

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) Canada Stuffed Articles Act (Canada distribution)	Visual	Fiber Content Label Care Label Country of Origin RN # or WPL # Size
Fabric 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	±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 <ul style="list-style-type: none"> • General • Dark leather/suede 	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

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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 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 EU distribution only)	Spot Test	None present
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm
* Dimethyl Furmarate (DMF) (For EU Distribution Only) * Any fabric, leather, wood and desiccant (silica gel) packets. * When product comes in contact with skin, test up to 3 like materials of the largest surface area. NOTE: Vendor to provide PKG Desiccant document and testing should only be completed if vendor cannot provide signed document	MTS In house method (Document Review)	Products placed or made available on the market shall comply with the requirements of Directive 2009/251/EC. Max limit: 0.1 mg DMF per kg of the product or part of product. Effective date: 01 May 2009. 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
Boots and Shoes

Sample Submission		USA	Asia
Darkest colorway – Full testing Including 2 common fibers	3 pair	\$295.00	\$195.00
Additional colorway – Colorfastness only	2 pair	95.00	60.00
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 fiber		45.00	14.00
Microscopic fiber content			
• Two cellulosic fiber 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
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



DXL Group – Performance Specifications Sandals

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) Canada Stuffed Articles Act (Canada distribution)	Visual	Fiber Content Label Care Label Country of Origin RN # or WPL # Size
Fabric 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	±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 <ul style="list-style-type: none"> • General • Dark leather/suede 	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 (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

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 EU distribution only)	Spot Test	None present
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm
* Dimethyl Furmarate (DMF) (For EU Distribution Only) * Any fabric, leather, wood and desiccant (silica gel) packets. * When product comes in contact with skin, test up to 3 like materials of the largest surface area. NOTE: Vendor to provide PKG Desiccant document and testing should only be completed if vendor cannot provide signed document	MTS In house method (Document Review)	Products placed or made available on the market shall comply with the requirements of Directive 2009/251/EC. Max limit: 0.1 mg DMF per kg of the product or part of product. Effective date: 01 May 2009. 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

Sample Submission		USA	Asia
Darkest colorway – Full testing Including 2 common fibers	3 pair	\$295.00	\$195.00
Additional colorway – Colorfastness only	2 pair	\$95.00	\$60.00
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 fiber		45.00	14.00
Microscopic fiber content			
• Two cellulosic fiber 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
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



DXL Group – Performance Specifications
Athletic Wear

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) Canada Stuffed Articles Act (Canada distribution)	Visual	Fiber Content Label Care Label Country of Origin RN # or WPL # Size
Fabric 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	±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 <ul style="list-style-type: none"> • General • Dark leather/suede 	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
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

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 EU distribution only)	Spot Test	None present
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm
* Dimethyl Furmarate (DMF) (For EU Distribution Only) * Any fabric, leather, wood and desiccant (silica gel) packets. * When product comes in contact with skin, test up to 3 like materials of the largest surface area. NOTE: Vendor to provide PKG Desiccant document and testing should only be completed if vendor cannot provide signed document	MTS In house method (Document Review)	Products placed or made available on the market shall comply with the requirements of Directive 2009/251/EC. Max limit: 0.1 mg DMF per kg of the product or part of product. Effective date: 01 May 2009. 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
Athletic Wear

Sample Submission		USA	Asia
Darkest colorway – Full testing Including 2 common fibers	3 pair	\$295.00	\$195.00
Additional colorway – Colorfastness only	2 pair	\$95.00	\$60.00
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 fiber		45.00	14.00
Microscopic fiber content			
• Two cellulosic fiber 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
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



DXL Group – Performance Specifications Slippers

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) Canada Stuffed Articles Act (Canada distribution)	Visual	Fiber Content Label Care Label Country of Origin RN # or WPL # Size
Fabric 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	±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 <ul style="list-style-type: none"> • General • Indigo dye, Pigment dye, Garment dye, Lightly brushed or piled surface 	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		
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 Non-Functional: 5 lbs @ 10 secs
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 EU distribution only)	Spot Test	None present
Azocolorants* (For EU distribution only)	EN14362	Less than 30 ppm



DXL Group – Performance Specifications
Slippers

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

Sample Submission		USA	Asia
Darkest colorway – Full testing Including 2 common fibers	3 pair	\$275.00	\$180.00
Additional colorway – Colorfastness only	2 pair	\$95.00	\$60.00
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 fiber		45.00	14.00
Microscopic fiber content			
• Two cellulosic fiber 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
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