PRODUCT ENVIRONMENTAL FOOTPRINT CATEGORY RULES (PEFCR) APPAREL AND FOOTWEAR ANNEX V

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Definitions				
Sport segment	Product intended primarily for use in an organized or individual capacity			
	related to physical activity and designed with functional elements			
	specifically for the intended use and practiced activity. Product			
	appearance shall not be the sole characteristic evaluated to determine			
	inclusion in this segment.			
Legging Segment	Form fitting piece of apparel designed to be worn on the lower body, bu	+		
(Subcategory 7)	which does not cover the user's foot.	·		
(Subcategory 7)	which does not cover the aser's root.			
Thick Classic	Materials made from spun or filament yarns which have a linear density			
Segment	greater than 100 denier.			
(Subcategory 7)				
. , ,				
Sheer Segment	Materials made from filament yarns which have a linear density less than	n		
(Subcategory 7)	100 denier.			
Infant segment	Product is intended to be used by pre-walking consumers, footwear size			
	<27.			
Children segment	Product is intended to be used by consumers, footwear size <35.			
۸ مار راید م مرسود مربط	Duradicatio internal add to be used by a sure was the sure waither the first			
Adult segment	Product is intended to be used by consumers who are neither infants no children.	r		

Footwear with heel segment

Footwear with an added heel, made with a different material than the sole. The heel is attached with a metallic part (e.g. nail, screw, etc.) to the sole. The heel fatigue test is applicable to heel height \geq 5cm (toplift NOT included), heel attachment test is applicable to heel height \geq 5cm (toplift included).

Sport footwear with cleats segment

Footwear for sports needing cleats to enhance traction on a turf or other defined field. The activity can take place either indoors or outdoors. Cleats can be made from metal, plastic or rubber. The cleats are a major design element of the footwear.

Sport footwear for linear sports segment

Footwear for sports that consist of going forward in a linear motion such as jogging. These sports can be practiced indoors or outdoors, but not in the wilderness. The terrain will be stabilised, but not necessarily standardised. The sole will be intended for asphalt, concrete, gravel, or other cover that does not systematically require cleats.

Sport footwear for multidirectional sports segment

Footwear for sports that engage in agile movement in multiple directions such as basketball, racket sports, etc. Footwear which are not meant for a specific activity but made for daily use in an active capacity shall be considered part of this segment.

Sport slippers segment

Thin footwear intended for sports where foot precision is important. This includes sports such as ballet, boxing, climbing and other activities which are practiced on a specific surface, and which are not intended for prolonged walking.

Sport footwear for outdoor sport segment

Footwear for outdoor sports practiced on undefined and unnormalised terrain. The soles for this footwear are designed to handle surfaces such as mud, forest trails, loose or packed soil and other natural substrates.

Sport footwear for water sports segment

Footwear for sports intentionally performed with direct and prolonged contact to either fresh or salt water.

Part I: Physical Durability Test Conditions

Product Definition

For physical durability testing a product is defined by an individual and unique specific material composition, material construction, fabric weight, dyeing method and fabric treatment and finishes. If one of these areas differs, the same physical durability score cannot be applied and new tests must be conducted for the differing product. If different suppliers are used for any component materials in the product it will be assumed the physical durability does not change for the products. It is the responsibility of the producer to insure this is the case.

For a product available in different colourways:

- For apparel, at the minimum the darkest of the available colourways shall be run for physical durability tests. Additional tests may be run on additional colourways with the average result used for calculating the final product score. If a darker colourway of an existing product is released after the initial tests have been run the new darkest colourway must be tested. If the results are within 5% of the initial test results the initial test results may be used, otherwise the results need to be updated for determining the lifetime modifier.
- For footwear, durability tests shall be performed on the best-selling reference for products that are carry over from previous seasons. For new products, the colourway with the highest planned production volume or forecast shall be used.
- The same result score may be applied to all colourways of a specific product if they are produced within 1 year.

Example 1: A t-shirt available in five different colourways (but all the same product per above definition)

Choose the darkest colour for testing and apply the test results to all 5 t-shirts

Example 2: A 5-pack of socks where 2 or more pairs are different compositions (and thus different products per above definition)

All unique pairs of socks need to be tested individually and the weighted average score applied to the 5-pack, e.g. 2 pairs of one composition (A), 3 pairs of a different composition (B) would have a score calculated as follows

$$Multipack\ Score = \frac{2 \times Product\ A\ score + 3 \times Product\ B\ score}{5}$$

Selecting Samples for Physical Durability Testing

Whenever possible, the materials being tested should come from production quality products. For durability tests where the listed testing method allows for either material or product sampling, material sampling is allowed as long as no further processing occurs and the sampling is conducted on the same material as that which will be assembled into the product. For example, the fabric strength test can be run on bulk material production samples unless the product goes through additional processing (garment wash, heat setting, etc.). Note: Tests that require product evaluation after care cycles (i.e. Dimensional Stability, Spirality and Appearance after washing) shall be conducted at the product level and shall not be conducted at a material level.

Samples shall be selected based on majority composition of the products. Any individual material comprising over 5% of the total composition of the product will need to be tested. All tests shall come from the same subcategory with any further differentiation made based on the most relevant segment for a material. The total score for the product will be calculated based on the weighted average of all individual scores.

Example: A non-sport t-shirt comprised of 70% cotton and 30% polyester where the front panel is a 100% jersey knit cotton and the back panel is a 100% woven polyester.

- The cotton front panel shall be tested according to the Subcategory 1, knit, non-sport testing table to generate an IQM for the first material.
- The polyester back panel shall be tested according to the Subcategory 1, woven, all uses testing table to generate an IQM for the second material.

The IQM used to determine the product lifetime modifier shall be the lower of the two individual material IQMs.

Apparel Care Cycle Conditions

Follow the specific care instructions on the product's care label. Table 1 shall be used for products with wet wash methods and table 2 shall be used for dry clean only products.

For Dimensional Stability (ISO 6330/ISO 5077) and Spirality (ISO 16322-3) testing the following conditionals shall be used based on the care instructions of the product.

Table 1 – Domestic Wash Conditions for Dimensional Stability and Spirality Tests

Procedure	Repeat	Conditions
Machine Wash	5 cycles	Type A washing machine with detergent 3 (for products with very mild/delicate/hand wash symbol (such as products containing wool or silk), use detergent 7). Ballast: according to Standard Hand Wash: According to ISO wash programs
Line/Flat Dry	After final wash	Follow instructions per ISO 6330
Tumble Dry	After each wash	Type A1. Ballast: according to
		Standard
Ironing	After final drying	Hand iron

Table 2 – Professional Cleaning Conditions for Dimensional Stability and Spirality Tests

Procedure	Repeat	Conditions
Dry Clean	3 cycles	Dry cleaning shall be conducted using the relevant dry cleaning ISO standard (ISO 3175-2 to 3175-4) based on the care label of the product.
Ironing	After final cycle	

For Appearance after Care Cycle (ISO 15487) testing the following conditions shall be used based on the care instruction of the product. Table 3 shall be used for products with wet wash methods and table 4 shall be used for dry clean only products.

Table 3 – Domestic Wash Conditions for Appearance Tests

Procedure	Repeat	Conditions
Machine Wash	15 cycles	Type A washing machine with
	Exception:	detergent 3 (for products over 80%
	Subcategory 4 and	use detergent 7).
	products with hand	Ballast: according to Standard
	wash symbol:	Hand Wash: According to ISO wash
	5 cycles	programs
Line/Flat Dry	After 5 washes and	Follow instructions per ISO 6330
	after the final wash	
Tumble Dry	After each of the first	Type A1. Ballast: according to
	5 washes and then	Standard
	after washes 10 and	
	15 (Subcategory 4	
	after each of first 5	
	washes only)	

Ironing	After final drying	Hand iron	
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Table 4 – Professional Cleaning Conditions for Appearance Tests

Procedure	Repeat	Conditions
Dry Clean	5 cycles	Dry cleaning shall be conducted using the relevant dry cleaning ISO standard (ISO 3175-2 to 3175-4) based on the care label of the product.
Ironing	After final cycle	

Apparel Test Conditions

ISO 16322-3: Determination of spirality after laundering

Part 3: Woven and knitted garments

Run test according to procedure B, evaluation of actual product. Use the care cycles regime described above.

ISO 20932-1: Determination of the elasticity of fabrics

Part 1: Strip tests – Method A (min. recovery %)

This test shall be run using Method A with a load of 30N for woven fabrics and 15N for knitted fabrics. Results will be evaluated after a 30 minute relaxation period. Benchmark of 100mm recommended.

ISO 20932-3: Determination of the elasticity of fabrics

Part 3: Narrow fabrics (min. recovery %)

This test shall be run using Method A on a 10 cm length of product and measured mounted on machine after 5 fatigue cycles and one minute recovery.

ISO 13938-1 (or 2): Bursting properties of fabrics

Part 1: Hydraulic or optionally Part 2: pneumatic method for determination of bursting strength and bursting distension (Kpa)

This test shall be run according to the ISO method using the 7.3 cm² sample holder.

EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method

Part 2: Determination of specimen breakdown (cycles)

This test shall be run with a load of 9 kPa to an end point of 2 broken yarns for woven products and 1 broken yarn for knit products.

EN 13770: Determination of the abrasion resistance of knitted footwear garments

This test shall be run using method 2 for complete products on leg form.

ISO 13934-2: Tensile properties of fabrics

Part 2: Determination of maximum force using the grab method (N)

This test shall be run according to the ISO method. The lowest average of horizontal or vertical test results shall be used to determine which of the threshold is met.

ISO 13937-1: Tear properties of fabrics

Part 1: Determination of tear force using ballistic pendulum method (Elmendorf) (N)

This test shall be run according to the ISO method. The lowest average of horizontal or vertical test results shall be used to determine which threshold is met.

ASTM D3939: Test method for snagging resistance of fabrics (Mace)

This test shall be run for 600 revolutions at 60 revolutions per minute.

BS 8479 modified: Method to determine a fabric's propensity to snagging (snagpod)

This test shall be run as outlined in the test method.

ISO 12945-1: Determination of fabric propensity to surface pilling, fuzzing or matting

Part 1: Pilling box method

The results for this test shall be evaluated after 10,800 revolutions (180 minutes at 60 revolutions per minute) for each direction.

ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics

Part 2: Fixed load method (mm), Main Fabric or Lining

This test shall be run according to the ISO method and the reported value shall be the average force measurement over 5 measurements on the weakest seam or, failing that, on an inside seam. Refer to standard for the relevant force setting.

ISO 105-E02: Tests for colour fastness, Part E02: Colour fastness to sea water This test shall be run according to the ISO method.

ISO 105-E03: Tests for colour fastness, Part E03: Colour fastness to chlorinated water

This test shall be run according to the ISO method. The concentration of chlorine shall be 50 milligrams per liter.

ISO 105-B02: Tests for colourfastness, Part B02: Colour fastness to artificial light: Xenon arc fading lamp test

This test shall be run using method 3. Assessment shall be conducted using European A1 conditions on a blue scale rating. No test is necessary on white coloured products. End point: Blue wool 4 graded at 4 on the grey scale.

ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying

Product Aspect: Holes or broken yarn

Assessment rating of grade 1 for presence of defect (hole) or grade 5 for absence of defect (no hole)

Product aspect: Pulled yarn

Assessment rating of grade 1 for presence of defect (pulled yarn) or grade 5 for absence of defect (no pulled yarn)

Appearance of collar & edges: Looseness

Assessment rating of grade 1 for severe or distinct change in appearance, grade 3 for moderate change in appearance or grade 5 for no or negligible change in appearance.

Pilling and fuzzing

Assessment reference ISO 12945-4 and ISO 15487 7.8.4. Assessment rating as follows (half grades are allowed):

Grade 1 for severe pilling/dense surface fuzzing/dense surface matting
Grade 2 for distinct pilling/distinct surface fuzzing/distinct surface matting
Grade 3 for moderate pilling/moderate surface fuzzing/moderate surface matting
Grade 4 for slight surface pilling/slight surface fuzzing/slight surface matting
Grade 5 for no change

Collar appearance: Curled or blistered aspect

Assessment rating of grade 1 for severe or distinct change in appearance, grade 3 for moderate change in appearance or grade 5 for no or negligible change in appearance.

Interlining & reinforcements

Assessment rating of grade 1 for severe or distinct change in appearance, grade 3 for moderate change in appearance or grade 5 for no or negligible change in appearance.

Underwire aspect: Piercing

Assessment rating of grade 1 for presence of defect (piercing) or grade 5 for absence of defect (no piercing)

Product aspect: Broken elastane (goes out)

Assessment rating of grade 1 for presence of defect (broken elastane), grade 3 for absence of defect (elastane goes out, but no broken yarn) or grade 5 absence of defect (no defect).

Fabric appearance: Delamination

Assessment rating of grade 1 for presence of defect (delamination) or grade 5 for absence of defect (no delamination)

Shell appearance: Curled or blistered aspect

Assessment rating of grade 1 for severe or distinct change in appearance, grade 3 for moderate change in appearance or grade 5 for no or negligible change in appearance.

Handling of functional accessories

Perform ten iterations on each type of functional accessory in their entire operation. Assessment rating of grade 1 for functional accessories which work poorly or no longer work or grade 5 for functional accessories which work perfectly as new.

Trim and accessories appearance

Assessment rating of grade 1 for severe or distinct change in appearance, grade 3 for moderate change in appearance or grade 5 for no or negligible change in appearance.

Colour change: Prints & embroideries

Assessment shall be graded according to ISO 105-A02 under clause 7.9. Assessment ratings as follow (half grades allowed):

Grade 1 – Very degraded colour according to grey scale

Grade 2 – Gradient colour

Grade 3 – Medium gradient colour

Grade 4 – Slightly degraded colour

Grade 5 – Colour intact as new, initial appearance

Colour change: Main fabric

Assessment shall be graded according to ISO 105-A02 under clause 7.9. Assessment ratings as follow (half grades allowed):

Grade 1 – Very degraded colour according to grey scale

Grade 2 - Gradient colour

Grade 3 – Medium gradient colour

Grade 4 - Slightly degraded colour

Grade 5 – Colour intact as new, initial appearance

Colour change: Lining

Assessment shall be graded according to ISO 105-A02 under clause 7.9. Assessment ratings as follow (half grades allowed):

Grade 1 – Very degraded colour according to grey scale

Grade 2 - Gradient colour

Grade 3 – Medium gradient colour

Grade 4 - Slightly degraded colour

Grade 5 – Colour intact as new, initial appearance

Footwear Test Conditions

ISO 24266: 2000 Method B (sport shoes only) Test Methods for Whole Shoe – Flexing Durability

Test method

Flexing rate: (230 ± 10) cycles per minutes

Flexing angle: 50° ± 1° Without cut on the outsole

Flexion limit:

Max rigidity: At 30N bending force must be lower than 45° (ISO:) Max thickness: 25 mm (combined outsole, midsole and insole)

ISO 17704: 2004 Footwear – Test Methods for Uppers, Linings and Insocks – Abrasion

Resistance

Upper Abrasion

Conditions: Dry conditions

Samples shall be taken at 30% of the shoe length from the front. If the shoe is without protection then the test shall be of the thinnest material from which a 38 mm diameter sample can be obtained. If the shoe has protection then the sample shall be a 38 mm diameter sample from the protection area. Tests shall be run on 2 specimens. Before testing, remove all material overlaps to avoid high local pressure points on the material during the test. Test only the outer face of the upper. The material shall be considered to have a hole if there are broken threads in an area with a diameter of 2.5 mm.

Conditions: Dry conditions with abrasion paper

Samples shall be taken at 30% of the shoe length from the front. If the shoe is without protection then the test shall be of the thinnest material from which a 38 mm diameter sample can be obtained. If the shoe has protection then the sample

shall be a 38 mm diameter sample from the protection area. Tests shall be run on 2 specimens. Before testing, remove all material overlaps to avoid high local pressure points on the material during the test. Test only the outer face of the upper. Use P400 sandpaper with a pressure of 9 kPa. New sandpaper shall be used at the start of every test and shall be replaced every 300 cycles. The material shall be considered to have a hole if there are broken threads in an area with a diameter of 2.5 mm.

Lining Abrasion

Conditions: Wet conditions

Samples shall be taken from the heel or collar lining of the footwear. The sample shall be without any seams, superposition or component limits. If there is no lining, test the inner face of the upper material (both heel and front of shoe). Use wool for the abradant. A new wool abradant shall be used for every test and shall be replaced every 50,000 cycles. The material shall be considered to have a hole if there are broken threads in an area with a diameter of 2.5 mm.

ISO 20871: 2018 Footwear – Test Methods for Outsoles – Abrasion Resistance

Sample preparation

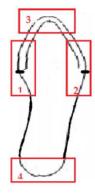
Sampling should be done on flat area of the sole if possible. If this is not possible, remove the patterns to have a flat test specimen. The sampling area shall be the main outsole material/component.

ISO 17708: 2018 Footwear – Test Methods for Whole Shoe – Upper Sole Adhesion

Samples shall be taken from the following 4 zones

- 1. Flexing medial
- 2. Flexing lateral
- 3. Forefoot
- 4. Heel

Zones 1, 2 and 4 will need samples 50 mm in length and 10 mm in width. Samples from Zone 3 will need to be 25 mm in length and 10 mm in width. Tests shall be run at 100 mm per minute. For each area the individual results will be averaged together and the lowest result will be used for evaluating the product.



ISO 17708: 2018 Footwear – Test Methods for Whole Shoe – Outsole-midsole Adhesion

This test is only applicable if the outsole is bonded to the midsole. If this test is necessary the follow the same instructions as those for Upper Sole Adhesion.

Part II: Subcategory and Segment Physical Durability Tables

Note

The durability tables listed in this annex do not apply to apparel products made up of 80% or more genuine leather and/or fur.

Subcategory 1: T-shirts

Segment: Woven, All uses

Table 5 - Subcategory 1: T-shirts, Segment: Woven, All uses

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 10%	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	2 of 3 needed, 10%	6,000 < x ≤ 15,000	15,000 < x ≤ 25,000	x > 25,000
	ISO 13934-2: Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method (N)	2 of 3 needed, 10%	100 < x ≤ 150	150 < x ≤ 300	x > 300
	ISO 13937-1: Tear properties of fabrics - Part 1: Determination of tear force using ballistic pendulum method (Elmendorf) (N)	2 of 3 needed, 10%	6 < x ≤ 8	8 < x ≤ 12	x > 12
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Collar appearance: Curled or blistered aspect	No, 8%	negligibl Moderate cha Below Ba	Aspirational (15 pt): x = 5, No or negligible change in appearance Moderate (10 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe of distinct change in appearance	appearance 3, Moderate arance 1, Severe or
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn		

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Seam Aspect Damage	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Main fabric	Yes, 10%	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5 accessories work perfect Below Basic (0 pt): x= 1, accessories which work perfect longer work	ectly as new 1, Functional k poorly or no		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change i appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 10%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: Knit, Non-sport

Table 6 - Subcategory 1: T-shirts, Segment: Knit, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 12%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%		
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 12%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%		
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 8%	8,000 < x ≤ 10,000	10,000 < x ≤ 20,000	x > 20,000		
	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 12%	200 < x ≤ 300	300 < x ≤ 400	x > 400		
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 12%		Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 8%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 12%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work				
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change appearance				

				1, Severe or opearance	
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 12%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5

Segment: Knit, Sport

Table 7 - Subcategory 1: T-shirts, Segment: Knit, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%		x ≤ 3%	
Determation.	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 11%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%	
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 7%	8,000 < x ≤ 10,000	10,000 < x ≤ 20,000	x > 20,000	
	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 12%	200 < x ≤ 300	300 < x ≤ 400	x > 400	
Fabric Aspect	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 7%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 7%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	accessori Below Ba accessori	ries work perf asic (0 pt): x= es which wor longer wor	1, Functional k poorly or no k	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Subcategory 2: Shirts & Blouses

Segment: Woven, All uses

Table 8 - Subcategory 2: Shirts & Blouses, Segment: Woven, All uses

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 10%	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Deformation	(%)				

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational	
Category		Weighting	Level	Level	Level	
Fabric	EN ISO 12947-2 : Determination of the abrasion resistance of fabrics by the	2 of 3	6,000 < x	15,000 < x	x > 25,000	
Strength	Martindale method	needed,	≤ 15,000	≤ 25,000		
	- Part 2: Determination of specimen breakdown (cycles)	10%				
	ISO 13934-2: Tensile properties of fabrics	2 of 3	100 < x ≤	150 < x ≤	x > 300	
	- Part 2: Determination of maximum force using the grab method (N)	needed,	150	300		
		10%				
	ISO 13937-1: Tear properties of fabrics	2 of 3	6 < x ≤ 8	8 < x ≤ 12	x ≤ 12	
	- Part 1: Determination of tear force using ballistic pendulum method (Elmendorf)	needed,				
	(N)	10%				
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Collar appearance: Curled or blistered aspect	No, 8%	Aspirational (15 pt): x = 5, No or negligible change in appearance Moderate (10 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	Absence of defect (15 pt): no hole and			
	products after domestic washing and drying		no broken yarn			
	- Product aspect: Holes or broken yarn		Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Seam Aspect	ISO 13936-2 : Determination of the slippage resistance of yarns at a seam in woven	Yes, 10%	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2	
Damage	fabrics					
	- Part 2: Fixed load method (mm): Main fabric					
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance			

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	- Trims and accessories appearance		Basic (5 pt): x = 3, Moderate char appearance			
			Below Basic (0 pt): x = 1, S distinct change in appea			
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 4%	x = 3	3/4 ≤ x ≤	x ≥ 4/5	
Damage	products after domestic washing and drying			4		
	- Colour change: Prints & embroideries					
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	x = 3	3/4 ≤ x ≤	x ≥ 4/5	
	products after domestic washing and drying			4		
	- Colour change: Main fabric					

Segment: Knit, Non-sport

Table 9 - Subcategory 2: Shirts & Blouses, Segment: Knit, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 12%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 12%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 8%	8,000 < x ≤ 10,000	10,000 < x ≤ 20,000	x > 20,000
	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 12%	200 < x ≤ 300	300 < x ≤ 400	x > 400
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 12%		t): no hole and arn pt): hole or n		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 8%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 12%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 12%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: Knit, Sport

Please refer to Part I above for information on how to run the tests in the table below.

