PROTOCOL # 1203-W

Footwear Materials Tier 1

Performance Test	Test Method	Samples	Test Principle/Requirements			Rating (Section or exec. Summary which failed items can be referenced)	
UPPER MATERIAL DEDECORMANCE LIDDED // EATHER VIII							
PERFORMANCE UPPER (LEAT	HER) U1	1	HEADO/	MEDIUM			
Rub Fastness (GSR) Dry:256			HEAVY 3.0 (dry)	MEDIUM	LIGHT (dry)		
rubs Wet:128 rubs	SATRA TM8		3.0 (dry) 3.0 (wet)				
1003 Wet. 120 1003		†	0.0 (WCt)	3.0 (wet) 2.0 (wet) 50,000			
			100,000	np) 50,000			
Flexing Endurance of Finish (not	SATRA TM25		(room temp) 50,000		°C)		
worse than slight cracking after no.			(-5°C)		Note 1		
of flexes)		4 x A4		00 (-20°C, upper for snow boo			
*Coating Adhesion (lbs/inch)	SATRA TM410	paper size	Coated	d leather: Min. 8.5 (Dry) Min. 7	'.0 (Wet)		
Tear strength	SATRA TM162	(210 mm x		Min.18 lbs #			
*\A/-+ Di-+ (if -l-i)	SATRA TM34	297mm)	\\/	. M:- 40 000 fl			
*Water Resistance (if claimed) *Taber Abrasion Resistance	(Maeser)	-		t : Min. 12,000 flexes with no v Min. 50 (H-18) Coated split lea			
(not worse than slight damage after no. of revolutions)	SATRA TM163			icable to athletic/sports footwe	, ,		
	AATCC 16			Class 4.0 Min.			
Colon Footon C. T. T.	Option 3 20AFU		/	inable to other-ti-t to foot	or only)		
*Color Fastness to Light Water Repellent	+ '	3- 8in x 8 in	(Appli	icable to athletic/sports footwe	аг опту)		
(Water Repellency – if claimed)	AATCC22 Mod	samples		Rating 90			
PERFORMANCE (Coated Fabri				realing 00			
Breaking Load (lbs./inch width)	SATRA TM29			57	40		
Broaking Load (Bossillon Water)		7		7 (tighter direction)	10		
Extension at Break (%)	SATRA TM29			10 (stretcher direction)			
Tear Strength (lbs)	SATRA TM30		10	8	6		
*Coating Adhesion (lbs/inch)	SATRA TM410	1		Min.8.5(Dry); Min.7.0(Wet)			
Flexing Endurance (not worse than		1	100,000	50,000	30,000		
slight cracking after no. of flexes)	SATRA TM25		(room temp) 50,000	(room temp) 25,000 (-5°C)	(room temp) No cold flex (-5°C)		
C N . 1	S/ATR/ATIVIZS	4 x A4 paper	(-5°C)				
See Note 1			size (210 mm 20,000 (-20°C, for snow boots only)				
Abrasion Resistance of Outer Face (not worse than moderate	SATRA TM31-	x 297mm	51,200 (dry)	25,600 (dry)	12,800 (dry)		
wear after no. of revolutions)	Martindale		12,800 (wet)	6,400 (wet)	3,200 (wet)		
Rub Fastness (GSR)	SATRA TM167	7		3.0 Dry & Wet			
*Taber Abrasion Resistance		7	3.0 DIY & Wet				
(not worse than slight damage	SATRA TM163						
after no. of revolutions)		_	(Appli	cable to athletic/sports footwe	ar only)		
*O-l Ft t- :-bt	AATCC 16		/A 13	Class 4.0 Min.			
*Color Fastness to Light Water Repellent	Option 3 20AFU	3- 8in x 8 in	(Appli	icable to athletic/sports footwe	ar only)		
(Water Repellency – if claimed)	AATCC22 Mod	samples		Rating 90			
Note 1: Upper material for summer s	sandals slinners thongs		ned footwear is exempt from co		durance at room temperature on	lv	
PERFORMANCE (Fabric Mat		s una cuiter open t	oca received to exempt from ce	id nox toot. Garry dat ricking En	aurance at reem temperature em	<i>y.</i>	
Breaking Load (lbs./Inch width)	SATRA TM29			57	40		
	2	1		7 (tighter direction)			
Extension at Break (%)	SATRA TM29			15 (stretcher direction)			
Abrasion Resistance (not worse	CATDA TOTAL	4 x A4	51,200 (dry)	25,600 (dry)	12,800 (dry)		
than moderate wear after the no.	SATRA TM31-	paper size	12,800 (wet)	6,400 (wet)	3,200 (wet)		
of revolutions) Rub Fastness (GSR)	Martindale SATRA TM167	(210mm x					
*Color Fastness to Light	AATCC 16	297mm)	3.0 Dry & Wet Class 4.0 Min				
20101 2 montrop to Eight	Option 3 20AFU		(Applicable to athletic/sports footwear only				
*Phenolic Yellowing	ISO 105 - X18		Change in shade: Class 4.0 Min. (Applicable to athletic/sports footwear only, Exempt Black Textile)				
Fiber Shedding or Pile Loss				Min 0 0 0b - 1"			
(applicable to fur/faux fur and	SATDA TM 227			Min 3.0 Shedding			
long pile fabrics) Water Repellent	SATRA TM 227						
(Water Repellency – if claimed)	AATCC22 Mod			Rating 90			
PERFORMANCE (Lace & Sa		s) U4					
Breaking Load (lbs./Inch width)	SATRA TM29			30			
			7 (tighter direction)				
Extension at Break (%)	SATRA TM29	4 x A4		15 (stretcher direction)			
Abrasion Resistance (not worse		paper size (210mm x		4 000 (d=-)			
than moderate wear after the no. of revolutions)	SATRA TM31- Martindale	297mm)		4,000 (dry) 1,200 (wet)			
	iviai undale			3 (dry)			
or revolutions)		1					
·	SATRA TM167			3 (wet)			
Rub Fastness (GSR) Water Repellent		3- 8in x 8 in		, ,			
Rub Fastness (GSR) Water Repellent (Water Repellency – if claimed) PERFORMANCE (Rubber &	AATCC22 Mod	samples		3 (wet) Rating 90			

