) of performance of tests .....:	2024-Oct-31 to 2024-Nov-18

General remarks:

The test results presented in this report relate only to the object tested.

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"(see Enclosure #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

General product information:

Anti Slip Gel.

EN 13845			
Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
4	**Requirements**		P
4.1	**General requirements**		P
	Floor coverings described in this European Standard shall comply with the appropriate general requirements specified in Table 1, when tested in accordance with the methods given therein.		P
4.2	**Classification requirements**		P
	Floor coverings described in this European Standard shall be classified as suitable for different levels of use in accordance with the performance requirements specified in Table 2, when tested with the methods given therein. Classification shall conform to the scheme established in EN ISO 10874.		P
5	**Marking**		P
	Floor coverings covered by this standard and/or their packaging shall bear the following marking:		P
	a) number and date of this European Standard;	See copy of marking plate	P
	b) manufacturer's or supplier's identification;	See copy of marking plate	P
	c) product name;	See copy of marking plate	P
	d) colour/pattern, and batch and roll number if applicable;	See copy of marking plate	P
	e) classes/symbols appropriate for the product;	See copy of marking plate	P
	f) for rolls: the length, width and thickness;	See copy of marking plate	P
	g) for tiles: the dimensions of a tile and the area in square metres contained in a package;	See copy of marking plate	P
	h) for rolls: a statement that the material shall be fully bonded to the subfloor;	See copy of marking plate	P
	i) slip resistance classification.	See copy of marking plate	P
Annex A (informative)	**Optional properties**		N/A
	Where the following properties are requested for specific applications, the floor covering should be tested in accordance with the appropriate methods:		N/A
	— electrical resistance (EN 1081);		N/A
	— electrostatic propensity (EN 1815);		N/A
	— effect of stains (EN ISO 26987);		N/A
	— heavy swivel castor.		N/A
Annex B (informative)	**Additional methods of test**		P
	The following test methods are also available for this type of product but do not form part of the specification:		P

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Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
	— effect of simulated movement of a furniture leg (EN 424);		P
	— peel resistance (EN ISO 24345);		P
	— shear force (EN 432);		P
	— spreading of water (EN 661);		P
	— curling on exposure to moisture (EN 662);		P
	— conventional pattern depth (EN 663);		P
	— volatile loss;		P
	— exudation of plasticizers (EN 665);		P
	— gelling (EN 666);		P
	— mass/unit area of a reinforcement or backing.		P
Annex C (normative)	**Determination of slip resistance**		P
C.1	**Scope**		P
	The method used in this European Standard is used to determine and assess the slip resisting properties of floor coverings, which are intended for use in wet loaded areas. The method can be applied with the test person barefoot or wearing standard test shoes.		P
C.2	**Referenced documents**		P
	CEN/TS 16165, Determination of slip resistance of pedestrian surfaces — Methods of evaluation, Annex A (Barefoot Ramp Test) and Annex B (Shod Ramp Test)		P
C.3	**Principle**		P
	An operator moves backwards and forwards in an upright position on the floor covering to be tested, the angle of which, starting from the horizontal is increased up to the point (angle of inclination) at which the operator becomes insecure. The angle of inclination is determined on a floor covering, which is subjected to a continuous stream of water containing a wetting agent. The angle of inclination is used to assess the enhanced slip resistant properties.		P
C.4	**Operator**		P
	The operators shall include at least two adults. Age, weight and pertinent physical limitations of the subjects shall be included in the test report. The feet or footwear of each operator shall have been wetted for (10 ± 1) min prior to the test in water. The water should be at a similar temperature as the solution to be used on the ramp (15 °C to 23 °C). The operator shall be protected from falling by means of a safety device, which permits the operator to move freely on the floor covering being tested.		P