Table 10 - Subcategory 2: Shirts & Blouses, Segment: Knit, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%		
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 11%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%		
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 7%	8,000 < x ≤ 10,000	10,000 < x ≤ 20,000	x > 20,000		
	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 11%	200 < x ≤ 300	300 < x ≤ 400	x > 400		
Fabric Aspect	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 8%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%		Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 7%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work				
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance				

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5

Subcategory 3: Sweaters & midlayers

Segment: All technicities, Non-sport

Table 11 - Subcategory 3: Sweaters & midlayers, Segment: All technicities, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 10%	5 < x ≤ 7%		x ≤ 3%	
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 10%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%	
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	No, 8%	200 < x ≤ 300	300 < x ≤ 500	x > 500	
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	Yes, 10%	2 ≤ x ≤ 3	3 < x ≤ 4	x > 4	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Pulled yarn	Yes, 10%	Absence of defect (15 pt): no pulled yarn Presence of defect (0 pt): pulled yarn			

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Appearance of collar & edges: Looseness	No, 4%	negligib Moderat ch Below Ba	x = 5, No or appearance 3, Moderate arance 1, Severe or ppearance		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	Yes, 10%	2 < x ≤ 3	3 < x ≤ 4	x > 4	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 10%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: All technicities, Sport

Table 12 - Subcategory 3: Sweaters & midlayers, Segment: All technicities, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 9%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%	
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 9%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%	
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 9%	200 < x ≤ 300	300 < x ≤ 400	x > 500	
Fabric Aspect	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	No, 4%	x = 3	3 < x < 4	x = 4	
Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	Yes, 9%	2 ≤ x ≤ 3	3/4 ≤ x ≤ 4	x > 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 9%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Pulled yarn	Yes, 9%		yarn	pt): no pulled t): pulled yarn	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Appearance of collar & edges: Looseness	No, 7%	Aspirational (15 pt): x = 5, No or negligible change in appearance Moderate (10 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	Yes, 9%	$2 < x \le 3$ $3 < x \le 4$ $x > 4$			
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 9%	accessor Below Ba	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work		

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	negligit Basic (5 p	tional (15 pt): 2 ble change in 2 t): x = 3, Mode appearance asic (0 pt): x = ct change in a	appearance erate change in se 1, Severe or
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 9%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5

Subcategory 4: Jackets & Coats

Segment: Woven, Non-sport

Table 13 - Subcategory 4: Jackets & Coats, Segment: Woven, Non-sport

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 11	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Deformation	(%)	%			
Fabric	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the	2 of 3	8,000 < x	15,000 < x	x > 25,000
Strength	Martindale method	needed,	≤ 15,000	≤ 25,000	
	- Part 2: Determination of specimen breakdown (cycles)	10%			
	ISO 13934-2: Tensile properties of fabrics	2 of 3	120 < x ≤	200 < x ≤	x > 300
	- Part 2: Determination of maximum force using the grab method (N)	needed,	200	300	
		10%			

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
Category	ISO 13937-1: Tear properties of fabrics - Part 1: Determination of tear force using ballistic pendulum method (Elmendorf) (N)	2 of 3 needed, 10%	6 < x ≤ 10	10 < x ≤ 15	x > 15		
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Interlining & reinforcements	No, 3%	negligib Basic (5 pt	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 3%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%		Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
Seam Aspect Damage	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Main fabric	Yes, 11%	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2		
	ISO 13936-2 : Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Lining	No, 3%	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2		
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work				
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 3%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance				

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 3%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
Damage	products after domestic washing and drying			4	
	- Colour change: Prints & embroideries				
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
	products after domestic washing and drying			4	
	- Colour change: Main fabric				
	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 3%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
	products after domestic washing and drying			4	
	- Colour change: Lining				

Segment: Woven, Sport

Table 14 - Subcategory 4: Jackets & Coats, Segment: Woven, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 11%	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	2 of 3 needed, 11%	20,000 < x ≤ 30,000	30,000 < x ≤ 40,000	x > 40,000
	ISO 13934-2: Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method (N)	2 of 3 needed, 11%	150 < x ≤ 250	250 < x ≤ 400	x > 400
	ISO 13937-1: Tear properties of fabrics - Part 1: Determination of tear force using ballistic pendulum method (Elmendorf) (N)	2 of 3 needed, 11%	6 < x ≤ 15	15 < x ≤ 20	x > 20
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Interlining & reinforcements	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance		

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational	
Category		Weighting	Level	Level	Level	
					: 1, Severe or	
	ICO 15407. Nath ad fau accessing annual and ath automilla and	NI - 40/		ppearance		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%		f defect (15 p no broken y ce of defect (0		
	- Froduct aspect. Holes of broken yarn		rresenc	broken yaı		
Seam Aspect Damage	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Main fabric	No, 4%	x = 4	2 < x < 4	x ≤ 2	
	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Lining	No, 4%	x = 4	2 < x < 4	x ≤ 2	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 4%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
	products after domestic washing and drying			4	
	- Colour change: Lining				

Segment: Knit, Non-sport

Table 15 - Subcategory 4: Jackets & Coats, Segment: Knit, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 14%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%	
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 14%	250 < x ≤ 300	300 < x ≤ 400	x > 400	
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 5%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 14%		defect (15 p no broken ya e of defect (0 broken yar	pt): hole or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Interlining & reinforcements	No, 5%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 5%	$x = 2/3 \qquad 3 \le x \le 4 \qquad x \ge 4/5$			

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 14%	Aspirational (15 pt): x = 5, Functions accessories work perfectly as new Below Basic (0 pt): x= 1, Functiona accessories which work poorly or n longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 5%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change ir appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 5%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 14%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Lining	No, 5%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: Knit, Sport

Table 16 - Subcategory 4: Jackets & Coats, Segment: Knit, Sport

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 13%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
Deformation	(%)				
Fabric	ISO 13938-1 (or 2): Bursting properties of fabrics	Yes, 13%	250 < x ≤	300 < x ≤	x > 400
Strength	- Part 1: Hydraulic method for determination of bursting strength and bursting		300	400	
	distension (Kpa)				

Fabric Aspect Damage	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	Yes, 13%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 12%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Interlining & reinforcements	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 12%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearanceBelow Basic (0 pt): Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying	Yes, 13%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

- Colour change: Main fabric				
ISO 15487: Method for assessing appearance of apparel and other textile end	No, 4%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
products after domestic washing and drying			4	
- Colour change: Lining				

Subcategory 5: Pants & Shorts

Segment: Woven, Non-sport

Table 17 - Subcategory 5: Pants & Shorts, Segment: Woven, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 9%	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Deformation	(%)				
	ISO 20932-1: Determination of the elasticity of fabrics	No, 9%	85 < x ≤	90 < x ≤	x > 95
	- Part 1: Strip tests – Method A (min. recovery %) ¹		90	95	
	ISO 16322-3: Determination of spirality after laundering	No, 7%	4 < x ≤ 5%	3 < x ≤ 4%	x ≤ 3%
	- Part 3: Woven and knitted garments (%)				
Fabric	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the	2 of 3	8,000 < x	15,000 < x	x > 25,000
Strength	Martindale method	needed, 9%	≤ 15,000	≤ 25,000	
	- Part 2: Determination of specimen breakdown (cycles)				
	ISO 13934-2: Tensile properties of fabrics	2 of 3	120 < x ≤	200 < x ≤	x > 300
	- Part 2: Determination of maximum force using the grab method (N)	needed, 9%	200	300	
	ISO 13937-1: Tear properties of fabrics	2 of 3	6 < x ≤ 10	10 < x ≤	x > 15
	- Part 1: Determination of tear force using ballistic pendulum method (Elmendorf)	needed, 9%		15	
	(N)				
Fabric Aspect	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 9%	Absence of defect (15 pt): no hole		
Damage	products after domestic washing and drying		no broken yarn		
	- Product aspect: Holes or broken yarn		Presence of defect (0 pt): hole or		
			broken yarn		

¹ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5		
Seam Aspect Damage	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Main fabric	Yes, 9%	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2		
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 9%	accesso Below Ba	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	negligib Basic (5 pt	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 9%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5		

Segment: Woven, Sport

Table 18 - Subcategory 5: Pants & Shorts, Segment: Woven, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 10%	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Deformation	(%)				

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
<i>.</i>	ISO 20932-1: Determination of the elasticity of fabrics - Part 1: Strip tests – Method A (min. recovery %) ²	No, 10%	85 < x ≤ 90	90 < x ≤ 95	x > 95
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	No, 3%	4 < x ≤ 5%	3 < x ≤ 4%	x ≤ 3%
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	2 of 3 needed, 10%	20,000 < x ≤ 30,000	30,000 < x ≤ 40,000	x > 40,000
	ISO 13934-2: Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method (N)	2 of 3 needed, 10%	150 < x ≤ 250	250 < x ≤ 400	x > 400
	ISO 13937-1: Tear properties of fabrics- Part 1: Determination of tear force using ballistic pendulum method (Elmendorf)(N)	2 of 3 needed, 10%	6 < x ≤ 15	15 < x ≤ 20	x > 20
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 3%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
Seam Aspect Damage	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Main fabric	No, 8 %	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work		
	ISO 15487 : Method for assessing appearance of apparel and other textile end products after domestic washing and drying	No, 3%	Aspirational (15 pt): x = 5, No or negligible change in appearance		

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² Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
	- Trims and accessories appearance		Basic (5 pt	Basic (5 pt): x = 3, Moderate chan			
			Below Basic (0 pt): x = 1, Several distinct change in appeara				
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 3%	x = 3	3/4 ≤ x ≤	x ≥ 4/5		
Damage	products after domestic washing and drying			4			
	- Colour change: Prints & embroideries						
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	x = 3	3/4 ≤ x ≤	x ≥ 4/5		
	products after domestic washing and drying			4			
	- Colour change: Main fabric						

Segment: Knit, Non-sport

Table 19 - Subcategory 5: Pants & Shorts, Segment: Knit, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-1: Determination of the elasticity of fabrics - Part 1: Strip tests – Method A (min. recovery %) ³	No, 11%	80 < x ≤ 85	85 < x ≤ 90	x > 90
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	No, 7%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 11%	250 < x ≤ 300	300 < x ≤ 400	x > 400
	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 11%	8,000 < x ≤ 15,000	15,000 < x ≤ 25,000	x > 25,000

³ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%		Absence of defect (15 pt no broken ya Presence of defect (0 broken yarı		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	$x = 3 \qquad 3/4 \le x \le \qquad x \ge 4$			

Segment: Knit, Sport

Please refer to Part I above for information on how to run the tests in the table below.