			400.000	50000	20000
			100,000 (room temp	50000 (room temp)	30000 (room temp)
		4 x A4 Paper Size			` ' '
Flexing Endurance (not worse		(210mm x	50,000 (-5°C)	25,000 (-5°C)	No Cold Flex (-5°C)
than slight cracking after no. of flexes)	SATRA TM25	297mm)		.000 (-20°C, for snow boots o	
Rub Fastness (GSR)	SATRA TM167	1		3.0 Dry & Wet	• /
Water Repellent		3- 8in x 8 in		•	
(Water Repellency – if claimed)	AATCC22 Mod	samples		Rating 90	
LINING	4				
PERFORMANCE (Leather) L Perspiration Fastness (grain)					
GSR)	SATRA TM335			3.0	
Abrasion Resistance	SATRA TM31-	4 x A4	Vamp: Dry: 25,600	Vamp: Dry: 12,800	Vamp: Dry: 12,800
(not worse than moderate wear after	Martindale	paper size	Wet: 6,400	Wet: Exempt	Wet: Exempt
no. of revolutions)		(210mm x	Counter: Dry: 38,400	Counter: Dry: 25,600	Counter: Dry: 12,800
		297mm)	Wet: 9,600	Wet: 6,400	Exempt
Rub Fastness Dry: 256 rubs	CATDA TMO			0.0 (D=) 0.0 (M(-4)	
Net:128 rubs PERFORMANCE (Textile and	SATRA TM8	toriale\ I 2		3.0 (Dry) 2.0 (Wet)	
Breaking Strength (lbs./inch)	SATRA TM29	Cilais) LZ		Min. 14lbs	
Abrasion Resistance		1	De- 25 (00		D 0.000
not worse than moderate wear	SATRA TM31- Martindale		Dry: 25,600 Wet: 6,400	Dry: 12,800 Wet: Exempt	Dry: 9,600 Wet: Exempt
after no. of revolutions)	iviaitiiluale	-	11CL 0,700	ны. Елепірі	ты. Елепрі
Flexing Endurance (not worse than slight					
cracking or slight damage after	SATRA TM25	4 x A4	100,000	50,000	25,000
no. of flexes) (Coated Fabric		paper size (210mm x	(room temp)	(room temp)	(room temp)
Materials)		297mm)			
Perspiration Fastness (grain) (GSR)	SATRA TM335			3	
JUN 1	SATRA TM167	1		3(dry)	
Rub Fastness (GSR)	SATRA INITO/			3 (wet)	
Phenolic Yellowing (Textile	ISO 105 – X18		Change in shade: Class 4.5	Min. (Applicable to athletics/s	sports footwear only, Exempt
only) PERFORMANCE (Lace & Sa) 3		Black Textile)	
Abrasion Resistance (not worse	un Fabric Waterlais	LS			
han moderate wear after the no.	SATRA TM31 -	4 x A4		3,000 (dry)	
f revolutions)	Martindale	paper size			
Rub Fastness (GSR)	SATRA TM167	(210mm x 297mm)		3(dry)	
YUU FASIIIESS (UOK)					
		29711111)		3 (wet)	
Perspiration Fastness (GSR)	SATRA TM335	29711111)		3 (wet) 3	
Perspiration Fastness (GSR) SOLING	SATRA TM335	29711111)			
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC	SATRA TM335	29711111)	Soft		73-77
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of	SATRA TM335 SATRA TM205	29711111)	Soft	50-63, Medium 64-72, Hard Min. 0.40 (Dry)	73-77
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction)	SATRA TM335	29711111)		50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance –Tested at	SATRA TM335 SATRA TM205 SATRA TM144	2 pairs		50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick:	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm	SATRA TM335 SATRA TM205			50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet)	
Perspiration Fastness (GSR) COLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm ler kc cut growth)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60			3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance —Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174			3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance —Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcellu	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM174			3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC) Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance —Tested at 4.5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellulardness (Shore A)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM174 SATRA TM205			3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC) Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellulardness (Shore A) Slip Resistance (Coefficient of	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM174			3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance –Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellu Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance –Tested at	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM174 SATRA TM205 SATRA TM205 SATRA TM205 SATRA TM144	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellu Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM174 SATRA TM205			3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance –Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcelludardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance –Tested at .5° C after 150,000 cycle (mm per kc cut growth)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM205 SATRA TM205 SATRA TM205 SATRA TM44 SATRA TM60	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04	
Perspiration Fastness (GSR) COLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ler kc cut growth) Fole Wearing Resistance Volume Loss) FERFORMANCE (Microcellulardness (Shore A) Flip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ler kc cut growth) Fole Wearing Resistance Folio Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ler kc cut growth) Fole Wearing Resistance	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM174 SATRA TM205 SATRA TM205 SATRA TM205 SATRA TM144	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of ririction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellutardness (Shore A) Slip Resistance (Coefficient of ririction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Lar Rubber) S2 SATRA TM205 SATRA TM44 SATRA TM60 SATRA TM60 SATRA TM174	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of friction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcellural Hardness (Shore