

# **Chapter 5**

# **Footwear Test Protocols**

DXL Group – Performance Specifications Boots and Shoes

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Test Property	Test Method	DXL Group Requirement
	Labeling	
Textile Fiber Products Identification Act (If claimed) Wool Products Labeling Act Guide for Select Leather and Imitation Leather Products EU Footwear Labeling Directive (EU distribution only)	Visual	Fiber Content Label Care Label Country of Origin RN # or WPL # Size
Canada Stuffed Articles Act (Canada distribution)		
,	abric Construction	
Fiber Analysis* (If claimed)	AATCC 20A/ASTM D629	0% Single Fiber +3% Blends
Fabric Weight (oz/sq yd)	ASM D3776	± 5% from contracted weight
Thread Count	ASTM D3775	$\pm$ 5% from contracted weight
Yarn Size* ( If requested)	ASTM D1059	± 5% from contracted weight
Defects	Visual assessment	Report all defects
	Appearance	
General appearance	Visual assessment	No distortion, defects, damaged components, excessive shrinkage/puckering between components
	Colorfastness	•
CF to Crocking	AATCC 8/116	Dry: Class 4 Wet: Class 3 Dry: Class 3 Wet: Class 2
Colorfastness to water: Color block/Contrast trims	AATCC 107	Color change: class 4 Staining: class 3 Self-staining: class 4.5
Colorfastness to perspiration: Inner components	AATCC 15	Color change: class 4 Staining: class 3 Self-staining: class 4.5
	Performance	·
Heel attachment: heels >5 cm	ASTM D1683 modified	150 lb minimum
Heel strength: heels >5 cm	BS 5131	No bending or cracking after 5 cycles of 4 ft-lbs
Slip Resistance	MTS	0.40 minimum static 0.30 minimum kinetic
Sole wearing resistance	DIN 53516	No more than 350 cubic mm volume loss
Flex Resistance (Upper component only)	MTS/SATRA	No cracking @35,000 cycles
Sole Bond durability	MTS	10 lb minimum



Toe Bond durability	MTS	30 lbs @ ½" circular sector
Reinforcement strength	MTS	25 lb minimum
Tongue strength	ASTM D1683 modified	30 lb minimum

## DXL Group – Performance Specifications Boots and Shoes

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Lace strength	ASTM D1683 modified	75 lb minimum
Lace durability	ASTM D3885 modified	100 cycles
Eyelet strength	ASTM D1683 modified	30 lb minimum
Component attachment strength	ASTM D7142	Functional: 15 lbs @ 10
		secs
		Non-Functional: 5 lbs @ 10
XXX	) (mg	secs
Waterproofing if claimed	MTS	No leakage after 100,000
		cycles
Y 1: 6	Analytical	I G1 11
Lead in surface coatings*	ASTM E 1613/1645	Shall not exceed 90 ppm
N' 1 1 to CE DIV 1' 1' 1' 1' 1'	G . T	(0.09% by weight)
Nickel * (For EU distribution only)	Spot Test	None present
Formaldehyde – skin contact areas* (For	Spot Test	None present
EU distribution only)	FDV4.40.50	1 20
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm
* Dimethyl Furmarate (DMF) (For EU Distribution Only)	MTS In house method	Products placed or made available on the market shall comply with the
(For EO Distribution Only)	(Document Review)	requirements of Directive
* Any fabric, leather, wood and desiccant (silica gel)		2009/251/EC.
packets.		Max limit: 0.1 mg DMF per kg of
* When product comes in contact with skin, test up to 3		the product or part of product.
like materials of the largest surface area.		
NOTE:		Effective date: 01 May 2009.
Vendor to provide PKG Desiccant document and		NOTE:
testing should only be completed if vendor cannot		- If the form is not filled out and
provide signed document		attached in the TRF, please ask
		the vendor to return this form
		- If the form is not returned within 5 days of sending the
		vendor the document, please
		proceed with testing
		- If the vendor cannot or will not
		return the form, please proceed
		with testing