Table 20 - Subcategory 5: Pants & Shorts, Segment: Knit, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 10%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-1: Determination of the elasticity of fabrics - Part 1: Strip tests – Method A (min. recovery %) ⁴	No, 10%	80 < x ≤ 85	85 < x ≤ 90	x > 90
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	No, 4%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 10%	250 < x ≤ 300	300 < x ≤ 400	x > 400
	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 10%	20,000 < x ≤ 30,000	30,000 < x ≤ 40,000	x > 40,000
Fabric Aspect Damage	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	Yes, 10%	NA	3 < x < 4/5	x ≥ 4/5
	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work		

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⁴ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	negligit Basic (5 pt Below Ba	appearance	appearance erate change in se : 1, Severe or
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 4%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
Damage	products after domestic washing and drying			4	
	- Colour change: Prints & embroideries				
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
	products after domestic washing and drying			4	
	- Colour change: Main fabric				

Subcategory 6: Dresses, Skirts & Jumpsuits

Segment: Woven, All uses

Table 21 - Subcategory 6: Dresses, Skirts & Jumpsuits, Segment: Woven, All uses

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 11%	4 < x ≤ 6%	2 < x ≤ 4%	x ≤ 2%
Deformation	(%)				
	ISO 20932-1: Determination of the elasticity of fabrics	No, 11%	85 < x ≤	90 < x ≤	x > 95
	- Part 1: Strip tests – Method A (min. recovery %) ⁵		90	95	
Fabric	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the	No, 7%	6,000 < x	15,000 < x	x > 25,000
Strength	Martindale method		≤ 15,000	≤ 25,000	
	- Part 2: Determination of specimen breakdown (cycles)				

⁵ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	ISO 13934-2: Tensile properties of fabrics	No, 7%	100 < x ≤	150 < x ≤	x > 300	
	- Part 2: Determination of maximum force using the grab method (N)		150	300		
	ISO 13937-1: Tear properties of fabrics- Part 1: Determination of tear force using ballistic pendulum method (Elmendorf)(N)	No, 3%	6 < x ≤ 8	8 < x ≤ 12	x > 12	
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%		defect (15 p no broken y e of defect (0 broken yar	pt): hole or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 7%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Seam Aspect Damage	ISO 13936-2: Determination of the slippage resistance of yarns at a seam in woven fabrics - Part 2: Fixed load method (mm): Main fabric	Yes, 11%	4 < x ≤ 6	2 < x ≤ 4	x ≤ 2	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 7%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 3%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: Knit, Non-sport

Please refer to Part I above for information on how to run the tests in the table below.

Table 22 - Subcategory 6: Dresses, Skirts & Jumpsuits, Segment: Knit, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%	
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	Yes, 11%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%	
	ISO 20932-1: Determination of the elasticity of fabrics - Part 1: Strip tests – Method A (min. recovery %) ⁶	No, 11%	85 < x ≤ 90	90 < x ≤ 95	x > 95	
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	No, 7%	200 < x ≤ 300	300 < x ≤ 400	x > 400	
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 7%	x = 2/3	2/3 < x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Pulled yarn	No, 3%	Absence of defect (15 pt): no pulled yarn Presence of defect (0 pt): pulled yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 7%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying	Yes, 11%	Aspirational (15 pt): x = 5, Functiona accessories work perfectly as new			

-

⁶ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
Accessories Aspect Damage	- Handling of functional accessories		Below Basic (0 pt): x= 1, Functional accessories which work poorly or relonger work				
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 7%	negligit Basic (5 p	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 3%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5		

Segment: Knit, Sport

Table 23 - Subcategory 6: Dresses, Skirts & Jumpsuits, Segment: Knit, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying	Yes, 10%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
Deformation	(%) ISO 16322-3: Determination of spirality after laundering	Yes, 10%	6 / v < 9%	4 < x ≤ 6%	x ≤ 4%
	- Part 3: Woven and knitted garments (%)	163, 1070	0 < X \(\) 8/0	4 < X ≤ 0/0	X 2 4/0
	ISO 20932-1: Determination of the elasticity of fabrics	No, 10%	85 < x ≤	90 < x ≤	x > 95
	- Part 1: Strip tests – Method A (min. recovery %) ⁷		90	95	

⁷ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	No, 7%	200 < x ≤ 300	300 < x ≤ 400	x > 400	
Fabric Aspect Damage	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	No, 7%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 7%	x = 2/3	2/3 < x ≤ 3/4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 9%		defect (15 p no broken y e of defect (0 broken yar	pt): hole or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Pulled yarn	No, 3%	Absence of defect (15 pt): no pulled yarn Presence of defect (0 pt): pulled yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 7%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 7%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 3%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
	products after domestic washing and drying			4	
	- Colour change: Main fabric				

Subcategory 7: Leggings, Stockings, Tights and Socks

Due to specific construction considerations in this subcategory the products will be segmented into "Leggings", "Classic thick" technicity segment and "Sheer" technicity segment. Full definitions can be found in the **Definitions** section of this Annex.

Segment: Leggings, Non-sport

Table 24 - Subcategory 7: Leggings, Stocking, Tights and Socks, Segment: Leggings, Non-sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-1: Determination of the elasticity of fabrics - Part 1: Strip tests – Method A (min. recovery %) ⁸	No, 11%	80 < x ≤ 85	85 < x ≤ 90	x > 90
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	No, 7%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 12%	250 < x ≤ 300	300 < x ≤ 400	x > 400
	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 10%	8,000 < x ≤ 15,000	15,000 < x ≤ 25,000	x > 25,000
Fabric Aspect Damage	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5

⁸ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%		Absence of defect (15 pt no broken ya Presence of defect (0 broken yarı		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: Leggings, Sport

Table 25 - Subcategory 7: Leggings, Stocking, Tights and Socks, Segment: Leggings, Non, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077 : Determination of dimensional change after washing and drying (%)	Yes, 10%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-1: Determination of the elasticity of fabrics - Part 1: Strip tests – Method A (min. recovery %) ⁹	No, 10%	80 < x ≤ 85	85 < x ≤ 90	x > 90
	ISO 16322-3: Determination of spirality after laundering - Part 3: Woven and knitted garments (%)	No, 3%	6 < x ≤ 8%	4 < x ≤ 6%	x ≤ 4%
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 10%	250 < x ≤ 300	300 < x ≤ 400	x > 400
	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 10%	20,000 < x ≤ 30,000	30,000 < x ≤ 40,000	x > 40,000
Fabric Aspect Damage	ASTM D3939: Test method for snagging resistance of fabrics (Mace)	Yes, 10%	NA	3 < x < 4/5	x ≥ 4/5
	ISO 12945-1 : Determination of fabric propensity to surface pilling, fuzzing or matting - Part 1: Pilling box method	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 10%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work		

⁹ Operating conditions: Result to be evaluated after 30 minutes relaxation. 30N load for woven fabrics. Threshold specified as minimum recovery (%).

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	negligit Basic (5 p	appearance	appearance erate change in ee 1, Severe or
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5

Segment: Classic thick, Non-sport

Table 26 - Subcategory 7: Leggings, Stockings, Tights and Socks, Segment: Classic thick, Non-sport

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
Fabric	NF EN 13770: Determination of the abrasion resistance of knitted footwear	Yes, 25%	400 < x ≤	600 < x ≤	x > 800
Strength	garments (number of cycles)		600	800	
Fabric Aspect	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 17%	Absence of	defect (15 p	t): no hole and
Damage	products after domestic washing and drying			no broken ya	arn
	- Product aspect: Holes or broken yarn		Presenc	e of defect (0	pt): hole or
				broken yar	n
	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 25%	x = 2/3	3 ≤ x ≤	x ≥ 4
	products after domestic washing and drying			3/4	
	- Pilling and fuzzing				

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 8%	negligib Basic (5 pt Below Ba	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change appearance Below Basic (0 pt): x = 1, Severe of distinct change in appearance		
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 25%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Segment: Classic thick, Sport

Table 27 - Subcategory 7: Leggings, Stockings, Tights and Socks, Segment: Classic thick, Sport

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Fabric Strength	NF EN 13770 : Determination of the abrasion resistance of knitted footwear garments (number of cycles)	Yes, 25%	1,000 < x ≤ 1,200	1,200 < x ≤ 1,500	x > 1,500
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 25%	Absence of defect (15 pt): no hole an no broken yarn Presence of defect (0 pt): hole or broken yarn		
	ISO 15487 : Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 17%	x = 3	x = 3/4	x ≥ 4
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 8%	Aspirational (15 pt): x = 5, No of negligible change in appearance Basic (5 pt): x = 3, Moderate chan appearance Below Basic (0 pt): x = 1, Severe distinct change in appearance		appearance erate change in e 1, Severe or

Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 25%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
Damage	products after domestic washing and drying			4	
	- Colour change: Main fabric				

Segment: Sheer, All uses

Table 28 - Subcategory 7: Leggings, Stockings, Tights and Socks, Segment: Sheer, All uses

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Fabric Aspect Damage	BS 8479 modified : Method to determine a fabric's propensity to snagging (snagpod)	No, 21%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 21%		f defect (15 p no broken y e of defect (0 broken yar	pt): hole or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	Yes, 21%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	No, 8%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 8%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 21%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

Subcategory 8: Underwear

Note: The underwear subcategory covers both tops such as bras and bottoms such as briefs. The tables for this segment will be split into specific tables for tops and bottoms. Please be sure the correct table is used for the product being evaluated.

Segment: Woven, All uses – Tops

Table 29 - Subcategory 8: Underwear, Segment: Woven, All uses - Tops

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077 : Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%	
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁰	Yes, 11%	12 < x ≤ 20%	7 < x ≤ 12%	x ≤ 7%	
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹¹	No, 4%	8 < x ≤ 10%	5 < x ≤ 8%	x ≤ 5%	
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%	Absence of defect (15 pt): no hole an no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Underwire aspect: Piercing	Yes, 11%	Absence of defect (15 pt): no piercing Presence of defect (0 pt): piercing			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 4%	Absence of defect (15 pt): no defect Absence of defect (5 pt): elastane goes out but no broken Presence of defect (0 pt): broken elastane			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying	Yes, 11%	Absence of defect (15 pt): no delamination			

¹⁰ Shoulder straps measurement

¹¹ Measurement of the half side between brackets and between breasts

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational	
Category		Weighting	Level	Level	Level	
	- Fabric appearance: Delamination		Pres	sence of defe	ct (0 pt):	
				on		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Shell appearance: Curled or blistered aspect	No, 4%	negligit Basic (5 pt Below Ba	appearance	appearance erate change in se 1, Severe or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	accesso Below Ba	ries work perf asic (0 pt): x=	1, Functional k poorly or no	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, N negligible change in appeara Basic (5 pt): x = 3, Moderate ch appearance Below Basic (0 pt): x = 1, Sev distinct change in appearar		appearance erate change in ee 1, Severe or	
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	$x = 3 \qquad 3/4 \le x \le \qquad x \ge 4/5$			

Segment: Woven, All uses – Bottoms

Table 30 - Subcategory 8: Underwear, Segment: Woven, All uses - Bottoms

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 12%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%	
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹²	Yes, 12%	15 < x ≤ 25%	7 < x ≤ 15%	x ≤ 7%	
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 12%	8,000 < x ≤ 10,000	10,000 < x ≤ 20,000	x > 20,000	
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 12%		defect (15 p no broken y e of defect (0 broken yar	pt): hole or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 4%	Absence of defect (15 pt): no defect Absence of defect (5 pt): elastane goes out but no broken Presence of defect (0 pt): broken elastane			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Fabric appearance: Delamination	Yes, 12%	Absence of defect (15 pt): no delamination Presence of defect (0 pt): delamination			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	$x = 3 \qquad 3/4 \le x \le \qquad x \ge 4/5$			
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 12%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487 : Method for assessing appearance of apparel and other textile end products after domestic washing and drying	No, 4%	Aspirational (15 pt): x = 5, No or negligible change in appearance			

¹² Half waist measurement

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
	- Trims and accessories appearance		Below B	t): x = 3, Mode appearanc asic (0 pt): x = ct change in a	1, Severe or
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 12%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5

