

TEST REPORT

ASTM E 303 - 93

Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester

Report Number. JAT241112880101SR-1

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Total number of pages 9 pages

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Dongguan City, Guangdong Province, China.

Testing location / address Same as above

Applicant's name....:

Address

Test specification:

Standard : ASTM E 303 – 93:2014

Standard Test Method for Measuring Surface Frictional Properties

Using the British Pendulum Tester

Non-standard test method.....: N/A

Test item description Anti Slip Gel

Trade Mark N/A

Manufacturer.....

Address:

Model/Type reference:

General disclaimer:

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

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Product name: Anti Slip Gel Model: Anti Slip Gel 300g Ningbo Mood Home Co., Ltd

Note: The labels for the other models are same as above except model name.





General remarks:
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(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 \square comma / \boxtimes point is used as the decimal separator.
General product information:
This product is a Anti Slip Gel with models Anti Slip Gel 300g, 500g, 1000g, Anti Slip Liquid 1L.
Model difference:
The components of the above models are the same, only the capacity is different.; All tests conduct on model Anti Slip Gel 300g cover other models.



TE®	Page 4 of 9 Report No.: JAT241112880101SR-				
•	ASTM E 303 - 93				
Clause	Requirement + test	Result - Remark	Verdict		

4	Significance and Use	See below	Р
4.1	This test method provides a measure of a frictional property, microtexture, of surfaces, either in the field or in the laboratory.	Complied	Р
4.2	This test method may be used to determine the relative effects of various polishing processes on materials or material combinations.	Complied	Р
4.3	The values measured in accordance with this method do not necessarily agree or directly correlate with those obtained utilizing other methods of determining friction properties or skid resistance.	Complied	Р
5	Apparatus	Complied	Р
5.1	British Pendulum Tester (Fig. 1)—The pendulum with slider and slider mount shall weigh 1500±30 g. The distance of the center of gravity of the pendulum from the center of oscillation shall be 411 ± 5 mm (16.2 ± 0.2 in.). The tester shall be capable of vertical adjustment to provide a slider contact path of125±1.6 mm (415/16±1/16 in.) for tests on flat surfaces, and 76 to 78 mm (3±1/16 in.) for tests on polishing-wheel specimens. The spring and lever arrangement shown in Fig. 2 shall give an average normal slider load between the 76-mm (3±in.) wide slider and test surface of 2500±100 g as measured by the method prescribed in the annex. FRICTION RING SCREW SPACER SCREW SPACER LEVELING SCREW LEVELIN	Complied	P
	FIG. 1 British Pendulum Tester		



Clause

Page 5 of 9

Requirement + test

Report No.: JAT241112880101SR-1

Verdict

Result - Remark

A	ASTM I	E 303 - 9	3	

	NUT FOR ADJUSTMENT CENTER OF SWING OF SPRING TENSION	Complied	Р
	FREE PATH OF SLIDER 508 mm (20 in.) RADIUS ADJUSTABLE BALANCE WEIGHT RUBBER CONTACT PATH TEST SURFACE STOP TO LIMIT OUTWARD MOVEMENT OF SLIDER FIG. 2 Schematic Drawing of Pendulum Showing Spring and Lever Arrangement		
5.2	Slider—The slider assembly shall consist of an aluminum backing plate to which is bonded a 6 by 25 by 76-mm (114 by 1 by 3-in.) rubber strip for testing flat surfaces or a 6 by 25 by 32 mm (114 by 1 by 1114-in.) rubber strip for testing curved polishing-wheel specimens. The rubber compound shall be natural rubber meeting the requirements of the Road Research Laboratory or synthetic rubber as specified in Specification E 501.	Complied	Р
5.2.1	New sliders shall be conditioned prior to use by making ten swings on No. 60 grade silicon carbide cloth or equivalent under dry conditions. The swings shall be made with a tester adjusted as in Section 7.	Complied	Р



Page 6 of 9 Report No.: JAT241112880101SR-1

	ASTM E 303 - 93				
Clause	Requirement + test	Result - Remark	Verdict		
5.2.2	Wear on the striking edge of the slider shall not excee 3.2 mm (1/8 in.) in the plane of the slider or 1.6 mm (1/1 in.) vertical to it, as illustrated in Fig. 3. 1.6 mm (1/16 in.) FIG. 3 Slider Assembly Illustrating the Maximum Wear on Striking Edge	*	P		
5.3	Accessories:	Complied	Р		
5.3.1	Contact path gage shall consist of a thin ruler suitably marked for measuring contact path length between 12 and 127 mm (4 7/8 and 5.0 in.) or between 75 and 78 mm (2 15/16 and 3 1/16 in.) as required for the particulatest.	4	Р		
5.3.2	Miscellaneous equipment, such as water container, surface thermometer, and brush is recommended.	Complied	Р		
6	Test Specimen	See below	Р		
6.1	Field—Field test surfaces shall be free of loose particle and flushed with clean water. The test surface does not have to be horizontal provided the instrument can be leveled in working position using only the leveling screws and the pendulum head will clear the surface.	· ·	Р		
6.2	Laboratory—Laboratory test panels shall be clean and free of loose particles and shall be held rigidly so as not be moved by the force of the pendulum.	*	Р		
6.2.1	Flat laboratory test panels shall have a test surface of least 89 by 152 mm (3/by 6 in.).	at Complied	Р		
6.2.2	Accelerated laboratory polishing-wheel specimens-shahave a test surface of at least 44 by 89 mm (13/4by 3 in.) and shall be curved in the arc of a circle 406 mm (in.) in diameter.	1/2	Р		
7	Preparation of Apparatus	Complied	Р		
7.1	Leveling—Level the instrument accurately by turning leveling screws until the bubble is centered in the spirilevel.	Complied	Р		