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Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
	It is important that the operators are fully trained and familiar with the test procedure and specific apparatus to be used prior to any tests being carried out. It is recommended that the calibration panels are used to aid the training procedure. As it is important that the gait and step timing are consistent during the test it is recommended that a timing device (such as an electronic metronome) and step markers adjacent to the test panel are used. These can provide a guide to the test subject in terms of step length until such time that they become familiar with the test procedure. Before any set of tests are carried out on floor coverings it is recommended that each operator is checked against the expected results from the calibration panels. If this check test gives a result that differs by more than + 2° from the calibration panel, the operator should not be used for testing until the cause has been identified and/or further training carried out.		P
C.5	**Test footwear**		P
	Each operator shall wear a pair of flat-soled shoes without a heel soled with Four S1 sole material. Any well-fitting commercially available shoe is suitable providing it has a flat sole and no defined heel area. The Four S Rubber, in 3 mm sheet form, is adhered to the sole and trimmed to size. Prior to use the shoe sole should be plane-grinded to an even finish using P400 silicon carbide paper in an orbital sander. Remove any dust from the shoe sole and repeat this procedure prior to any new test programme, or if the shoe sole has become damaged during the tests.		P
C.6	**Apparatus**		P
	The test device is a level and torsion free platform at least 600 mm wide and 2 000 mm long, which can be adjusted to gradients between 0° and 45° in the longitudinal direction preferably by a centre pivot. The drive unit achieves a platform angular lifting speed of maximum 1°/s, so that at least 45 s are required to adjust to the maximum angle of 45°. The lifting stroke is controlled by the operator. An angle indicator on the test device displays the platform angle from horizontal at an accuracy of 0,5° + 0,2°. The angle indicator cannot be seen by the operator during testing. For safety reasons the operator shall wear a suitable fall arrest harness and railings are fitted along the longitudinal sides of the test apparatus. A second operator is used to record the angle and monitor the flow of the wetting solution. A suitable apparatus is described in CEN/TS 16165, A.2.1.		P
C.7	**Test fluid**		P

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Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
	The test fluid used is the aqueous solution of a neutral wetting agent. Sodium Dodecyl Sulphate (Sodium Lauryl Sulphate Standard Laboratory Grade) should be used at a concentration of 0,1 %. It is important that the test solution is prepared immediately before the test using tap water and is used within a test period of 1 h. The test fluid is pumped at 6 l/min to wet the whole surface of the test floor. The temperature of the solution shall be between 15 °C and 23 °C.		P
C.8	**Test piece**		P
	The test piece shall be a minimum of 1 000 mm x 500 mm and shall be taken from the floor coverings to be tested. The floor coverings to be tested shall either be fastened or bonded onto level base-plates made of a load-bearing, warp-free material. The surface to be tested shall be clearly recognisable as such or be marked as such.		P
	Floor coverings with directional profiles or roughness shall be positioned in such a way that the direction of minimum slip resistance corresponds to the direction of movement of the operator. Where the direction is not obvious testing of the slip resistance in directions at 90° to each other may be required.		P
	Floor coverings, which are rectangular in shape without directional profiles or roughness, shall be positioned in such a way that the short edge is parallel to the rotary axis of the test apparatus.		P
	The upper surface of the floor coverings shall be cleaned before testing to remove manufacturing residues, dirt, stripping agents or rough edges by scrubbing with the test fluid and a soft bristle brush and then allowing the lubricant to flow over the surface prior to the test being carried out.		P
	The test piece shall be prepared to correspond to the use in practice of this type of covering.		P
	Condition the test samples for 24 h in the same ambient conditions as for the test apparatus 15 °C to 23 °C.		P
C.9	**Procedure**		P
	Ensure a continuous and uniform stream of test fluid at 6 (± 1) l/min over the test piece during the test. In the case of absorbent floor coverings ensure uniform wetting of the top surface by preliminary soaking.		P