Segment: Knit, All uses – Tops

Table 31 - Subcategory 8: Underwear, Segment: Knit, All uses - Tops

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077 : Determination of dimensional change after washing and drying (%)	Yes, 10%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹³	Yes, 10%	12 < x ≤ 20%	7 < x ≤ 12%	x ≤ 7%
ı	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁴	No, 6%	8 < x ≤ 10%	5 < x ≤ 8%	x ≤ 5%
Fabric Strength	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 10%	200 < x ≤ 300	300 < x ≤ 400	x > 400
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying	Yes, 10%	Absence of	defect (15 p no broken y	t): no hole and arn

¹³ Shoulder straps measurement

¹⁴ Measurement of the half side between brackets and between breasts

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
category	- Product aspect: Holes or broken yarn			nce of defect ((broken ya	pt): hole or
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Underwire aspect: Piercing	Yes, 10%		pt): no piercing pt): piercing	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 3%	Absence	e of defect (15 of defect (5 pt) out but no br nce of defect (0 elastane	elastane goes oken o pt): broken
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Fabric appearance: Delamination	Yes, 10%		(15 pt): no on ct (0 pt): on	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Shell appearance: Curled or blistered aspect	No, 3%	neglig Basic (5	ational (15 pt): yible change in pt): x = 3, Mode appearance Basic (0 pt): x = nct change in a	appearance erate change in ce = 1, Severe or
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 3%	$x = 3 \qquad 3/4 \le x \le \qquad x \ge 4/5$		
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 9%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 3%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance		

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
				asic (0 pt): x = et change in a	: 1, Severe or ppearance
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 3%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
Damage	products after domestic washing and drying			4	
	- Colour change: Prints & embroideries				
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 10%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
	products after domestic washing and drying			4	
	- Colour change: Main fabric				

Segment: Knit, All uses – Bottoms

Table 32 - Subcategory 8: Underwear, Segment: Knit, All uses - Bottoms

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077 : Determination of dimensional change after washing and drying (%)	Yes, 11%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁵	Yes, 11%	15 < x ≤ 25%	7 < x ≤ 15%	x ≤ 7%
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	No, 7%	8,000 < x ≤ 10,000	10,000 < x ≤ 20,000	x > 20,000
	ISO 13938-1 (or 2): Bursting properties of fabrics - Part 1: Hydraulic method for determination of bursting strength and bursting distension (Kpa)	Yes, 11%	200 < x ≤ 300	300 < x ≤ 400	x > 400
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 11%	1	defect (15 p no broken ya	t): no hole and arn

¹⁵ Half waist measurement

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational	
Category		Weighting	Level	Level e of defect (0	Level	
			Present	broken yaı		
	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 4%	Absonso	pt): no defect		
	products after domestic washing and drying	100, 470		: elastane goes		
	- Product aspect: Broken elastane (goes out)			out but no br	_	
	Troduct aspect. Broken clastatic (goes out)			e of defect (0		
			rreserio	elastane		
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 11%	Δhser	nce of defect		
	products after domestic washing and drying	103, 1170	Absci		. ,	
	- Fabric appearance: Delamination		Pres			
	Tablic appearance. Detailination			4	` ' '	
	ISO 15487 : Method for assessing appearance of apparel and other textile end products after domestic washing and drying	No, 4%	x = 3	3/4 ≤ x ≤	x ≥ 4/5	
	- Pilling and fuzzing					
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 11%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	Aspirational (15 pt): x = 5, No of negligible change in appearance Basic (5 pt): x = 3, Moderate chan appearance Below Basic (0 pt): x = 1, Severe distinct change in appearance		appearance erate change in se = 1, Severe or	
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 4%	x = 3	3/4 ≤ x ≤	x ≥ 4/5	
Damage	products after domestic washing and drying			4		
	- Colour change: Prints & embroideries					
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 11%	$x = 3$ $3/4 \le x \le$ $x \ge 4/5$			

Subcategory 9: Swimwear

Note: The swimwear subcategory covers both tops and bottoms. The tables for this segment will be split into specific tables for tops and bottoms. Please be sure the correct table is used for the product being evaluated.

Segment: Woven, All uses – Tops

Table 33 - Subcategory 9, Swimwear, Segment: Woven, All uses - Tops

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
Product Deformation	ISO 6330/ISO 5077 : Determination of dimensional change after washing and drying (%)	Yes, 7%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%		
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁶	Yes, 7%	15 < x ≤ 25%	7 < x ≤ 15%	x ≤ 7%		
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁷	No, 3 %	8 < x ≤ 10%	5 < x ≤ 8%	x ≤ 5%		
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	2 of 3 needed, 7%	6,000 < x ≤ 15,000	15,000 < x ≤ 25,000	x > 25,000		
	ISO 13934-2: Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method (N)	2 of 3 needed, 7%	100 < x ≤ 150	150 < x ≤ 200	x > 200		
	ISO 13937-1: Tear properties of fabrics - Part 1: Determination of tear force using ballistic pendulum method (Elmendorf) (N)	2 of 3 needed, 7%	6 < x ≤ 8	8 < x ≤ 10	x > 10		
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 7%	Absence of defect (15 pt): no hole an no broken yarn Presence of defect (0 pt): hole or broken yarn				
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying	Yes, 7%		Absence of defect (15 pt): no piercing Presence of defect (0 pt): piercing			

¹⁶ Shoulder straps measurement

¹⁷ Measurement of the half side between brackets and between breasts

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level		
	- Underwire aspect: Piercing						
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 3%	Absence of defect (15 pt): no of Absence of defect (5 pt): elasta out but no broken Presence of defect (0 pt): broken): elastane goes oken O pt): broken		
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Fabric appearance: Delamination		products after domestic washing and drying - Fabric appearance: Delamination	Yes, 7%		elastane ence of defect delaminati esence of defe delaminati	(15 pt): no on ect (0 pt):
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Shell appearance: Curled or blistered aspect	No, 2%	neglig Basic (5	x = 5, No or appearance erate change in ce = 1, Severe or appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 2%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5		
Seam Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Seam appearance: Smoothed, delaminated or puckered for main fabric	Yes, 7%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change appearance Below Basic (0 pt): x = 1, Severe of distinct change in appearance				
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 7%	Aspirational (15 pt): x = 5, Functional accessories work perfectly as new Below Basic (0 pt): x= 1, Functional accessories which work poorly or no longer work				
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 2%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change i appearance				

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
				asic (0 pt): x = ct change in a	
Colour Damage	ISO 15487 : Method for assessing appearance of apparel and other textile end products after domestic washing and drying	No, 2%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	- Colour change: Prints & embroideries ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 7%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	products after domestic washing and drying				,
	- Colour change: Main fabric				
	ISO 105-E02: Tests for colour fastness	No, 3%	x = 2/3	$3 \le x \le 4$	x ≥ 4/5
	- Part E02: Colour fastness to sea water (Colour change)				
	ISO 105-E03: Tests for colour fastness	No, 3%	x = 3	3 < x ≤ 4	x ≥ 4/5
	- Part E03: Colour fastness to chlorinated water (Colour change)				
	ISO 105-B02: Tests for colour fastness	No, 3%	x = 3	x = 3/4	x ≥ 4
	- Part B02: Colour fastness to artificial light: Xenon arc fading lamp test				

Segment: Woven, All uses – Bottoms

Table 34 - Subcategory 9: Swimwear, Segment: Woven, All uses - Bottoms

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 8%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁸	Yes, 8%	15 < x ≤ 25%	7 < x ≤ 15%	x ≤ 7%
Fabric Strength	EN ISO 12947-2: Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown (cycles)	2 of 3 needed, 8%	6,000 < x ≤ 15,000	15,000 < x ≤ 25,000	x > 25,000

¹⁸ Half waist measurement

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
	ISO 13934-2: Tensile properties of fabrics - Part 2: Determination of maximum force using the grab method (N)	2 of 3 needed, 8%	100 < x ≤ 150	150 < x ≤ 200	x > 200
	ISO 13937-1: Tear properties of fabrics - Part 1: Determination of tear force using ballistic pendulum method (Elmendorf) (N)	2 of 3 needed, 8%	6 < x ≤ 8	8 < x ≤ 10	x > 10
Fabric Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	Yes, 8%		defect (15 p no broken y e of defect (0 broken yar	pt): hole or
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 3%	Absence of	•	pt): broken
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Fabric appearance: Delamination	Yes, 8%		ce of defect (delamination ence of defe delamination	on ct (0 pt):
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 3%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
Seam Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Seam appearance: Smoothed, delaminated or puckered for main fabric	Yes, 8%	negligib Basic (5 pt Below Ba	appearance	appearance erate change in ee 1, Severe or
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 7%	accessor Below Ba	ries work per sic (0 pt): x=	1, Functional k poorly or no

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 3%	negligib Basic (5 pt	appearance	appearance erate change in ee 1, Severe or
Colour	ISO 15487: Method for assessing appearance of apparel and other textile end	No, 3%	x = 3	3/4 ≤ x ≤	x ≥ 4/5
Damage	products after domestic washing and drying			4	
	- Colour change: Prints & embroideries				
	ISO 15487: Method for assessing appearance of apparel and other textile end	Yes, 8%	x = 2/3	$3 \le x \le 4$	x ≥ 4/5
	products after domestic washing and drying				
	- Colour change: Main fabric				
	ISO 105-E02: Tests for colour fastness	No, 3%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	- Part E02: Colour fastness to sea water (Colour change)				
	ISO 105-E03: Tests for colour fastness	No, 3%	x = 3	3 < x ≤ 4	x ≥ 4/5
	- Part E03: Colour fastness to chlorinated water (Colour change)				
	ISO 105-B02: Tests for colour fastness	No, 3%	x = 3	x = 3/4	x ≥ 4
	- Part B02: Colour fastness to artificial light: Xenon arc fading lamp test				

Segment: Knit, All uses – Tops

Table 35 - Subcategory 9: Swimwear, Segment: Knit, All uses - Tops

End of Life	Required Normative Test	Criticality,	Basic	Moderate	Aspirational
Category		Weighting	Level	Level	Level
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 10%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ¹⁹	Yes, 10%	15 < x ≤ 25%	7 < x ≤ 15%	x ≤ 7%

¹⁹ Shoulder straps measurement

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Category	ISO 20932-3: Determination of the elasticity of fabrics	No, 4%	8 < x ≤	5 < x ≤ 8%	x ≤ 5%	
	- Part 3: Narrow fabrics(%) ²⁰		10%	3,0		
Fabric Aspect Damage	BS 8479 modified: Method to determine a fabric's propensity to snagging (snagpod)	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	No, 3%	Absence of defect (15 pt): no hole and no broken yarn Presence of defect (0 pt): hole or broken yarn			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Underwire aspect: Piercing	No, 4%			ot): no piercing	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 4%	Absence of defect (15 pt): no defect Absence of defect (5 pt): elastane goes out but no broken Presence of defect (0 pt): broken elastane			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Fabric appearance: Delamination	No, 4%	Absence of defect (15 pt): no delamination Presence of defect (0 pt): delamination			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Shell appearance: Curled or blistered aspect	No, 3%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	

