

Barefoot Ramp Test DIN 51097

This test is used for the slip resistance of Floor Tiles under wet and barefoot conditions. The tiles are fixed on a ramp which is made wet, and a test person walks on them with the ramp set at a succession of increasing angles until the person slips. The angle at which they slip is recorded. Tiles are classified into one of three groups, A, B, or C, as an indication of their level of slip resistance. We would normally recommend that tiles for use in wet barefoot areas achieve classification C.

Category	Lower Limit	Upper Limit	Area
A	12°	18°	<ul style="list-style-type: none">• barefoot hallways (mainly dry).• individual and group changing rooms with lockers• pool floor in the nonswimmer areas, where the water level exceeds 80 cm.
B	>18°	24°	<ul style="list-style-type: none">• barefoot hallways, if not classified in A• showers.• area surrounding the disinfectant sprayers.• pool surrounds.• pool floor in the nonswimmer areas where the water level is less than 80 cm in parts.• pool floor in the nonswimmer areas in the tide effect pool.• lift slab floors.• paddling pools,• steps leading into the water.• steps, of maximum 1 m width with hand rails, leading into the water.• steps outside of the pool area.
C	>24°		<ul style="list-style-type: none">• steps leading into the water, if not classified in B.• foot baths.• inclined pool borders.

Shoe Shod Ramp Test DIN 51130

This test is used for testing slip resistance of a surface to shoe shod traffic tested on a ramp in the presence of a surface lubricant. This test is most useful for assessing profiled tiles, or tiles which are to be used in areas where there is a high risk of contamination.

Note that the lowest classification is R9, and that this is therefore not a good specification for slip resistance, and should be supported by a pendulum value. (The range for R9 has recently been changed from 3° - 10° to 6° - 10° because of problems with misinterpretation of the R9 category).

Classifications

R Value	Degrees
R9	6° - 10°
R10	10° - 19°
R11	19° - 27°
R12	27° - 35°
R13	35°+

Pendulum Test BS7976-2

This test is used for determining the coefficient of friction under wet and dry conditions using a Four S Rubber Slider (also known as Slider 96).

The apparatus is portable (just) and is therefore useful for determining the slip resistance of floorings in use. The presently accepted limits for flooring using this technique are shown below:

Risk of Slipping	Slip Resistance Value Using 4S
High	24 and below
Medium	25 to 35
Low	36 to 64
Very Low	65 and above

Result Of Mrs Stone Store Slip Testing

Product Tested	Pendulum Test (BS 7976)	Ramp-Wet Barefoot (Din 51097 : 1992)	Slip Test in Shod Conditions (R Rating) (Din 51130)
Brazilian Riven Slate	Average Dry 61 Average Wet 50	24 Degrees Category C	32.1 Degrees R12
Brazilian Honed Slate	Average Dry 56 Average Wet 26	22 Degrees Category B	
Honed Limestone			6.7 Degrees R9
Polished Limestone			4.1 Degrees Below Minimum Value