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Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
	The operator shall move backwards and forwards in an upright position on the floor covering being tested, taking steps corresponding to approximately half the operators foot length. Step rates should be 144 (± 10) steps/min. It is important that the operator looks down at their feet when conducting the test. The foot should be lifted clear of the test surface during each step. The operator should move backwards and forwards twice on the test surface without pausing at the top or bottom. Then, whilst stationary, the operator increases the platform angle by approximately 1° and repeats the test. The process is repeated until the angle of inclination (the critical angle) at which the operator reaches the limit of safe movement (i.e. a definite slip occurs) is reached. The operators may repeat the movement around the critical angle to satisfy themselves the result is valid. The critical angle shall be determined four times, returning to the horizontal position between each test. The procedure is then repeated by the second operator.		P
C.10	**Evaluation**		P
	Calculate the arithmetic mean from the eight individual values. If any individual values deviate by more than 2° from the mean, repeat the test and calculate the mean from the 16 individual values.		P
C.11	**Calibration**		P
	As there are no absolute standard floor covering surfaces available in the form of resilient vinyl floor coverings, calibration of the apparatus and test subjects can be based on the method outlined in CEN/TS 16165, Annex A.[2]		P
C.12	**Test report**		P
	The test report shall indicate the following:		P
	a) reference to this European Standard, i.e. EN 13845;		P
	b) designation, manufacturer, product, quality classification and dimensions of products used for the floor covering;		P
	c) surface characteristics (e.g. smooth, profiled);		P
	d) sampling;		P
	e) joint width of floor covering tested;		P
	f) mean angle of inclination rounded to the nearest 1°, if necessary for every profile direction tested;		P
	g) test location;		P
	h) any deviation from this standard that may have affected the results;		P

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Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
	i) date of test;		P
	j) slip classification.		P
Annex D (normative)	**Determination of wear resistance**		N/A
D.1	**Scope**		N/A
	This method is used for classifying floor coverings with enhanced slip resistance by the reduction of identifiable particles in the surface.		N/A
D.2	**Principle**		N/A
	To measure the loss of particles in the surface after a defined number of wear test cycles.		N/A
D.3	**Apparatus**		N/A
	The apparatus shall be in accordance with that specified in EN 660-2.		N/A
D.4	**Test specimen**		N/A
	Three test specimens of diameter 100 mm shall be made. One of them shall be kept in reserve. A circular hole, with the same diameter as the journal in the centre of the specimen holder table, shall be cut in the middle of each specimen.		N/A
	When the test specimen is rotating in a test the two wheels shall be rolling on it, following a circular path with an area of about 3 000 mm2. Mark an area on the test specimen by two radial lines. Choose the angle θ so that the number of particles in the area restricted by the lines and the wear pattern will be about 100 (Figure D.1, area (a).)		N/A
	To simplify particle counting a transparent squared matrix may be used. Mark the centre and the radial lines on the matrix. When counting particles align the matrix on the test specimen.		N/A
D.5	**Conditioning**		N/A
	The product conditioning shall be as specified in EN 660-2.		N/A
D.6	**Procedure**		N/A
	Use the wear test procedure specified in EN 660-2. Start the procedure with the test specimen marked according to Figure D.1. After 20 revolutions, take the sample out and count the number of particles (N1) in the area (a) that is limited by the marked lines and the wear pattern (see Figure D.1). Use a pocket lens or a microscope with a magnification of X7-10. After counting the particles subject the specimen to the appropriate number of wear cycles specified in Table D.1 and count the remaining particles (N_2).		N/A

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Clause	**Requirement - Test**	**Result - Remark**	**Verdict**
D.7	**Expression of result**		N/A
	Express the reduction of identifiable particles as a percentage loss according to the following formula $\frac{N_1 - N_2}{N_1} \times 100$ (D.1)		N/A
D.8	**Test report**		N/A
	The test report shall indicate the following:		N/A
	a) reference to this European Standard i.e., EN 13845;		N/A
	b) product designation, manufacturer, quality classification and dimensions of products e.g. thickness;		N/A
	c) surface characteristics;		N/A
	d) any deviation from standard that may have affected the result;		N/A
	e) number of revolutions tested and the wear class achieved;		N/A
	f) date of the test.		N/A

Appendix: Photos of unit

---END OF TEST REPORT---