²⁰ Measurement of the half side between brackets and between breasts

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Seam Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Seam appearance: Smoothed, delaminated or puckered for main fabric	Yes, 10%	Aspirational (15 pt): x = 5, No or negligible change in appearance Basic (5 pt): x = 3, Moderate change in appearance Below Basic (0 pt): x = 1, Severe or distinct change in appearance		
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 10%	accesso Below Ba	ries work perf asic (0 pt): x=	1, Functional k poorly or no
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	negligib Basic (5 pt	appearance	appearance erate change in se 1, Severe or
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 10%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	ISO 105-E02: Tests for colour fastness - Part E02: Colour fastness to sea water (Colour change)	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	ISO 105-E03: Tests for colour fastness - Part E03: Colour fastness to chlorinated water (Colour change)	No, 4%	x = 3	3 < x ≤ 4	x ≥ 4/5
	ISO 105-B02: Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test	No, 4%	x = 3	x = 3/4	x ≥ 4

Segment: Knit, All uses – Bottoms

Table 36 - Subcategory 9: Swimwear, Segment: Knit, All uses - Bottoms

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level	
Product Deformation	ISO 6330/ISO 5077: Determination of dimensional change after washing and drying (%)	Yes, 12%	5 < x ≤ 7%	3 < x ≤ 5%	x ≤ 3%	
	ISO 20932-3: Determination of the elasticity of fabrics - Part 3: Narrow fabrics(%) ²¹	Yes, 12%	15 < x ≤ 25%	7 < x ≤ 15%	x ≤ 7%	
Fabric Aspect Damage	BS 8479 modified: Method to determine a fabric's propensity to snagging (snagpod)	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Holes or broken yarn	No, 4%		defect (15 p no broken ya e of defect (0 broken yar	pt): hole or	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Product aspect: Broken elastane (goes out)	No, 4%	Absence of defect (15 pt): no defect Absence of defect (5 pt): elastane goes out but no broken Presence of defect (0 pt): broken elastane			
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Fabric appearance: Delamination	No, 4%		ce of defect (delamination ence of defeo delamination	on ct (0 pt):	
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Pilling and fuzzing	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5	
Seam Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Seam appearance: Smoothed, delaminated or puckered for main fabric	Yes, 12%	negligib Basic (5 pt) Below Ba	appearanc	appearance erate change in ee : 1, Severe or	

²¹ Half waist measurement

End of Life Category	Required Normative Test	Criticality, Weighting	Basic Level	Moderate Level	Aspirational Level
Accessories Aspect Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Handling of functional accessories	Yes, 12%	accesso Below Ba	ories work per asic (0 pt): x=	1, Functional k poorly or no
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Trims and accessories appearance	No, 4%	negligik Basic (5 pt Below Ba	appearance	appearance erate change in ce : 1, Severe or
Colour Damage	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Prints & embroideries	No, 4%	x = 3	3/4 ≤ x ≤ 4	x ≥ 4/5
	ISO 15487: Method for assessing appearance of apparel and other textile end products after domestic washing and drying - Colour change: Main fabric	Yes, 12%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	ISO 105-E02: Tests for colour fastness - Part E02: Colour fastness to sea water (Colour change)	No, 4%	x = 2/3	3 ≤ x ≤ 4	x ≥ 4/5
	ISO 105-E03: Tests for colour fastness - Part E03: Colour fastness to chlorinated water (Colour change)	No, 4%	x = 3	3 < x ≤ 4	x ≥ 4/5
	ISO 105-B02: Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test	No, 4%	x = 3	x = 3/4	x ≥ 4

Subcategory 10: Apparel Accessories

Due to the diversity of product types in this subcategory and the diversity of assessment methods for these products, all products within this subcategory shall be given a lifetime modifier of 1.0 and shall not be assessed for physical durability.

Subcategory 11: Open-toed Shoes

Segment: Non-sport, Infant

Please refer to Part I above for information on how to run the tests in the table below.

Table 37 - Subcategory 11: Open-toed Shoes, Segment: Non-sport, Infant

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Zipper failure	Zipper	EN 16732	25%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	25%	≥ 85 N	≥ 100 N	≥ 125 N
Attachment	Straps		25%	≥ 125 N	≥ 150 N	≥ 175 N
Bond Strength	Outsole	ISO 17708	12.5%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Separation			If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm
	Midsole		12.5%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Separation			If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Non-sport, Children

Table 38 - Subcategory 11: Open-toed Shoes, Segment: Non-sport, Children

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale	Upper	ISO 17704	6%	12,800 cycles	18,000 cycles	25,600 cycles
Abrasion ²²						
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 250 mm ³	d ≥ 0.9 then ≤ 200 mm ³	d ≥ 0.9 then ≤ 150 mm ³
Abrasion				d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Segment: Non-sport, Adult multipurpose

Table 39 - Subcategory 11: Open-toed Shoes, Segment: Non-sport, Adult multipurpose

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					

²² Dry condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale	Upper	ISO 17704	6%	6,400 cycles	18,000 cycles	25,600 cycles
Abrasion ²³						
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 350 mm ³	d ≥ 0.9 then ≤ 250 mm ³	d ≥ 0.9 then ≤ 200 mm ³
Abrasion				d < 0.9 then ≤ 250 mg	d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Segment: Non-sport, Adult multipurpose with heel

Table 40 - Subcategory 11: Open-toed Shoes, Segment: Non-sport, Adult multipurpose with heel

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	9%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					

²³ Dry condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale Abrasion ²⁴	Upper	ISO 17704	3%	6,400 cycles	12,800 cycles	18,000 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	9%	d ≥ 0.9 then ≤ 350 mm ³ d < 0.9 then ≤ 250 mg	d ≥ 0.9 then ≤ 250 mm ³ d < 0.9 then ≤ 200 mg	$d \ge 0.9 \text{ then} \le 200 \text{ mm}^3$ $d < 0.9 \text{ then} \le 150 \text{ mg}$
Zipper failure	Zipper	EN 16732	9%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	9%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		9%	≥ 150 N	≥ 200 N	≥ 250 N
Bond Strength	Outsole Separation Midsole Separation	ISO 17708	13%	≥ 2.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 1.5 N/mm ≥ 2.5 N/mm If ≥ 80% material failure ≥ 1.5 N/mm	≥ 3 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2 N/mm ≥ 3 N/mm If ≥ 80% material failure ≥ 2 N/mm	≥ 3.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2.5 N/mm ≥ 3.5 N/mm If ≥ 80% material failure ≥ 2.5 N/mm
Broken Heel	Heel Resistance	ISO 19956	13%	NA	NA	14,000 cycles
	Heel Attachment	ISO 22650	13%	NA	NA	500 N

Segment: Non-sport, Indoor

Table 41 - Subcategory 11: Open-toed Shoes, Segment: Non-sport, Indoor

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	20,000 cycles	30,000 cycles	40,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					

²⁴ Dry condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
	area					
	Outsole breakage					
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 475 mm³	d ≥ 0.9 then ≤ 450 mm ³	d ≥ 0.9 then ≤ 400 mm ³
Abrasion				d < 0.9 then ≤ 375 mg	d < 0.9 then ≤ 350 mg	d < 0.9 then ≤ 300 mg
				Rubber with textile ≤ 640	Rubber with textile ≤ 620	Rubber with textile ≤ 600
				mm³	mm³	mm³
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm
	Midsole Separation		20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Sport, Outdoor

Table 42 - Subcategory 11: Open-toed Shoes, Segment: Sport, Outdoor

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	20%	50,000 cycles	75,000 cycles	150,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale Abrasion ²⁵	Upper	ISO 17704	13%	16 cycles	32 cycles	128 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	13%	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg	d ≥ 0.9 then ≤ 150 mm ³ d < 0.9 then ≤ 100 mg	d ≥ 0.9 then ≤ 100 mm ³ d < 0.9 then ≤ 50 mg
Zipper failure	Zipper	EN 16732	7%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	7%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		7%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	20%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 4 N/mm
Strength				in case of material	in case of material	in case of material
				breakage ≥ 2 N/mm	breakage ≥ 2.5 N/mm	breakage ≥ 3.5 N/mm
	Midsole Separation		13%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 4 N/mm
				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 2 N/mm	≥ 2.5 N/mm	≥ 3.5 N/mm

Segment: Sport, Water Sports

Table 43 - Subcategory 11: Open-toed Shoes, Segment: Sport, Water Sports

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	30%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					

²⁵ Dry condition with abrasion paper

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale	Upper	ISO 17704	10%	8 cycles	16 cycles	64 cycles
Abrasion ²⁶						
Outsole	Tread loss	ISO 20871:2018	20%	d ≥ 0.9 then ≤ 250 mm³	d ≥ 0.9 then ≤ 200 mm ³	d ≥ 0.9 then ≤ 150 mm³
Abrasion				d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg
Accessories	Straps	ISO 24263	10%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment						
Bond	Outsole Separation	ISO 17708	20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
Strength				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		10%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Subcategory 12: Closed-toed Shoes

Segment: Non-sport, Infant

Table 44 - Subcategory 12: Closed-toed Shoes, Segment: Non-sport, Infant

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Zipper failure	Zipper	EN 16732	25%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	25%	≥ 85 N	≥ 100 N	≥ 125 N
Attachment	Straps		25%	≥ 125 N	≥ 150 N	≥ 175 N
Bond Strength	Outsole	ISO 17708	12.5%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Separation			If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper

²⁶ Dry condition with abrasion paper

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
				delamination	delamination	delamination
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm
	Midsole		12.5%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Separation			If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Non-sport, Children

Table 45 - Subcategory 12: Closed-toed Shoes, Segment: Non-sport, Children

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					
Martindale	Upper	ISO 17704	6%	12,800 cycles	18,000 cycles	25,600 cycles
Abrasion ²⁷						
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 250 mm ³	d ≥ 0.9 then ≤ 200 mm³	d ≥ 0.9 then ≤ 150 mm ³
Abrasion				d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper

²⁷ Dry condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
				delamination	delamination	delamination
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Segment: Non-sport, Adult multipurpose

Table 46 - Subcategory 12: Closed-toed Shoes, Segment: Non-sport, Adult multipurpose

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					
Martindale	Upper	ISO 17704	6%	6,400 cycles	18,000 cycles	25,600 cycles
Abrasion ²⁸						
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 350 mm ³	d ≥ 0.9 then ≤ 250 mm³	d ≥ 0.9 then ≤ 200 mm ³
Abrasion				d < 0.9 then ≤ 250 mg	d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper

²⁸ Dry condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
				delamination	delamination	delamination
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Segment: Non-sport, Adult multipurpose with heel

Table 47 - Subcategory 12: Closed-toed Shoes, Segment: Non-sport, Adult multipurpose with heel

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 A	9%	50,000 cycles	75,000 cycles	100,000 cycles
Martindale Abrasion ²⁹	Upper	ISO 17704	3%	6,400 cycles	12,800 cycles	18,000 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	9%	d ≥ 0.9 then ≤ 350 mm ³ d < 0.9 then ≤ 250 mg	d ≥ 0.9 then ≤ 250 mm ³ d < 0.9 then ≤ 200 mg	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg
Zipper failure	Zipper	EN 16732	9%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	9%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		9%	≥ 150 N	≥ 200 N	≥ 250 N
Bond Strength	Outsole Separation	ISO 17708	13%	≥ 2.5 N/mm If failure ≥ 80% outsole/upper	≥ 3 N/mm If failure ≥ 80% outsole/upper	≥ 3.5 N/mm If failure ≥ 80% outsole/upper

²⁹ Dry condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
				delamination	delamination	delamination
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		13%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
Broken Heel	Heel Resistance	ISO 19956	13%	NA	NA	14,000 cycles
	Heel Attachment	ISO 22650	13%	NA	NA	500 N

Segment: Non-sport, Indoor

Table 48 - Subcategory 12: Closed-toed Shoes, Segment: Non-sport, Indoor

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	20,000 cycles	30,000 cycles	40,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 475 mm³	$d \ge 0.9 \text{ then} \le 450 \text{ mm}^3$	d ≥ 0.9 then ≤ 400 mm³
Abrasion				d < 0.9 then ≤ 375 mg	d < 0.9 then ≤ 350 mg	d < 0.9 then ≤ 300 mg
				Rubber with textile ≤ 640	Rubber with textile ≤ 620	Rubber with textile ≤ 600
				mm ³	mm³	mm³
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
				delamination	delamination	delamination
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm
	Midsole Separation		20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Sport, Shoes with Cleats

Table 49 - Subcategory 12: Closed-toed Shoes, Segment: Sport, Shoes with Cleats

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 B	40%	25,000 cycles	40,000 cycles	100,000 cycles
Martindale Abrasion30	Upper	ISO 17704	10%	16 cycles	32 cycles	128 cycles
Martindale Abrasion31	Lining	ISO 17704	10%	12,800 cycles	19,200 cycles	25,600 cycles
Bond Strength	Outsole Separation	ISO 17708	40%	≥ 2 N/mm If failure ≥ 80% outsole/upper delamination ≥ 1 N/mm	≥ 2.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 1.5 N/mm	≥ 3 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2 N/mm

 $^{^{\}rm 30}$ Dry condition with abrasion paper $^{\rm 31}$ Wet condition

Segment: Sport, Linear

Please refer to Part I above for information on how to run the tests in the table below.