A) Silip Resistance (Coefficient of friction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Lar Rubber) S2 SATRA TM205 SATRA TM44 SATRA TM60 SATRA TM60 SATRA TM174	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcelludardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Silip Resistance (Coefficient of	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Solid Wearing Resistance Volume Loss) PERFORMANCE (Microcelludardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rubellardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rubellardness (Shore A) Slip Resistance (Coefficient of riction)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Lar Rubber) S2 SATRA TM205 SATRA TM205 SATRA TM44 SATRA TM60 SATRA TM174 SATRA TM174 SATRA TM174	2 pairs		3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) 4400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet)	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcellutardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 50 C after 150,000 cycle (mm ber kc cut growth) Flexing Endurance (Resin Rub Hardness (Shore A) Flexing Endurance – Tested at 50 C after 150,000 cycle (mm ber kc cut growth) Flexing Endurance – Tested at 50 C after 150,000 cycle (mm ber kc cut growth) Flexing Endurance – Tested at 50 C after 150,000 cycle (mm ber kc cut growth) Flexing Endurance – Tested at 50 C after 150 C after	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144	2 pairs		3 50-63, Medium 64-72, Hard 1 Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Available of the second of	
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcelludardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) 4400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet)	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm her kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcellutardness (Shore A) Slip Resistance (Coefficient of riction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm her kc cut growth) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm her kc cut growth) Flexing Endurance (Coefficient of riction) Flexing Endurance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle mm her kc cut growth	SATRA TM335 SATRA TM205 SATRA TM1205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM205 SATRA TM144 SATRA TM205 SATRA TM144 SATRA TM60	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard 1 Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Ava. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 men: Max. 0.1 (heel height > 5)	Max. 0.5
Perspiration Fastness (GSR) COLING PERFORMANCE (Solid PVC) Personal Resistance (Coefficient of iction) Personal Resistance (Coefficient of iction) Personal Resistance (Coefficient of iction) Personal Resistance (Resinance - Tested at 5° C after 150,000 cycle (mm er kc cut growth) Personal Resistance (Microcellulardness (Shore A) Personal Resistance (Coefficient of iction) Personal Resistance (Coefficient of iction) Personal Resistance (Resinance - Tested at 5° C after 150,000 cycle (mm er kc cut growth) Personal Resistance (Resinance - Tested at 5° C after 150,000 cycle (Testing Endurance - Tested at 5° C after 150,000 cycle (Testing Endurance - Tested at 5° C after 150,000 cycle (Testing Endurance - Tested at 5° C after 150,000 cycle (Testing Resistance Volume Loss)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144 SATRA TM205 SATRA TM174 ber) S3 SATRA TM174 SATRA TM174	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard 1 Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet)	Max. 0.5
erspiration Fastness (GSR) OLING ERFORMANCE (Solid PVC ardness (Shore A) lip Resistance (Coefficient of iction) lexing Endurance –Tested at 5° C after 150,000 cycle (mm er kc cut growth) ole Wearing Resistance /olume Loss) ERFORMANCE (Microcellu ardness (Shore A) lip Resistance (Coefficient of iction) lexing Endurance –Tested at 5° C after 150,000 cycle (mm er kc cut growth) ole Wearing Resistance /olume Loss) ERFORMANCE (Resin Rub lardness (Shore A) lip Resistance (Coefficient of iction) lexing Endurance – Tested at 5° C after 150,000 cycle (mm er kc cut growth) lip Resistance (Coefficient of iction) lexing Endurance – Tested at 5° C after 150,000 cycle (mm er kc cut growth) ole Wearing Resistance /olume Loss) ERFORMANCE (Solid Vulce (Solid Vulce Loss)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM144 SATRA TM174 SATRA TM174 SATRA TM174 Anized Rubber) S4	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height > 5) ≤300 mm3	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance —Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcellulardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance —Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rubert Resistance (Coefficient of riction) Flexing Endurance — Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Flexing Endurance — Tested at 5° C after 150,000 cycle (Solid Vulce Mearing Resistance (Coefficient of riction) Flexing Endurance — Tested at 5° C after 150,000 cycle (Maring Endurance — Tested at 5° C after 15	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144 SATRA TM205 SATRA TM174 ber) S3 SATRA TM174 SATRA TM174	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard 1 Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Ava. