

Results of slip resistance testing by HSE/HSL – updated December 2009

Notes on using this table

1: Inclusion of any footwear in this table does not imply any endorsement of the product by HSE/HSL.

2: Coefficient of friction (CoF) determined according to HSE/HSL method PED-SOP-12 using a DIN ramp.

3: Shoes presenting a **high slip potential are shown in red**, shoes posing a **moderate slip potential are shown in orange** and a **low slip potential is shown in green**. Additional information on shoe type is given in column 2. Shoes which are marketed with claims of slip resistance are identified in column 5. A brief description of sole construction is also given in most cases. Results ordered by CoF on wet steel.
△= new since April 2009 report.

4: Some slip-resistant footwear may not be suitable in certain demanding conditions. For example, footwear that performs well on the hard, smooth surfaces used in these tests may not perform well on soft or irregular outdoor surfaces.

5: These test results relate to new footwear. Note that slip resistance can change with wear; for example, some soles can become more slippery when the profile becomes worn.

6: Consider asking your supplier to provide trial pairs to help you make the right choice, and **do not select footwear on the basis of brochure descriptions or laboratory test results alone**.

7: Footwear selection has to take account of a number of factors in addition to slip resistance, such as comfort, durability and any other safety features required, such as toe protection. The final choice may have to be a compromise.

Shoe	Shoe Type		Date Tested	Marketed As Slip Resistant	Sole Construction	Wet Coefficient of Friction (CoF)				
						Steel / Water	Steel / Glycerol	Quarry Tile / Glycerol	Chequerplate / Water	Chequerplate / Glycerol
Shoes For Crews (Easy clean grid pattern)	Slip-On Shoe		2007	Yes	Welted Rubber	0.54	0.21	0.40	0.49	0.24
Shoes For Crews (SFC3)	Dress shoe, Boot, Trainer, Wellington. Toe protection available		2005	Yes	Welted Rubber	0.52	0.31	0.40	0.51	0.27
Agrip Wellington	Wellington. Toe protection		2007	Yes	Rubber	0.52	0.17	0.35	0.42	0.24
Hyper V Sole Spider Max Black	Trainer and Wellington. Toe protection		2006	Yes	Rubber	0.51	0.18	0.34	0.51	0.34
Crocs Bistro	Slip-on Clog	△	2009	Yes	Unknown	0.46	0.21	0.51		
Safetrax	Slip-on, trainer, dress shoe	△	2009	Yes	Unknown	0.43	0.21	0.46	0.61	0.24
Dickies Skate Shoe	Trainer		2007	Yes	Rubber	0.43	0.21	0.44	0.46	0.28
Keuka Café	Shoe, Boot, Trainer. Toe protection		2006	Yes	Rubber	0.41	0.24	0.50	0.54	0.34
Dickies Sport Low-Cut Trainer	Trainer		2007	Yes	Rubber	0.41	0.16	0.37	0.45	0.25
Slip Grips – Spider Grip sole (5332)	Shoe, Boot, Slip-on. Toe protection		2005	Yes	Rubber	0.41	0.17	0.39	0.49	0.28
Wat-Out 58167	Slip-on Boot		2007	No	P.U.	0.39	0.18	0.31	0.40	0.24
Arco Safety STOP	Slip-on, trainer, dress shoe, boot. Toe protection available	△	2009	Yes	Rubber	0.38	0.18	0.38	0.58	0.28
TredSafe (Chef)	Slip-on shoe. Other styles are available.		2006	Yes	Rubber	0.38	0.18	0.55	0.58	0.26
Dunlop Purofort – High Grip	Wellington. Toe protection		2005	Yes	Nitrile Rubber	0.38	0.15	0.27	0.40	0.23
Cat Supremacy Boot	Boot. Toe / Mid sole protection	△	2009	Yes	Rubber	0.38	0.08	0.23	0.53	0.21
V6 Powerwear (V6000)	Safety Boot/ Toe / Mid-sole protection.		2006	No	Thermo Plastic Urethane / P. U.	0.37	0.10	0.18	0.27	0.18