#### DXL Group – Performance Specifications Boots and Shoes

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Sample St	ubmission		
		USA	Asia
Darkest colorway – Full	3 pair	\$295.00	\$195.00
testing			
Including 2 common fibers			
Additional colorway –	2 pair	95.00	60.00
Colorfastness only			
Fabric (If requested by DXL Group)	1 ½ yards	N/A	N/A
Turnaround time (TAT)	3-4 working days		
	excluding analytical		
Chemical fiber content per fibe	er	45.00	14.00
Microscopic fiber content			
Two cellulosic fi		95.00	65.00
Additional cellulosic fiber		50.00	22.00
<ul> <li>One specialty hair fiber</li> </ul>		100.00	32.00
<ul> <li>Two specialty hair fiber blend</li> </ul>		150.00	60.00
Additional specialty fiber		60.00	32.00
Lambs wool per yarn/per fiber		150.00	32.00
Lead Content		65.00	25.00
Nickel Qualitative	Nickel Qualitative		15.00 each
Nickel Quantitative		EN12471/EN1811	Coated -
			\$128.00
			Uncoated - \$83.00
Azocolourants		EN 14362	70.00
Formaldehyde Qualitative		A056	15.00
Formaldehyde Quantitative		ISO 14184	20.00

Note: Protocol base price includes fiber identification of 2 common fibers

 $*Additional\ charge$ 

Individual test discount: 35% off local prices



## DXL Group – Performance Specifications Sandals

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Test Property	Test Method	DXL Group Requirement
	Labeling	
Textile Fiber Products Identification Act (If claimed)	Visual	Fiber Content Label Care Label
Wool Products Labeling Act		Country of Origin
Guide for Select Leather and Imitation Leather		RN # or WPL #
Products		Size
EU Footwear Labeling Directive (EU		
distribution only)		
Canada Stuffed Articles Act (Canada		
distribution)		
	Fabric Construction	T
Fiber Analysis* (If claimed)	AATCC 20A/ASTM D629	0% Single Fiber <u>+</u> 3% Blends
Fabric Weight (oz/sq yd)	ASM D3776	± 5% from contracted weight
Thread Count	ASTM D3775	±5% from contracted weight
Yarn Size* ( If requested)	ASTM D1059	± 5% from contracted weight
Defects	Visual assessment	Report all defects
	Appearance	
General appearance	Visual assessment	No distortion, defects, damaged components, excessive shrinkage/puckering
		between components
	Colorfastness	
CF to Crocking	AATCC 8/116	5 61 4
• General		Dry: Class 4
<ul> <li>Dark leather/suede</li> </ul>		Wet: Class 3
		Dry: Class 3 Wet: Class 2
Colorfastness to water: Color block/Contrast	AATCC 107	Color change: class 4
trims	AATCC 107	Staining: class 3
ums		Self-staining: class 4.5
Colorfastness to perspiration: Inner components	AATCC 15	Color change: class 4.
coloriasticss to perspiration. Timer components	Milee 13	Staining: class 3
		Self-staining: class 4.5
	Performance	231 5411119. 01405 115
Heel attachment: heels >5 cm	ASTM D1683 modified	150 lb minimum
Heel strength: heels >5 cm	BS 5131	No bending or cracking after 5
		cycles of 4 ft-lbs
Slip Resistance	MTS	0.40 minimum static
•		0.30 minimum kinetic
Sole wearing resistance	DIN 53516	No more than 350 cubic mm
		volume loss
Flex Resistance (If applicable)	MTS/SATRA	No cracking @35,000 cycles
Sole Bond durability	MTS	10 lb minimum
Reinforcement strength	MTS	25 lb minimum
Toe strap break	MTS	25 lb minimum
Component attachment strength	ASTM D7142	Functional: 15 lbs @ 10 secs
_		Non-Functional: 5 lbs @ 10
		secs