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height > 1 ≤300 mm3	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellurardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rubellardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rubellardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulcellardness (Shore A) Silip Resistance (Coefficient of Solid Vulcellardness (Shore A) Silip Resistance (Coefficient of Solid Vulcellardness (Shore A)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 SATRA TM144 SATRA TM174 SATRA TM174 SATRA TM174 Anized Rubber) S4	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet)	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellu Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulc Hardness (Shore A)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM1205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM144 SATRA TM174	2 pairs 2 pairs 2 pairs	<5 mm	3 50-63, Medium 64-72, Hard 1 Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Ava. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height > 1 ≤300 mm3	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellu Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulc Hardness (Shore A) Slip Resistance (Coefficient of friction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM1205 SATRA TM144 SATRA TM60 SATRA TM174 ber) S3 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM144 SATRA TM174	2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet)	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellulardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rubellardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rubellardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulced Lardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth) Flexing Endurance – Tested at .5° C after 150,000 cycle (mm per kc cut growth)	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM60 SATRA TM174 Iber) S3 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM174	2 pairs 2 pairs 2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height > 100 mm) 46-84 Min. 0.40 (Dry) Min. 0.30 (Wet)	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcellurardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at 5° C after 150,000 cycle mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at 5° C after 150,000 cycle Hardness (Shore A) Silip Resistance (Coefficient of rirction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM60 SATRA TM174 Iber) S3 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM144 SATRA TM174	2 pairs 2 pairs 2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height > 100 mm) 46-84 Min. 0.40 (Dry) Min. 0.30 (Wet)	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcelludardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rubbardness (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Solid Vulcemance – Tested at 5° C after 150,000 cycle mm ber kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Solid Vulcemances (Shore A) Silip Resistance (Coefficient of riction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm ber kc cut growth) Sole Wearing Resistance Volume Loss) Sole Wearing Resistance Volume Loss)	SATRA TM335 SATRA TM205 SATRA TM1205 SATRA TM144 SATRA TM60 SATRA TM174 Lar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174	2 pairs 2 pairs 2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height ≥ 9 ≤300 mm3 46-84 Min. 0.40 (Dry) Min. 0.30 (Wet0 Max. 0.1	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC Hardness (Shore A) Silip Resistance (Coefficient of ririction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Microcelluderances (Shore A) Silip Resistance (Coefficient of ririction) Flexing Endurance –Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance Volume Loss) PERFORMANCE (Resin Rubert Albert Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rubert Sole Wearing Resistance (Volume Loss) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulcet Mardness (Shore A) Silip Resistance (Coefficient of ririction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulcet Solid Vulcet Solid Resistance (Coefficient of ririction) Flexing Endurance – Tested at 5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (High and I	SATRA TM335 SATRA TM205 SATRA TM1205 SATRA TM144 SATRA TM60 SATRA TM174 Lar Rubber) S2 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174	2 pairs 2 pairs 2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max. 1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height ≥ 9 ≤300 mm3 46-84 Min. 0.40 (Dry) Min. 0.30 (Wet0 Max. 0.1	Max. 0.5
Perspiration Fastness (GSR) SOLING PERFORMANCE (Solid PVC) Hardness (Shore A) Silip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Microcellu Hardness (Shore A) Silip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Silip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Resin Rub Hardness (Shore A) Silip Resistance (Coefficient of friction) Flexing Endurance – Tested at -5° C after 150,000 cycle (mm per kc cut growth) Sole Wearing Resistance (Volume Loss) PERFORMANCE (Solid Vulc Hardness (Shore A) Silip Resistance (Coefficient of	SATRA TM335 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM174 Iar Rubber) S2 SATRA TM1205 SATRA TM144 SATRA TM60 SATRA TM60 SATRA TM174 SATRA TM205 SATRA TM144 SATRA TM60 SATRA TM144 SATRA TM60 SATRA TM174 OW Density EVA) S	2 pairs 2 pairs 2 pairs	<5 mm	3 50-63, Medium 64-72, Hard Min. 0.40 (Dry) Min. 0.30 (wet) hick: Max.1.5 5-10 mm thick: 10-15 mm thick: Max. 0.1 > 15mm: Max.0.02 Soft & Medium: ≤300 mm3 Hard: ≤250 mm3 Min. 36 Min. 0.40 (Dry) Min. 0.30 (Wet) Max. 0.04 ≤400 mm3 78-86 Min. 0.40 (Dry) Min. 0.30 (Wet) Men: Max. 0.1 Women: Max. 0.1 Women: Max. 0.05 nen: Max. 0.1 (heel height > 5 ≤300 mm3 46-84 Min. 0.40 (Dry) Min. 0.30 (Wet0 Max. 0.1 ≤200 mm3	Max. 0.5