Shoe	Shoe Type		Date Tested	Marketed As Slip Resistant	Sole Construction	Wet Coefficient of Friction (CoF)				
						Steel / Water	Steel / Glycerol	Quarry Tile / Glycerol	Chequerplate / Water	Chequerplate / Glycerol
Goliath Atomium (Atom63)	Slip-on ankle boot Slip-on shoe, Trainer. Toe protection		2006	Yes	Dual Density P.U.	0.37	0.14	0.32	0.35	0.20
Bata Industrials (Thor 705-69911)	Safety Boot/ Toe / Mid-sole protection.		2006	No	Dual Density P.U.	0.37	0.12	0.20	0.42	0.22
Steitz Secura SST8	Shoe. Toe protection available.	△	2009	Yes	Unknown	0.36	0.14	0.27	0.50	0.21
V6 Powergrip V6115 Chukka boot	Boot	△	2009	Yes	3 densities of PU + TPU	0.36	0.14	0.22	0.42	0.19
Uvex Classic (8451.9) – Ultra Grip sole	Safety Boot. Toe protection		2005	No	Nitrile Rubber Outer / P. U. Core	0.36	0.05	0.20	0.48	0.24
Forma Oilmaster	Boot		2007	No		0.35	0.16	0.19		
Bata Safemaster	Wellington. Toe / Midsole protection		2005	Yes	Nitrile Rubber	0.34	0.05	0.20		
Emma Venus	Shoe. Toe protection		2005	No	Dual Density P.U.	0.34	0.15	0.26		
ABS (ABS220P)	Shoe, Boot. Toe protection available		2005	Yes	P.U.	0.33	0.16	0.34		
Keuka Café Overshoe	Overshoe		2006	Yes	Rubber	0.33	0.17	0.36		
Tuskers 632 Unisex Safety Shoe	Shoe, slip-on. Toe protection		2006	Yes	P.U.	0.33	0.20	0.39		
V6 Powergrip V6806 Polar	Rigger Boot. Toe / Midsole protection	△	2009	No	Dual layer P.U.	0.33	0.16	0.27		
Centek (FS140)	Rigger Boot. Toe / Midsole protection		2005	No	Dual Density P.U.	0.32	0.09	0.22		
Uvex Quattro – (8411.2)	Safety Boot. Toe / Midsole protection		2005	No	Nitrile Rubber Outer / P. U. Core	0.32	0.09	0.17		
Otter 93609	Shoe. Toe protection		2006	No	Thermo Plastic Urethane / P.U.	0.32	0.12	0.17		
Globe Trotter Rigger Boot, Contract Range	Rigger Boot. Toe / Midsole protection		2006	No	Dual Density P.U.	0.32	0.08	0.21	0.33	0.18
Lightyear ST650		△	2009	No		0.32	0.14	0.25		
Fusion Platon	Bike Boot	△	2009	Yes	Vulcanised Rubber	0.32	0.07	0.14		
Aimont Aster	Shoe	△	2009	No	Light P.U.	0.32	0.16	0.27		
Abeba Clog	Slip-on Clog		2007	Yes	P.U.	0.31	0.15	0.28		
Arco Sandyderm – Cofra Aderplus sole (6641)	Slip-on shoe. Toe protection. Other styles are available.		2005	Yes	P.U,	0.31	0.11	0.30		
Click Boot CDDCMSBL	Boot	△	2009	No	Dual Density P.U.	0.31	0.10	0.23		
Panoply Sault S3	Boot	△	2009	Yes	Dual Density P.U, Studed Sole	0.31	0.16	0.19		
Solemate 195051	Boot	△	2009	Yes		0.30		0.18		
Aimont Dahlia	Boot	△	2009	Yes	Light P.U.	0.30	0.21	0.32		
Cofra Minorca Safety Shoe with Corfa Wave Sole	Shoe, Boot, Trainer, Slip-on. Toe / Mid-sole protection		2006	Yes	Thermo Plastic Urethane / P.U.	0.30	0.14	0.24		
Otter 98402	Shoe. Toe protection		2006	No	Thermo Plastic Urethane / P.U.	0.30	0.09	0.16		
Dunlop Acifort	Wellington, Toe protection		2007	No	PVC / Nitrile Rubber	0.30	0.13	0.16		
Trucker Scouter	Boot	△	2009	No		0.30	0.11	0.14		
Tuf (P5600)	Office Shoe. Toe protection		2005	No	Dual Density P.U.	0.29	0.10	0.20		
Footsure Mudguard Gibson (FS65)	Office Shoe. Toe protection		2005	No	Thermo Plastic Urethane	0.29	0.16	0.18		
Jalas Tandem Sport Geox (5910)	Office Shoe		2005	No		0.29	0.13	0.21		
V6 Powerwear V6000 Bison - new sole	Boot	△	2009	No		0.28	0.14	0.22		
TK Steel 2006 SBP	Boot	△	2009	No		0.28	0.06	0.09		
Tuskers Aquagrip Boot 388	Office Shoe, Dress Boot, Boot.Available		2006	Yes	Dual Density P.U.	0.28	0.16	0.30		