## DXL Group – Performance Specifications Sandals

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Analytical			
Lead in surface coatings*	ASTM E 1613/1645	Shall not exceed 90 ppm (0.09% by weight)	
Nickel * (For EU distribution only)	Spot Test	None present	
Formaldehyde – skin contact areas* (For	Spot Test	None present	
EU distribution only)			
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm	
* Dimethyl Furmarate (DMF) (For EU Distribution Only)	MTS In house method (Document Review)	Products placed or made available on the market shall comply with the requirements of Directive	
* Any fabric, leather, wood and desiccant (silica gel) packets.		2009/251/EC.  Max limit: 0.1 mg DMF per kg of	
* When product comes in contact with skin, test up to 3 like materials of the largest surface area.		the product or part of product.	
NOTE:		Effective date: 01 May 2009.	
Vendor to provide PKG Desiccant document and testing should only be completed if vendor cannot provide signed document		NOTE: - If the form is not filled out and attached in the TRF, please ask the vendor to return this form - If the form is not returned within 5 days of sending the vendor the document, please proceed with testing	
		- If the vendor cannot or will not return the form, please proceed with testing	



# DXL Group – Performance Specifications Sandals

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Sample Submission			
		USA	Asia
Darkest colorway – Full	3 pair	\$295.00	\$195.00
testing			
Including 2 common fibers			
Additional colorway –	2 pair	\$95.00	\$60.00
Colorfastness only			
Fabric (If requested by DXL	1 ½ yards	N/A	N/A
Group)			
Turnaround time (TAT)	3-4 working days		
	excluding analytical		
		47.00	
Chemical fiber content per fibe	er	45.00	14.00
Microscopic fiber content			
Two cellulosic fi	ber blend	95.00	65.00
Additional cellulosic fiber		50.00	22.00
One specialty hair fiber		100.00	32.00
Two specialty hair fiber blend		150.00	60.00
Additional specialty fiber		60.00	32.00
Lambs wool per yarn/per fiber		150.00	32.00
	<u>-</u>		
Lead Content		65.00	25.00
Nickel Qualitative		Spot	15.00 each
Nickel Quantitative		EN12471/EN1811	Coated -
_			\$128.00
			Uncoated -
A 1		ENI 14272	\$83.00
Azocolourants		EN 14362	70.00
Formaldehyde Qualitative		A056	15.00
Formaldehyde Quantitative		ISO 14184	20.00

Note: Protocol base price includes fiber identification of 2 common fibers

 $*Additional\ charge$ 

Individual test discount: 35% off local prices



### DXL Group – Performance Specifications Athletic Wear

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Test Property	Test Method	DXL Group Requirement
	Labeling	
Textile Fiber Products Identification Act (If	Visual	Fiber Content Label
claimed)		Care Label
Wool Products Labeling Act		Country of Origin
Guide for Select Leather and Imitation Leather		RN # or WPL #
Products		Size
EU Footwear Labeling Directive (EU		
distribution only)		
Canada Stuffed Articles Act (Canada		
distribution)		
	abric Construction	
Fiber Analysis* (If claimed)	AATCC 20A/ASTM D629	0% Single Fiber
		<u>+</u> 3% Blends
Fabric Weight (oz/sq yd)	ASM D3776	$\pm$ 5% from contracted weight
Thread Count	ASTM D3775	±5% from contracted weight
Yarn Size* ( If requested)	ASTM D1059	$\pm$ 5% from contracted weight
Defects	Visual assessment	Report all defects
	Appearance	
General appearance	Visual assessment	No distortion, defects,
		damaged components,
		excessive shrinkage/puckering
		between components
	Colorfastness	
CF to Crocking	AATCC 8/116	
<ul> <li>General</li> </ul>		Dry: Class 4
<ul> <li>Dark leather/suede</li> </ul>		Wet: Class 3
		Dry: Class 3
		Wet: Class 2
Colorfastness to water: Color block/Contrast	AATCC 107	Color change: class 4
trims		Staining: class 3
		Self-staining: class 4.5
Colorfastness to perspiration: Inner components	AATCC 15	Color change: class 4
		Staining: class 3
		Self-staining: class 4.5
Atmospheric fumes (white only)	AATCC 23	Class 4 minimum
	Performance	
Slip Resistance	MTS	0.40 minimum static
		0.30 minimum kinetic
Sole wearing resistance	DIN 53516	No more than 350 cubic mm
		volume loss
Flex Resistance (Upper component only)	MTS/SATRA	No cracking @35,000 cycles
Sole Bond durability	MTS	10 lb minimum
Toe Bond durability	MTS	30 lbs @ ½" circular sector
Reinforcement strength	MTS	25 lb minimum
Tongue strength	ASTM D1683 modified	30 lb minimum
Lace strength	ASTM D1683 modified	75 lb minimum