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Flexing Endurance –Tested at	0.470.4.74400		1. 1. 7. 14. 00415.1. 7. 14. 04	
-5° C after 150,000 cycle (mm per kc cut growth)	SATRA TM60	2 pairs	Low density: Max. 0.04 High density: Max. 0.1	
Sole Wearing Resistance (Volume			Low density: ≤ 700 mm3	
Loss)	SATRA TM174		High density: ≤ 250 mm3	
	SAIKA IWII/4			
DEDECORMANIOE (The surre or le	-ti- Dubb 00		Note: Measure volume loss at an abrasion distance of 20 m.	
PERFORMANCE (Thermopla Hardness (Shore A)	Stic Rubber) 56		Soft grade: 43-51	
Tradicis (Shore A)	SATRA TM205		Medium grade: 52-59	
			Hard grade: 60-76	
Slip Resistance (Coefficient of	SATRA TM144		Min. 0.40 (Dry)	
friction) Flexing Endurance –Tested at	_	2 pairs	Min. 0.30 (Wet)	
-5° C after 150,000 cycle (mm	SATRA TM60		Up to 15 mm thick: Max. 0.5	
per kc cut growth)			> 15 mm thick: Max. 0.1	
Sole Wearing Resistance	SATRA TM174		≤300 mm3	
(Volume Loss) PERFORMANCE (Polyuretha	no Cinalo ⁹ Duol	Denoity) C7		
Hardness (Shore A)	SATRA TM205	Density) 51	15-30(Skin-off) 50-70 (Skin-on)	
Slip Resistance (Coefficient of		-	Min. 0.40 (Dry)	
friction)	SATRA TM144		Min. 0.30 (wet)	
Flexing Endurance –Tested at		2 pairs		
-5° C after 150,000 cycle (mm	SATRA TM60		Max. 0.005	
per kc cut growth) Sole Wearing Resistance	0.475.4.74	†		
(Volume Loss)	SATRA TM174		≤250 mm3	
PERFORMANCE (Sole Leath		ned) S8		
Grain Crack (Index)	SATRA TM48		Vegetable Tanned :Min. 16	
Slip Resistance (Coefficient of	SATRA TM144	2 pairs	Min. 0.30 (Dry)	
friction) Sole Wearing Resistance	SATRA TM174	· '	Min. 0.30 (Wet) ≤350 mm3	
PERFORMANCE (Outsole of		otwoar) SQ	2000 111110	
PERFORMANCE (Outsole of	Auneuc/Sports Fo	l liwear) 35	Rubber: Min. 1,400	
			Microcellular rubber: Min. 560	
	SATRA TM137		Solid Plastic(including solid PU,PVC,TPU): Min. 2,000 Flexible Plastic(including TPR,	
Topoilo Strongth (lbo /og inch)			foam TPU, foam PU, foam PVC): Not applicable	
Tensile Strength (lbs./sq. inch)		_	EVA(low density)or phylon: Not applicable Rubber: Min. 300	
			Microcellular rubber: Min. 250	
	SATRA TM137		Solid Plastic(including solid PU,PVC ,TPU): Min. 300	
Extension at Break (%)			Flexible Plastic(including TPR, foam TPU, foam PU, foam PVC): Not applicable	
Extension at Break (%)		-	EVA(low density)or phylon: Not applicable Rubber: Min. 55 Microcellular rubber: Min. 40 Plastics: Not applicable	
Tearing Strength (lbs./inch)	SATRA TM218	2 × 44	EVA or Phylon: Not applicable	
Flexing Endurance –Tested at	0.470.4.71.400	2 x A4 paper size		
-5° C after 150,000 cycle (mm per kc cut growth)	SATRA TM60	(210mm x	Max. 0.03	
per no cut growth)		297mm)	Rubber: 56-75 (Shore A) Microcellular rubber: Min. 36 (Shore A)	
	SATRA TM205		Solid Plastic(including solid PU,PVC ,TPU): 55-76 (Shore D)	
Harden .	0/111011W200		Flexible Plastic(including TPR, foam TPU, foam PU, foam PVC): 45-75 (Shore A)	
Hardness Slip Resistance (Coefficient of		-	EVA(low density)or phylon: 50-76 (Type OO) Min. 0.50 (Dry)	
friction)	SATRA TM144		Min. 0.40 (Wet)	
,		1	Rubber: ≤200 mm3	
			Microcellular rubber: ≤300 mm3	
	SATRA TM174		Solid Plastic(including solid PU,PVC ,TPU): ≤150 mm3 Flexible Plastic(including TPR, foam TPU, foam PU, foam PVC): ≤250 mm3	
Sole Wearing Resistance			EVA(low density)or phylon: ≤500 mm3	
(Volume Loss)			EVA(high density) ≤160mm3	
PERFORMANCE (Midsole of		otwear) S10		
Hardness (Type OO)	SATRA TM205		45-65	
Compression Set	SATRA TM64	2 pairs	PU phylon: Max. 15% after 22hrs@23°C EVA phylon: Max. 20% after 6 hrs@45°C	
Split Tear Strength (lbs./inch)	SATRA TM65	†	Min. 15	
PERFORMANCE (Snow Boot			min 10	
Flexing Endurance – Ross Flex		2:	May 6 mm	
(Tested at – 20° C)	SATRA TM60	2 pairs	Max. 6 mm cut growth (after 20,000 cycles)	
PERFORMANCE (Polycarbo	nate-Urethane) S12			
Hardness (Shore A)	SATRA TM205		Soft grade 52-59 Medium grade: 60-69	
Hardness (Shore A)	SATRA TIVIZUS		Hard grade: 70-77	
Slip Resistance (Coefficient of	SATRA TM144	1	Min. 0.40 (Dry)	
friction)	SAIRA IIVI 144	2 pairs	Mi. 0.30 (Wet)	
Flexing Endurance –Tested at	CATDA TM60	2 pairs	Up to 15 mm thick: Max. 1.0	
-5° C after 150,000 cycle (mm per kc cut growth)	SATRA TM60		>15 mm: Max. 0.5	
Sole Wearing Resistance	CATDA TM4474	1	<050 mm2	
(Volume Loss)	SATRA TM174		≤250 mm3	
PERFORMANCE (Thermopla		S13		
Hardness	SATRA TM205		Soft grade 70-90 (Shore A) Medium grade: 46-54 (Shore D)	
Slip Resistance (Coefficient of	SATRA TM144		Min. 0.40 (Dry) Min. 0.30 (Wet)	
friction)			IVIII. U.SU (WEL)	1