Table 50 - Subcategory 12: Closed-toed Shoes, Segment: Sport, Linear

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 B	30%	30,000 cycles	50,000 cycles	100,000 cycles
Martindale Abrasion ³²	Upper	ISO 17704	10%	8 cycles	16 cycles	64 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	30%	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg	d ≥ 0.9 then ≤ 150 mm ³ d < 0.9 then ≤ 100 mg	d ≥ 0.9 then ≤ 100 mm ³ d < 0.9 then ≤ 50 mg
Bond Strength	Outsole Separation	ISO 17708	20%	≥ 2 N/mm in case of material breakage ≥ 1.5 N/mm	≥ 2.5 N/mm in case of material breakage ≥ 2 N/mm	≥ 3 N/mm in case of material breakage ≥ 2.5 N/mm
	Midsole Separation		10%	≥ 2 N/mm in case of material breakage ≥ 1.5 N/mm	≥ 2.5 N/mm in case of material breakage ≥ 2 N/mm	≥ 3 N/mm in case of material breakage ≥ 2.5 N/mm

Segment: Sport, Multidirectional

³² Dry condition with abrasion paper

Table 51 - Subcategory 12: Closed-toed Shoes, Segment: Sport, Multidirectional

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 B	19%	50,000 cycles	75,000 cycles	100,000 cycles
Martindale Abrasion ³³	Upper	ISO 17704	13%	16 cycles	32 cycles	128 cycles
Martindale Abrasion ³⁴	Lining	ISO 17704	5%	12,800 cycles	19,200 cycles	25,600 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	13%	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg	d ≥ 0.9 then ≤ 150 mm ³ d < 0.9 then ≤ 100 mg	$d \ge 0.9 \text{ then } \le 100 \text{ mm}^3$ $d < 0.9 \text{ then } \le 50 \text{ mg}$
Zipper failure	Zipper	EN 16732	6%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	6%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		6%	≥ 150 N	≥ 200 N	≥ 250 N
Bond Strength	Outsole Separation	ISO 17708	19%	≥ 2.5 N/mm In case of material breakage ≥ 2 N/mm	≥ 3 N/mm In case of material breakage ≥ 2.5 N/mm	≥ 3.5 N/mm In case of material breakage ≥ 3 N/mm
	Midsole Separation		13%	≥ 2.5 N/mm In case of material breakage ≥ 2 N/mm	≥ 3 N/mm In case of material breakage ≥ 2.5 N/mm	≥ 3.5 N/mm In case of material breakage ≥ 3 N/mm

Segment: Sport, Slippers

Please refer to Part I above for information on how to run the tests in the table below. Note: Excludes climbing shoes

³³ Dry condition with abrasion paper 34 Wet condition

Table 52 - Subcategory 12: Closed-toed Shoes, Segment: Sport, Slippers

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale	Upper	ISO 17704	50%	16 cycles	32 cycles	128 cycles
Abrasion ³⁵						
Outsole	Tread loss	ISO 20871:2018	17%	d ≥ 0.9 then ≤ 450 mm ³	d ≥ 0.9 then ≤ 350 mm ³	d ≥ 0.9 then ≤ 250 mm³
Abrasion				d < 0.9 then ≤ 350 mg	d < 0.9 then ≤ 250 mg	d < 0.9 then ≤ 200 mg
Bond	Outsole Separation	ISO 17708	33%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
Strength				In case of material	In case of material	In case of material
				breakage	breakage	breakage
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Sport, Outdoor

Table 53 - Subcategory 12: Closed-toed Shoes, Segment: Sport, Outdoor

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 B	17%	30,000 cycles	50,000 cycles	100,000 cycles
Martindale Abrasion ³⁶	Upper	ISO 17704	12%	16 cycles	32 cycles	128 cycles
Martindale Abrasion ³⁷	Lining	ISO 17704	12%	12,800 cycles	19,200 cycles	25,600 cycles

³⁵ Dry condition with abrasion paper

³⁶ Dry condition with abrasion paper

³⁷ Wet condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 200 mm ³	$d \ge 0.9 \text{ then} \le 150 \text{ mm}^3$	d ≥ 0.9 then ≤ 100 mm ³
Abrasion				d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg	d < 0.9 then ≤ 50 mg
Zipper failure	Zipper	EN 16732	6%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	6%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		6%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 4 N/mm
Strength				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 2 N/mm	≥ 2.5 N/mm	≥ 3.5 N/mm
	Midsole Separation		12%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 4 N/mm
				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 2 N/mm	≥ 2.5 N/mm	≥ 3.5 N/mm

Segment: Sport, Water Sports

Table 54 - Subcategory 12: Closed-toed Shoes, Segment: Sport, Water Sports

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	34%	10,000 cycles	25,000 cycles	50,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					
Martindale	Upper	ISO 17704	11%	8 cycles	16 cycles	64 cycles
Abrasion ³⁸						
Outsole	Tread loss	ISO 20871:2018	22%	d ≥ 0.9 then ≤ 250 mm³	d ≥ 0.9 then ≤ 200 mm³	d ≥ 0.9 then ≤ 150 mm³
Abrasion				d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg

³⁸ Dry condition with abrasion paper

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Bond	Outsole Separation	ISO 17708	22%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
Strength				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		11%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Subcategory 13: Boots

Segment: Non-sport, Infant

Table 55 - Subcategory 13: Boots, Segment: Non-sport, Infant

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Zipper failure	Zipper	EN 16732	25%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	25%	≥ 85 N	≥ 100 N	≥ 125 N
Attachment	Straps		25%	≥ 125 N	≥ 150 N	≥ 175 N
Bond Strength	Outsole	ISO 17708	12.5%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Separation			If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm
	Midsole		12.5%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Separation			If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Non-sport, Children

Table 56 - Subcategory 13: Boots, Segment: Non-sport, Children

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	50,000 cycles	75,000 cycles	100,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					
Martindale	Upper	ISO 17704	6%	12,800 cycles	18,000 cycles	25,600 cycles
Abrasion ³⁹						
Outsole	Tread loss	ISO 20871:2018	12%	$d \ge 0.9 \text{ then } \le 250 \text{ mm}^3$	d ≥ 0.9 then ≤ 200 mm ³	d ≥ 0.9 then ≤ 150 mm ³
Abrasion				d < 0.9 then ≤ 200 mg	d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 3.5 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

³⁹ Dry condition

Segment: Non-sport, Adult multipurpose

Table 57 - Subcategory 13: Boots, Segment: Non-sport, Adult multipurpose

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 A	12%	50,000 cycles	75,000 cycles	100,000 cycles
Martindale Abrasion ⁴⁰	Upper	ISO 17704	6%	6,400 cycles	18,000 cycles	25,600 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 350 mm ³ d < 0.9 then ≤ 250 mg	d ≥ 0.9 then ≤ 250 mm ³ d < 0.9 then ≤ 200 mg	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond Strength	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 1.5 N/mm	≥ 3 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2 N/mm	≥ 3.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2.5 N/mm
	Midsole Separation		17%	≥ 2.5 N/mm If ≥ 80% material failure ≥ 1.5 N/mm	≥ 3 N/mm If ≥ 80% material failure ≥ 2 N/mm	≥ 3.5 N/mm If ≥ 80% material failure ≥ 2.5 N/mm

⁴⁰ Dry condition

Segment: Non-sport, Adult multipurpose with heel

Table 58 - Subcategory 13: Boots, Segment: Non-sport, Adult multipurpose with heel

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 A	9%	50,000 cycles	75,000 cycles	100,000 cycles
Martindale Abrasion ⁴¹	Upper	ISO 17704	3%	6,400 cycles	12,800 cycles	18,000 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	9%	d ≥ 0.9 then ≤ 350 mm ³ d < 0.9 then ≤ 250 mg	d ≥ 0.9 then ≤ 250 mm ³ d < 0.9 then ≤ 200 mg	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg
Zipper failure	Zipper	EN 16732	9%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	9%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		9%	≥ 150 N	≥ 200 N	≥ 250 N
Bond Strength	Outsole Separation Midsole Separation	ISO 17708	13%	≥ 2.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 1.5 N/mm ≥ 2.5 N/mm	≥ 3 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2 N/mm ≥ 3 N/mm	≥ 3.5 N/mm If failure ≥ 80% outsole/upper delamination ≥ 2.5 N/mm ≥ 3.5 N/mm
Broken Heel	Heel Resistance	ISO 19956	13%	If ≥ 80% material failure ≥ 1.5 N/mm NA	If ≥ 80% material failure ≥ 2 N/mm NA	If ≥ 80% material failure ≥ 2.5 N/mm 14,000 cycles
D. OKCH FICCI	Heel Attachment	ISO 22650	13%	NA	NA	500 N

⁴¹ Dry condition

Segment: Non-sport, Indoor

Please refer to Part I above for information on how to run the tests in the table below.

