Ramp tests
Many European flooring manufacturers use ramp-type tests to classify the slipperiness of their products before sale. Such tests are generally carried out using German National Standard test methods (DIN 51097:19924 and DIN 51130:20045).
DIN 51097 involves the use of barefoot operators with a soap solution as the contaminant, and DIN 51130 uses heavily-cleated EN:ISO 20345 safety boots with motor oil contamination..

Floor surface materials are often classified on the basis of the DIN standards. The classification schemes outlined in DIN 51130 (Table 4) and DIN 51097 (Table 5) have led to some confusion, resulting in the wrong floor surfaces sometimes being installed.

Classification	R9	R10	R11	R12	R13
Slip angle (°)	6-10	10-19	19-27	27-35	> 35

DIN 51130 R-Value slipperiness classifications.

Classification	A	B	C
Slip angle (°)	12-17	18-23	> 24

DIN 51097 slipperiness classifications.

A common problem stems from the misconception that the ‘R’ scale runs from R1 to R13, where R1 is the most slippery, and R13 the least slippery. HSE have been involved in cases where R9 floors have been specified as specialist anti-slip surfaces. In reality,the R scale runs from R9 to R13, where R9 is the most slippery, and R13 the least slippery. Floor surfaces that are classified by the DIN 51130 standard as R9 (or in some instances R10) are likely to be unacceptably slippery when used in wet or greasy conditions. Further problems may arise from the wide
range of CoF within a given classification, for example R10 covers a CoF range from 0.18 to 0.34, which represents a very wide range of slip potential. The same limitations apply to DIN 51097 for barefoot areas.
The EN13845:20056 standard for slip resistance of safety floors addresses some of the shortcomings of the DIN tests above, but one area of concern is the different thresholds set for shod (20°= CoF 0.36) and barefoot (15°= CoF 0.27) conditions. The level of friction needed by a person to walk without slipping is thought to be the same whether the person is barefoot or wearing shoes. Flooring reported to ‘pass’ this standard for barefoot use may actually present a moderate slip potential.