Flexing Endurance –Tested at -5° C after 150,000 cycle (mm per kc cut growth)	SATRA TM60	2 pairs		Up to 15 mm thick: Max. 0.5 > 15 mm thick: Max. 0.1		
Sole Wearing Resistance (Volume Loss)	SATRA TM174			≤250 mm3		
COMPONENTS						
PERFORMANCE (Hook and	Loop/Velcro) C2					
*Shear Strength	SATRA TM123	3 Samples	(Original) : 1	10.0 lbs./in 2 After 5000 cycles	: 8.0 lbs./in ²	
			, , ,	Original: 0.4 lbs/in.		
*Peel Strength	SATRA TM123	3 Samples		After 5000 cycles: 0.3 lbs./in		
PERFORMANCE (Top piece)	C3					
*Hardness	SATRA TM205			PU/TPU/PVC: Wide < 10mm: 60-70 Shore I Wide ≥ 10mm: 40-50 Shore I Rubber/TPR:		
		3 pairs	With heel block: Min	n. 86 Shore A Without heel blo	ock: Min. 73 Shore A	
Slip Resistance (Coefficient of friction)	SATRA TM144		Min.	Min. 0.30 (Dry) 0.30 (Wet) (Width <10mm): E	xempt	
*Sole Wearing Resistance (Volume Loss)	SATRA TM174			<10mm wide: Max.40mm3 10-25mm wide: Max.100mm3 >25mm wide: Max.350mm3	·	
PERFORMANCE (Elastic) C1						
*Resistance of elastics to						
repeated extension	SATRA TM103	2 Samples	Initial: Max. 109	% Rubber thread breakage aft	er 10,000cycles.	
PERFORMANCE (Zipper) C4						
*Lateral Strength of Slider	SATRA TM51	2 Samples		Min. 50 lbs.		
*Puller Attachment Strength	SATRA TM52	2 Samples		Min. 20 lbs.		
*Puller Torque Strength (Applicable to infant, pre- walk and children's shoes up to size 13 only)	ASTM D2061	2 Samples		Min. 4 in-lbs.		
PERFORMANCE (Slender He	els) C5 (Applicable	for heel heig	ht greater than 50mm, ar	nd the heel with 30mm ac	ross or less in all directio	ns)
*Fatigue test for shoe heel	SATRA TM21	3 Samples		mage or bending after 14,000		,
*Lateral impact test for shoe heels	SATRA TM20	3 Samples		ng or cracking after 5 impacts	•	
TEXTILE: UPPER/LINING & S	SOCK/OUTSOLE					
FUR AND FAUX FUR T1						
*Fur Identification	AATCC 20	1 Sample	Fiber	examination by microscopic r	nethod	
	AATCC 20/20A	1 Sample		Single fiber only: no tolerance		
*Fiber Content		1 Sample	2	or more fibers blend: ± 3% m	ax.	
RESTRICTED SUBSTANCES						
*Formaldehyde (Applicable to skin contact areas of infant, pre- walk and children's shoes up to size 13 only)	Pr EN ISO TS 17226 ISO 14184-1	1 x A4 paper size (210mm x 297mm)	Natural leather materials: <75 ppm Textile materials: <20 ppm			
* CA Prop 65	Refer to Protocol 1300	All Samples	determine	ed against the requirements o if additional testing or labeling		
Lead, Cadmium and Phthalate Applicable to children product including - Child car seats - Clothing - Cosmetics for children under the age of 12 - Jewelry for children under the age of 12 - Products to help a child with	Lead and Cadmium EPA SW 846 Method # 3050B/3051 (Mod.) / CPSC-CH-E1003- 09.1/ CPSC-CH- E1002-08.1 / CPSC- CH-E1001-08.1	All Samples	Washington Children's Safe Products Act ≤ 90 ppm (lead) ≤ 40 ppm (Cadmium) ≤ 0.1% max total (BBP, DBP, DEHP, DINP, DIDP, DNOP) ≤ 0.1% max each individual (DCHP, DIBP, DnHP/DHEXP, DPP/DPENP) Note: Actual test would be performed on below suggested accessible materials. The Washington standard cannot be enforced for products to which a federal standard applies. Substances Suggested materials Lead Follow CPSC lead Cadmium Follow CPSC lead			
sucking or teething, to facilitate sleep, relaxation, or the feeding	Phthalate CPSC-CH-C1001-		Cadmium	Coating and Plasticized		
of a child	09.3		Phthalates	materials		
	Metal: CPSC-CH- E1001-08.3 Non Metal: CPSC- CH-E1002-08.3 Surface Coating: CPSC-CH-E1003-		90ppm Minnesota 325E.389 Products preempted by fedetesting.' Product exemptions for CPS			
Total Lead	09.1 Substrate & Surface	1 Sample	CFR 1252)			
			75ppm Minnesota 325E.3892 (HF 2310) Product Exemptions by federal & state law (e.g., CPSC, FDA, etc) are exempt from			
	Coating: EPA or ASTM method from			,	DA, etc) are exempt from	
Total Cadmium	Coating: EPA or	1 Sample		,	DA, etc) are exempt from	
Total Cadmium PFAS Supplemental Protocol (1600)	Coating: EPA or ASTM method from AFIRM or CPSC	1 Sample All Samples	Product Exemptions by fede testing.'	eral & state law (e.g., CPSC, F	. , ,	