#### DXL Group – Performance Specifications Athletic Wear

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Lace durability	ASTM D3885 modified	100 cycles
Eyelet strength	ASTM D1683 modified	30 lb minimum
Component attachment strength	ASTM D7142	Functional: 15 lbs @ 10
		secs
		Non-Functional: 5 lbs @ 10
		secs
Waterproofing if claimed*	MTS	No leakage after 100,000
		cycles
	Analytical	
Lead in surface coatings*	ASTM E 1613/1645	Shall not exceed 90 ppm
		(0.09% by weight)
Nickel * (For EU distribution only)	Spot Test	None present
Formaldehyde – skin contact areas* (For	Spot Test	None present
EU distribution only)		
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm
* Dimethyl Furmarate (DMF)	MTS In house method	Products placed or made available
(For EU Distribution Only)	(Document Review)	on the market shall comply with the requirements of Directive
* Any fabric, leather, wood and desiccant (silica gel)		2009/251/EC.
packets.		
* When product comes in contact with skin, test up to 3		Max limit: 0.1 mg DMF per kg of the product or part of product.
like materials of the largest surface area.		the product of part of product.
		Effective date: 01 May 2009.
NOTE:		
Vendor to provide PKG Desiccant document and		NOTE: - If the form is not filled out and
testing should only be completed if vendor cannot provide signed document		attached in the TRF, please ask
provide signed document		the vendor to return this form
		- If the form is not returned
		within 5 days of sending the
		vendor the document, please proceed with testing
		process with testing
		- If the vendor cannot or will not
		return the form, please proceed with testing
	<u>l</u>	with testing



#### DXL Group – Performance Specifications Athletic Wear

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Sample S	ubmission		
		USA	Asia
Darkest colorway – Full	3 pair	\$295.00	\$195.00
testing			
Including 2 common fibers			
Additional colorway –	2 pair	\$95.00	\$60.00
Colorfastness only			
Fabric (If requested by DXL	1 ½ yards	N/A	N/A
Group)			
Turnaround time (TAT)	3-4 working days		
	excluding analytical		
Chemical fiber content per fiber	l er	45.00	14.00
Microscopic fiber content			
Two cellulosic fi	ber blend	95.00	65.00
Additional cellulosic fiber		50.00	22.00
One specialty hair fiber		100.00	32.00
Two specialty hair fiber blend		150.00	60.00
<ul> <li>Additional specialty fiber</li> </ul>		60.00	32.00
Lambs wool per yarn/per fiber		150.00	32.00
Lead Content		65.00	25.00
Nickel Qualitative		Spot	15.00 each
Nickel Quantitative		EN12471/EN1811	Coated -
Mickel Qualititative		EN124/1/EN1011	\$128.00
			Uncoated -
			\$83.00
Azocolourants		EN 14362	70.00
Formaldehyde Qualitative		A056	15.00
Formaldehyde Quantitative		ISO 14184	20.00

