

## Portable Tribometers for Assessing Pedestrian Wet Traction Potential

Tribometer	Approximate price, USD	Source of test	Validation for pedestrian traction	Advantage	Drawback	Use
<b>Horizontal dynamometer pull-meter static</b>	Low cost but not recommended for pedestrian safety testing. Not offered by SDA	ASTM C 1028-07	None. Can give highly deceptive results if applied to slip potential of pedestrian; <i>J. Forensic Sci. March 2007, p. 400</i>	Good workout: uses 50-pound weight lifted 112 times per test	As stated unanimously by ASTM Committee 21.06, not suitable for evaluating slip-fall potential	Surface quality control checks by tile manufacturers, in plant or in field
<b>SlipAlert</b>	\$2,948.00	Proprietary product — no ASTM standard required	Studies by British and Australian government agencies of SlipAlert vs. pendulum	Much smaller, lighter, simpler, more rugged and less costly than pendulum	Needs long path length. Bounces with soft slider. Also, cart may veer or spin, causing inaccuracy on some runs	Surrogate where pendulum is uneconomic. Rapid monitoring by minimally trained staff. Visual demo
<b>Tortus III</b>	\$5,749.00	Proprietary product, no ASTM standard required. Endorsed by Ceramic Tile Institute (CTIOA)	University of Southern California Medical Center Study (Tortus II) published in <i>J. Forensic Sci. March 2007, p. 400</i>	Makes printed record. Cost-effective for multiple points on a property. Can test short, narrow samples if needed	May not assess hydroplaning potential for running person	Periodic monitoring, dry and wet, using hard and soft rubber test feet
<b>BOT-3000</b>	\$5,995.00	ANSI B101.1 static COF. ANSI B101.3 dynamic COF	University of Wuppertal comparison with human traction, 72 test points including 12 surfaces, two contaminants, three shoe-bottom materials, correlation coefficient 0.93	Printed and electronic records. Cost-effective for QC and multiple points on a property. Very simple to operate	Measures DCOF up to 1.00 only. Dry tests not possible with some rubber test foot materials.	Periodic monitoring and new flooring slip resistance quality control using dynamic COF
<b>Pendulum slip/skid tester</b>	\$7,999.00	ASTM E-303 as modified in 2005 by United Kingdom Slip Group. Endorsed by CTIOA	Greater London Council Bulletins 43 (1971) and 145 (1985), in continuous use since 1971 and adopted by 49 nations on four continents	Well-validated against accident histories and long-used with little controversy	Bulky, heavy, requires 2-minute on site assembly and skilled operator	Primary standard and for Sustainable Slip Resistance testing