ADDITIONAL NOTE:

- *** It is suggested number of samples required for basic package testing only. It may vary depending on the actual samples and no. of tests that are required for testing. The number of working days will depend on the actual candle-burning hours. For large candle additional days are required to complete burn. Please consult your nearest laboratory for details.
- #: Materials not meeting these levels should not necessarily be considered unsuitable: adequate reinforcement can increase both thickness and strength to acceptable levels.

REMARK:

HEAVY:

- Snow boots and shoes
- Rain boots and shoes
- Waterproof leather footwear
- Sports sandals (adult's and children's)
- Aqua shoes
- Hiking boots
- Athletics footwear
- All children's footwear except for casual sandals, slippers, ballets, flats, fabric upper shoes and beach thongs

- Men's dress shoes (leather oxford and loafers)
- Men's casual shoes (leather oxford, loafers, ankle boots)
- Women's dress shoes (leather and fabric; pumps, flats, sandals, loafers, oxfords)
- Women's casuals (leather and fabric, flats, sandals, loafers,oxfords, ankle boots)
- Coed vulcanized shoe/molded upper shoes
- Coed leather sandals
- Children's casual sandals, ballets, flats and fabric upper shoes

LIGHT

- Slippers (men's, women's, and children's)
- Women's espadrilles
- Beach thongs (men's, women's and children's)
- -Coed fabric upper shoes
 -Infant and pre-walk shoes

NOTE: Upper material for summer sandals, slippers, thongs and other open-toed footwear is exempt from cold flex test. Carry out Flexing Endurance at room temperature only.

PROTOCOL VERSION	DESCRIPTION OF CHANGE	Revised By	Approved By
		·	Ro Jain
1203 – 0	Initial Release	Simon Leung Jun 30, 2005	July 06, 2005
	Revised the requirements for PERFORMANCE (Leather) U1- Rub Fastness & Water	Simon Leung Aug 14,	
1203 – 1	Resistance	2005	Ro Jain Sept 8, 2005
	Deleted Sole Bond Strength Test From Leather Upper Materials (U1). Revised Leather		
	Lining Rub Fastness Test To SATRA TM8. Deleted Azo Dye, Nickel, TBT/DBT, PCP And		
	EN 71 Testing From Restricted Substances. Formaldehyde		
	Testing Became Applicable To Children's Shoes Only. Added Velcro and Zipper		
	Performance Tests, Deleted Soluble Chromium & Cadmium Testing From Restricted	Simon Leung Dec 15,	Ro Jain
1203 – 2	Substances.	2005	Dec 19, 2005
	Added Flexing Endurance Test Requirement To Snow Boot Upper Material (U1 & U2).		
	Exempted Kid Leather From Qualitative Peel Test. Revised Water Resistance Test		
	Requirement. Updated Rub Fastness, Flexing Endurance And Abrasion Resistance Test		
	Requirements (U1, U2, U3, L1 & L2). Updated Slip Resistance Requirement For Soling		
	Materials.		
	Added Ross Flex Test To Outsole Material of Snow Boot (S10); Measurement Of The		
	Limit Of Useful Extension Of Elastics & Elastics Webbing (C3); Fiber Content & Foam		
	Padding I.D. Tests To Thermal Insulating Lining, Interlining, Filling & Padding (L3) And		
	Microscopic I.D. of Fur & Faux Fur (L4).		
	Added Miscellaneous Tests To Cover Upper, Lining And Soling Material For		Ro Jain
1203 – 3	Athletic/Sports Shoes. Added Phthalates And Lead In PVC Tests (R2 & R3)	Simon Leung Jun 18, 2008	
	Added Hard Grade Requirement to TPR Soling Material. Added Soling Performance		Ro Jain
1203 – 4	Requirements to PCU. Price Adjustment.	Simon Leung Oct 23, 2008	Oct. 31, 2008
	Revised the Soling Performance Standard of PCU. Added the Soling Performance		
	Standard of TPU (S14). Added Wet Abrasion Requirement to Lining (L1 & L2). Removed		Ro Jain
1203 – 5	Test L4. Added Textile: Upper/Lining & Sock/Outsole Test (T1 & T2)	Simon Leung Jul 13, 2009	Jul 14, 2009
	Updated the Shoe Classification List. Updated Wet Abrasion Requirement for Lining (L1		
	& L2). Updated Hardness Requirement for Solid PVC (S1). Updated the Slip Resistance		
	Requirement for Resin Rubber (S3). Updated the Hardness and Slip Resistance		
	Requirement for High & Low Density EVA (S5). Updated the Hardness Requirement for		
	Polyurethane – Single		
	& Dual Density (S7). Updated the Spilt Tear Strength Requirement for Mid Sole of		
	Athletic/Sports Footwear (S11). Added Outsole Abrasion Test (S1 to S14). Added Slip		
	Resistance Test to Soling for Athletics/Sports Shoes (S10). Updated Phthalates in PVC		
1000	Test to Phthalates in Accessible Plasticized Materials. Added Lead in Accessible		D. I.I. A. II.A. 0040
1203 – A	Substrate Materials Test (R4 & R5). Price Adjustment.	Simon Leung April 1, 2010	Ro Jain April 1, 2010
	Added Upper material Test for Lace & Satin Fabric Materials (U4), Replaced Thermal		
	Insulation Test (L3) by Lining Material Test on Lace & Satin Fabric, Deleted Slipper		
	Soles Test (S9). Deleted Wool & Wool Blends Test (T1), Deleted Lead in PVC Test (R3).		
	Updated Lead in Accessible Substrate Materials Test (R4 & R5). Updated Section	Simon Loung Contomb	Do Join Contamber 00
1203 – B	Codes, Where Necessary, Due to Above Changes. Deleted Foam Padding I.D. and Lead in PVC from Price Table.	Simon Leung September 29, 2010	Ro Jain September 29, 2010
1203 - 6	Updated Slip Resistance Requirement for Soling Materials. Updated the Test	23, 2010	2010
	Principle/Requirement for Lead in Substrate Materials for Adult's and Children's	Simon Leung June 13,	Ro Jain
1203 – C	Products.	2011	June 13, 2011
1203 - 0	i i i i i i i i i i i i i i i i i i i	Elizabeth Armstrong July	Ro Jain
1203-D	Updated pricing for phthalates	21, 2011	July 21, 2011
1203-0	opuated pricing for prititalates	Elizabeth Armstrong	July 21, 2011
		February 1,	Ro Jain February 1,
1203-E	Added composite testing requirements for phthalates testing	2012	2012
1203-E	Added composite testing requirements for pritrialates testing	2012	Ro Jain
1203-F	Sanarate the test line of Pron 65 to supplementary protocol	Candy Chan Mar 26 2012	Apr 15, 2013
1203-F	Separate the test line of Prop 65 to supplementary protocol	Candy Chan Mar 26, 2013	Apr 10, 2013