8.3

169	Page 7 of 9	Report No.: JAT24111288	0101SR-1
Clause	ASTM E 303 - 93 Requirement + test	Result - Remark	Verdict
7.2	Zero Adjustment— Raise pendulum mechanism by	Complied	Р
	loosening locking knob (directly behind pendulum pivot) and turn either of pair of head movement knobs at center of tester to allow slider to swing free of test surface. Tighten locking knob firmly. Place pendulum in release position and rotate the drag pointer counter clockwise until it comes to rest against adjustment screw on pendulum arm. Release pendulum and note		
	pointer reading. If reading is not zero, loosen locking ring and rotate friction ring on bearing spindle slightly and lock again. Repeat test and adjust friction ring until the pendulum swing carries pointer to zero.		
7.3	Slide Length Adjustment:	Complied	Р
7.3.1	With pendulum hanging free, place spacer under adjusting screw of lifting handle. Lower pendulum so edge of slider just touches surface. Lock pendulum head firmly, raise lifting handle, and remove spacer.	Complied	Р
7.3.2	Raise slider by lifting handle, move pendulum to right lower slider, and allow pendulum to move slowly to left until edge of slider touches surface. Place gage beside slider and parallel to direction of swing to verify length of contact path. Raise slider, using lifting handle, and move pendulum to left, then slowly lower until slider edge again comes to rest on surface. If the length of the contact path is not between 124 and 127 mm (4 7/8 and 5.0 in.) on flat test specimens or between 75 and 78 mm (2 15/16 and 3 1/16 in.) on curved polishing-wheel specimens, measured from trailing edge to trailing edge of the rubber slide, adjust by raising or lowering instrument with the front leveling screws. Readjust level of instrument if necessary. Place pendulum in release position and rotate the drag pointer counter-clockwise until it comes to rest against adjustment screw on pendulum arm.		P
8	Procedure	Complied	Р
8.1	Apply sufficient water to cover the test area thoroughly. Execute one swing, but do not record reading.	Complied	Р
8.2	Without delay, make four more swings, rewetting the test area each time and record the results. SPRING CLIP WASHER FIG. 4 Spring Clip and Spring to Inhibit Slider Rotation	Complied	Р

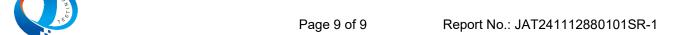
Recheck the slide contact length in accordance with 4.3. Complied

Р



169	Page 8 of 9	Report No.: JAT241112880101SR-1		
ASTM E 303 - 93				
Clause	Requirement + test	Result - Remark	Verdict	

9	Report	Complied	Р
9.1	Report the following information:	Complied	Р
9.1.1	Individual values in BPN or polish value units,	Complied	Р
9.1.2	Temperature of the test surface,	30.2℃	Р
9.1.3	Type, age, condition, texture and location of test surface,	Complied	Р
9.1.4	Type and source of aggregate for polish value tests, and	Complied	Ρ
9.1.5	Type and age of the rubber slider.	Complied	Р
10	Precision and Bias	Complied	Р
10.1	Repeated tests show standard deviations as follows: British rubber sliders Rubber sliders (conforming to Specification E 501) 1.2 BPN units	Complied	Р
	In both cases the upper quartile of variability is represented in prevailing test instruments. As there is no marked correlation between standard deviation and arithmetic mean of sets of test values, it appears that standard deviations are pertinent to this test regardless of the average skid resistance being tested.		
10.2	The relationship, if any exists, of observed BPN units to some "true" value of skid resistance has not and probably cannot be studied. As a result, precision and bias of this test in relation to a true skid resistance measure cannot be evaluated, and only repeatability is given for the method.	Complied	Р
10.3	Determine the testing error as follows: $E = t\sigma n^{-1/2} $ (1)	Complied	Р
	where: $E = \text{testing error},$ $t = \text{normal curve of } 1.96 \text{ or } 2.0 \text{ rounded},$ $\sigma = \text{standard deviation of individual test results (BPN units)}, \text{ and}$ $n = \text{number of tests}.$		
10.4	In order to ensure that the testing error stays within 1.0 BPN unit at a 95 % confidence level (corresponding to a normal curve of 1.96 or 2.0 rounded), the following sample sizes are needed:	Complied	Р



Photo



*** End of Report ***