Shoe	Shoe Type		Date Tested	Marketed As Slip Resistant	Sole Construction	Wet Coefficient of Friction (CoF)				
						Steel / Water	Steel / Glycerol	Quarry Tile / Glycerol	Chequerplate / Water	Chequerplate / Glycerol
	with Toe / Mid-sole protection									
Sievi Solid XL+	Boot. Toe / Midsole protection		2006	No		0.28	0.13	0.32		
Dunlop Purofort Rig – Air	Rigger Boot. Toe / Midsole protection		2006	No	Dual Density P.U.	0.28	0.05	0.19		
Converse G4885 SafetyTrainer	Trainer	△	2009	No		0.28	0.08	0.16		
Apache S3 boot	Boot	△	2009	No	Dual Density	0.28	0.15	0.21		
Heckel MacSilver (NEW SOLE)	Boot		2007	No	Dual Density Rubber	0.27	0.16	0.21		
Eski Boot WF101	Boot	△	2009	No	Light P.U.	0.27	0.15	0.21		
Aimont Mako 71347	Trainer	△	2009	No	P.U./T.P.U.	0.27	0.11	0.17		
Jallatte Jaldonnel SAS Boot. Tritane sole	Shoe, Boot, Trainer. Toe / Mid-sole protection		2006	No	Dual Density P.U.	0.27	0.08	0.23		
Bekina Steplite Wellington	Wellington. Toe / Midsole Protection		2007	Yes	P.U.	0.27	0.11	0.22		
Uvex Xenova (6940.8)	Boot, Toe protection		2007	Yes	Dual Density P.U.	0.27	0.20	0.35		
Auda White Derby Shoe	Shoe	△	2009	No	Dual Density P.U.	0.26	0.16	0.29		
Panther Dakota (21094 14 S3)	Safety Boot. Toe protection		2005	No		0.25				
Bata Hazmax (892-77210K)	Wellington. Toe / Midsole protection		2005	Yes	Vulcanised Rubber	0.25		0.12		
Arco Lavoro Brad Boot	Dress Boot		2007	Yes	PU / Rubber	0.25				
Magnum Elite Spider	Boot	△	2009	Yes	Nitrile rubber	0.25	0.08	0.15		
Cofra Stanton Off-Road Sole Safety Boot	Shoe, Boot, Rigger Boot. Toe / Mid-sole protection		2006	No	Nitrile Rubber Outer / P.U. Core	0.23				
Ruff Lander (S17)	Boot. Toe protection		2005	No	Vulcanised Rubber	0.23				
Dunlop Wellington Shoe	Slip-on Wellington Shoe		2007	No	PVC	0.23				
Tuf Revolution Trainer	Trainer	△	2009	No	Rubber	0.21				
V20 Waterwear VS2019 Storm	Boot	△	2009	No	Rubber	0.21				
Ruff Lander (S64)	Rigger Boot. Toe / Midsole protection		2005	No	Vulcanised Rubber	0.20				
Auda White Wellington	Wellington Boot	△	2009	No	Nitrile	0.20				
Precision Wheat Ankle Boot (8801)	Boot. Toe protection		2005	Yes	Nitrile Rubber Outer / P. U. Core	0.18		0.14		
Dr. Martens Grip Trax	Boot. Toe protection		2005	Yes	Rubber Outer / P. U. Core	0.18		0.09		
Magnum Patrol	Boot. Available with Toe / Midsole protection		2006	No	Nitrile Rubber	0.18				
Crocs Gold Slip-on Clog	Slip-on Clog		2007	Yes	Foam Resin	0.18				
Precision Black Trainer (5500)	Trainer. Toe protection		2006	Yes	Dual Density Phylon / Nitrile rubber	0.17		0.09		
Magnum Stealth	Boot	△	2009	Yes		0.16				
Quiva (Quiva 06/A)	Medical Clogs		2006	Yes	Thermostatic	0.15		0.10		
Dr. Martens Tred safety Chukka Boot (6G8100)	Safety Boot. Toe protection		2006	Yes	Nitrile Rubber	0.15		0.11		
E2 Re-usable Overshoes	Overshoe	△	2009	Yes		0.15				
Trojan Elite H64 Black Safety Shoe	Shoe. Toe / Mid-sole protection		2006	No	Rubber	0.13				
Four-S Shoe	Standard shoe sole		2006	No	Four-S rubber	0.07	0.01		0.23	0.10
Spertouch Delux PVC/PP overshoe	Overshoe	△	2009	Yes		0.06				