	Added the Upper Performance Standard of Rubber & Polymeric Materia	als (U5). Added Ha	nson Chen August 6,	Ro Jain September 5,
1203-G	the Soling Performance Standard of Flexible Plastic to S9.	20	13	2013
				Ro Jain
1203-H	Differentiate the performance test rating into Tier 1/Tier 2/Tier 3 Added Top Piece and Slender Heels sections		nnson Chen Vill Wu Jun 25, 2013	Ech 40 2044
1203-П	Updated the pricing of below test items:	/ W	VIII VVU JUII 25, 2013	Feb. 10, 2014
	Sheer Strength;			
	Peel Strength and			Jeetendra Shelatkar Aug
1203-l	Colorfastness to Light Fading		andy Chan Jul 30, 2014	18, 2014
1203-J	Lead, Cadmium and Phthalate in Washington Children's Safe Products	Act Ma		Elizabeth Armstrong May 13, 2016
1203-K	Added Chromium VI testing for leather		, 2018	Elizabeth Armstrong May 29, 2018
1203-L	Removed Chromium VI testing		izabeth Armstrong ine 27, 2018	Elizabeth Armstrong June 27, 2018
4000 M	Added Silver Obeddien and Bile Betantion Testing		izabeth Armstrong	Elizabeth Armstrong Sep
1203-M	Added Fiber Shedding and Pile Retention Testing		ept 14, 2018 izabeth Armstrong	14, 2018 Elizabeth Armstrong
1203-N	Updated water resistance testing requirements	Se	pt 28, 2018	Sept 28, 2018
1203-O	Updated phthalates requirements for Washington State		izabeth Armstrong ine 11, 2019	Elizabeth Armstrong June 11, 2019
1203-0	opuated pritinalates requirements for washington state		narlene Swanson	Charlene Swanson
1203-P	Updated phthalates requirements for Washington State		igust 2019	August 2019
1203-Q	Added Water Repellency Testing		izabeth Armstrong n 28, 2021	Elizabeth Armstrong Jan 28, 2021
1200-0	Added Water Repellency resulting	Eli	izabeth Armstrong	Elizabeth Armstrong
1203-R	Updated sole wearing, hardness, tensile strength, extension break on		arch 24, 2021	March 24, 2021
1203-S	Updated protocol	Eli 20:		Elizabeth Armstrong July 2021
1203-T	Added back in *Resistance of elastics to repeated extension that was r protocol update		izabeth Armstrong Sept	Elizabeth Armstrong Sept 2021
1203-U	Added PFAS Supplement testing requirements	Eliz 202		Elizabeth Armstrong April 2022
1203-V	Added Minnesota Law Testing requirements for lead & Cadmium		zabeth Armstrong Nov 202	3
1203-W	Updated MN Law to add exemptions	Eli: 20:	zabeth Armstrong March 24	