Note: Protocol base price includes fiber identification of 2 common fibers

\*Additional charge Individual test discount: 35% off local prices



## DXL Group – Performance Specifications Slippers

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Test Property	Test Method	DXL Group Requirement
	Labeling	
Textile Fiber Products Identification Act (If	Visual	Fiber Content Label
claimed)		Care Label
Wool Products Labeling Act		Country of Origin
Guide for Select Leather and Imitation Leather		RN # or WPL #
Products		Size
EU Footwear Labeling Directive (EU		
distribution only)		
Canada Stuffed Articles Act (Canada		
distribution)		
,	abric Construction	
Fiber Analysis* (If claimed)	AATCC 20A/ASTM D629	0% Single Fiber
Tibel Midiysis (if claimed)	70 11 CC 2010 115 1W D02)	±3% Blends
Fabric Weight (oz/sq yd)	ASM D3776	± 5% from contracted weight
Thread Count	ASTM D3775	±5% from contracted weight
Yarn Size* ( If requested)	ASTM D1059	± 5% from contracted weight
Defects	Visual assessment	Report all defects
	Appearance	
General appearance	Visual assessment	No distortion, defects,
		damaged components,
		excessive shrinkage/puckering
		between components
	Colorfastness	•
CF to Crocking	AATCC 8/116	
General	111100 0,110	Dry: Class 4
<ul> <li>Indigo dye, Pigment dye, Garment dye,</li> </ul>		Wet: Class 3
		Dry: Class 3
Lightly brushed or piled surface		Wet: Class 2
Colorfastness to water: Color block/Contrast	A A T C C 107	Color change: class 4
	AATCC 107	
trims		Staining: class 3
		Self-staining: class 4.5
Colorfastness to perspiration: Inner components	AATCC 15	Color change: class 4
		Staining: class 3
		Self-staining: class 4.5
	Performance	
Slip Resistance (Traditional non-textile sole)	MTS	0.40 minimum static
		0.30 minimum kinetic
Sole Bond durability	MTS	10 lb minimum
Toe Bond durability	MTS	30 lbs @ ½" circular sector
Reinforcement strength	MTS	25 lb minimum
Component attachment strength	ASTM D7142	Functional: 15 lbs @ 10 secs
component attachment strength	151111 15/172	Non-Functional: 5 lbs @ 10
		secs
	Analytical	5005
Load in surface coatings*	· ·	Shall not award 00 mm
Lead in surface coatings*	ASTM E 1613/1645	Shall not exceed 90 ppm
N' L Lis (E. EV. P	l g . m	(0.09% by weight)
Nickel * (For EU distribution only)	Spot Test	None present
Formaldehyde – skin contact areas* (For EU	Spot Test	None present
distribution only)		
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm
	•	



# DXL Group – Performance Specifications Slippers

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Analytical - continued			
* Dimethyl Furmarate (DMF)	MTS In house method	Products placed or made available	
(For EU Distribution Only)	(Document Review)	on the market shall comply with the requirements of Directive	
* Any fabric, leather, wood and desiccant (silica gel) packets.		2009/251/EC.	
•		Max limit: 0.1 mg DMF per kg of	
* When product comes in contact with skin, test up to 3 like materials of the largest surface area.		the product or part of product.	
NOTE:		Effective date: 01 May 2009.	
Vendor to provide PKG Desiccant document and		NOTE:	
testing should only be completed if vendor cannot		- If the form is not filled out and	
provide signed document		attached in the TRF, please ask	
		the vendor to return this form	
		- If the form is not returned	
		within 5 days of sending the vendor the document, please	
		proceed with testing	
		proceed with testing	
		- If the vendor cannot or will not	
		return the form, please proceed	
		with testing	

Sample Submission			
-		USA	Asia
Darkest colorway – Full testing	3 pair	\$275.00	\$180.00
Including 2 common fibers			
Additional colorway –	2 pair	\$95.00	\$60.00
Colorfastness only			
Fabric (If requested by DXL	1 ½ yards	N/A	N/A
Group)			
Turnaround time (TAT)	3-4 working days excluding analytical		
Chemical fiber content per fiber		45.00	14.00
Microscopic fiber content			
<ul> <li>Two cellulosic fiber blend</li> </ul>		95.00	65.00
<ul> <li>Additional cellulosic fiber</li> </ul>		50.00	22.00
<ul> <li>One specialty hair fiber</li> </ul>		100.00	32.00
Two specialty hair fiber blend		150.00	60.00
Additional specialty fiber		60.00	32.00
Lambs wool per yarn/per fiber		150.00	32.00
Lead Content		65.00	25.00
Nickel Qualitative		Spot	15.00 each
Nickel Quantitative		EN12471/EN1811	Coated - \$128.00
			Uncoated - \$83.00
Azocolourants		EN 14362	70.00
Formaldehyde Qualitative		A056	15.00
Formaldehyde Quantitative		ISO 14184	20.00

Note: Protocol base price includes fiber identification of 2 common fibers

 $*Additional\ charge$ 

Individual test discount: 35% off local prices