Table 59 - Subcategory 13: Boots, Segment: Non-sport, Indoor

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe	Outsole/upper	ISO 24266 A	12%	20,000 cycles	30,000 cycles	40,000 cycles
Flexion	unbonding					
	Breakage of the					
	upper in flexion					
	area					
	Outsole breakage					
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 475 mm³	d ≥ 0.9 then ≤ 450 mm ³	d ≥ 0.9 then ≤ 400 mm ³
Abrasion				d < 0.9 then ≤ 375 mg	d < 0.9 then ≤ 350 mg	d < 0.9 then ≤ 300 mg
				Rubber with textile ≤ 640	Rubber with textile ≤ 620	Rubber with textile ≤ 600
				mm³	mm³	mm³
Zipper failure	Zipper	EN 16732	12%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	12%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		12%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
Strength				If failure ≥ 80%	If failure ≥ 80%	If failure ≥ 80%
				outsole/upper	outsole/upper	outsole/upper
				delamination	delamination	delamination
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm
	Midsole Separation		20%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
				If ≥ 80%	If ≥ 80%	If ≥ 80%
				material failure	material failure	material failure
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Sport, Multidirectional

Table 60 - Subcategory 13: Boots, Segment: Sport, Multidirectional

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the	ISO 24266 B	19%	20,000 cycles	40,000 cycles	100,000 cycles
	upper in flexion area Outsole breakage					
Martindale Abrasion ⁴²	Upper	ISO 17704	13%	16 cycles	32 cycles	128 cycles
Martindale Abrasion ⁴³	Lining	ISO 17704	5%	12,800 cycles	19,200 cycles	25,600 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	13%	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg	d ≥ 0.9 then ≤ 150 mm ³ d < 0.9 then ≤ 100 mg	d ≥ 0.9 then ≤ 100 mm ³ d < 0.9 then ≤ 50 mg
Zipper failure	Zipper	EN 16732	6%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	6%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		6%	≥ 150 N	≥ 200 N	≥ 250 N
Bond Strength	Outsole Separation	ISO 17708	19%	≥ 2.5 N/mm In case of material breakage ≥ 2 N/mm	≥ 3 N/mm In case of material breakage ≥ 2.5 N/mm	≥ 3.5 N/mm In case of material breakage ≥ 3 N/mm
	Midsole Separation		13%	≥ 2.5 N/mm In case of material breakage ≥ 2 N/mm	≥ 3 N/mm In case of material breakage ≥ 2.5 N/mm	≥ 3.5 N/mm In case of material breakage ≥ 3 N/mm

Segment: Sport, Slippers

Please refer to Part I above for information on how to run the tests in the table below. Note: Excludes climbing shoes

⁴² Dry condition with abrasion paper ⁴³ Wet condition

Table 61 - Subcategory 13: Boots, Segment: Sport, Slippers

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Martindale	Upper	ISO 17704	50%	4 cycles	8 cycles	32 cycles
Abrasion ⁴⁴						
Outsole	Tread loss	ISO 20871:2018	17%	d ≥ 0.9 then ≤ 450 mm ³	d ≥ 0.9 then ≤ 350 mm ³	d ≥ 0.9 then ≤ 250 mm ³
Abrasion				d < 0.9 then ≤ 350 mg	d < 0.9 then ≤ 250 mg	d < 0.9 then ≤ 200 mg
Bond	Outsole Separation	ISO 17708	33%	≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
Strength				In case of material	In case of material	In case of material
				breakage	breakage	breakage
				≥ 1 N/mm	≥ 1.5 N/mm	≥ 2 N/mm

Segment: Sport, Outdoor

Table 62 - Subcategory 13: Boots, Segment: Sport, Outdoor

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 B	17%	30,000 cycles	50,000 cycles	100,000 cycles
Martindale Abrasion ⁴⁵	Upper	ISO 17704	12%	16 cycles	32 cycles	128 cycles
Martindale Abrasion ⁴⁶	Lining	ISO 17704	12%	12,800 cycles	19,200 cycles	25,600 cycles

⁴⁴ Dry condition with abrasion paper

⁴⁵ Dry condition with abrasion paper

⁴⁶ Wet condition

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Outsole	Tread loss	ISO 20871:2018	12%	d ≥ 0.9 then ≤ 200 mm³	d ≥ 0.9 then ≤ 150 mm³	d ≥ 0.9 then ≤ 100 mm ³
Abrasion				d < 0.9 then ≤ 150 mg	d < 0.9 then ≤ 100 mg	d < 0.9 then ≤ 50 mg
Zipper failure	Zipper	EN 16732	6%	500 cycles	750 cycles	1,000 cycles
Accessories	Buckle	ISO 24263	6%	≥ 150 N	≥ 200 N	≥ 250 N
Attachment	Straps		6%	≥ 150 N	≥ 200 N	≥ 250 N
Bond	Outsole Separation	ISO 17708	17%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 4 N/mm
Strength				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 2 N/mm	≥ 2.5 N/mm	≥ 3.5 N/mm
	Midsole Separation		12%	≥ 2.5 N/mm	≥ 3 N/mm	≥ 4 N/mm
				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 2 N/mm	≥ 2.5 N/mm	≥ 3.5 N/mm

Segment: Sport, Water Sports

Table 63 - Subcategory 13: Boots, Segment: Sport, Water Sports

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Whole Shoe Flexion	Outsole/upper unbonding Breakage of the upper in flexion area Outsole breakage	ISO 24266 A	34%	10,000 cycles	25,000 cycles	50,000 cycles
Martindale Abrasion ⁴⁷	Upper	ISO 17704	11%	8 cycles	16 cycles	64 cycles
Outsole Abrasion	Tread loss	ISO 20871:2018	22%	d ≥ 0.9 then ≤ 250 mm ³ d < 0.9 then ≤ 200 mg	d ≥ 0.9 then ≤ 200 mm ³ d < 0.9 then ≤ 150 mg	$d \ge 0.9 \text{ then} \le 150 \text{ mm}^3$ $d < 0.9 \text{ then} \le 100 \text{ mg}$

⁴⁷ Dry condition with abrasion paper

Test	Testing Area	Test Protocol	Weighting	Basic Level	Moderate Level	Aspirational Level
Bond	Outsole Separation	ISO 17708	22%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
Strength				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm
	Midsole Separation		11%	≥ 2 N/mm	≥ 2.5 N/mm	≥ 3 N/mm
				in case of material	in case of material	in case of material
				breakage	breakage	breakage
				≥ 1.5 N/mm	≥ 2 N/mm	≥ 2.5 N/mm

Part III: Functionality Tests

Functionality tests are only to be run on products for which the relevant functionality is claimed as an attribute the product has.

Apparel: Insulation Test: ISO 11092 R_{CT}

Conditions: Test to be run as stated in the ISO method. Testing will occur after 5 wash cycles⁴⁸ for subcategory 4 and after 20 washes for all other subcategories. All segments will have the same thresholds. For products with Line/Flat Dry: drying will be done after 5 washes for subcategory 4, and after 5 washes and the final wash for all other subcategories. For products with Tumble Dry: drying will be done after each of the 5 washes for subcategory 4, and after each of the first 5 washes and after washes 10, 15 and 20 for all other subcategories.

Weighting: 10%

Table 64 - Apparel Insulation Functionality Test Thresholds

Basic Threshold	Intermediate Threshold	Aspirational Threshold
0.010 ≤ x < 0.60	0.60 ≤ x < 0.120	x ≥ 0.120

Apparel: Water Repellency

Bundesman Method

Test: ISO 9865:1991

This is the preferred test for Water Repellency. If this test cannot be conducted please use the Spray test instead.

Conditions: Test to be run as stated in the ISO method. Test to be performed before wash. Grading to be done after 30 minutes. All segments will have the same thresholds.

Weighting: 10%

Table 65 - Apparel Water Repellency Functionality Test Thresholds (Bundesman)

Basic	Intermediate	Aspirational
Threshold	Threshold	Threshold
x ≤ 2	2 < x < 3.5	x ≥ 3.5

Spray Test Method

Test: ISO 4920

This test may be run if the Bundesman test is not available or viable for a given product. Conditions: Test to be run as stated in the ISO method with water temperature of 20 °C. Samples assessed after 5 wash cycles. For products with Line/Flat Dry: dry after the final wash. For products with Tumble Dry: dry after each wash. . All segments will have the same thresholds.

Weighting: 10%

⁴⁸ The wash cycle for these products shall be conducted according to the care cycle instructions in the first section of this annex (Part I: Physical Durability Test Conditions).

Table 66 - Apparel Water Repellency Functionality Test Thresholds (Spray Test)

Basic	Intermediate	Aspirational
Threshold	Threshold	Threshold
Grade 3	Grade 3/4	Grade 4

Apparel: Water Proofness

Test: ISO 811

Conditions: Water pressure $60 \text{ cmH}_2\text{O}/\text{min}$. Water temperature 20° C. Samples evaluated after 5 wash cycles. For products with Line/Flat Dry: dry after the final wash. For products with Tumble Dry: dry after each wash. All segments will have the same thresholds. Testing shall occur both on the main fabrics as well as on the seams.

Weighting: 10%

Table 67 - Apparel Water Proofness Functionality Test Thresholds

Basic	Intermediate	Aspirational
Threshold	Threshold	Threshold
5,000 mm	10,000 mm	

Footwear: Waterproofness

Test: ISO 20344-5.15.2

Conditions: Weighting: 10%

Table 68 - Footwear Waterproofness Functionality Test Thresholds, by Segment

Segment 1 Use Case	Segment 2 Additional	Basic Threshold	Intermediate Threshold	Aspirational Threshold
Non-Sport	All segments	Total area of water	Total area of water	Total area of water
		penetration ≤ 3 cm ²	penetration ≤ 3 cm ²	penetration ≤ 3 cm ²
		after 5,000 cycles	after 10,000 cycles	after 15,000 cycles
Sport	Footwear for	No water	No water	No water
	Linear Sports	penetration after	penetration after	penetration after
		10,000 cycles	20,000 cycles	50,000 cycles
Sport	Footwear for	No water	No water	No water
	Multidirectional	irectional penetration after penetration		penetration after
	Sports	10,000 cycles	20,000 cycles	50,000 cycles
Sport	Sport Footwear for No water Outdoor Sport penetration aft		No water	No water
			penetration after	penetration after
		15,000 cycles	50,000 cycles	100,000 cycles

Part IV: Testing Equivalence; A protocol for Acceptance of alternative test results.

Introduction

The PEFCRs contain an extensive array of tests designed to predict the impact of a product's physical durability on its potential Duration of Service lifetime. Being an EU derived system, the tests require the use of EN or ISO standard test methods to be employed. It is however appreciated that most manufacturers of EU destined products are based outside of the EU and are supplying products globally, to brands using other test methods and standards. Product testing is a costly, both economically and environmentally, undertaking so duplication to meet the needs of different brands should be avoided wherever possible. Many test methods are similar, either being done on the same equipment or measuring the same parameters under slightly different conditions. If the outcomes of the different test methods are measuring the same parameter than it should be feasible to establish some correlation or conversion between them via an agreed set of protocols. These protocols will differ according to whether the results are parametric or non-parametric.

Rules:

- 1. If an ISO/EN test has been used but under different conditions the impact of those conditions on the test result should be identified
- 2. The non-ISO or non-EN test method should be an internationally recognised test method such as AATCC, ASTM, JSI etc. or an internal method validated by a third party (ISO 17025 accredited) laboratory.
- 3. The calibration testing has been carried out by an ISO 17025 accredited testing laboratory.
- 4. The validity of the method of calibration be verified by an independent third party such as a national accreditation body, see https://european-accreditation.org/ea-members/directory-of-ea-members-and-mla-signatories.

Calibration methods

For existing norms, such as AATCC, ASTM, etc, to create an acceptable calibration curve, a wide range of products needs to be tested. The range should cover:

- At least three falling below the basic level, (these product/fabrics can be from any company/source)
- At least three falling between basic and aspirational.
- At least three greater than aspirational

This would yield 18 test results or nine data points, but this should be considered an absolute minimum, 20+ data points (40+ test results) would be ideal.

Parametric (results form a continuous numerical range) Test Data

An example of a parametric calibration measuring differences between the ISO test and the alternative is shown in Fig 1

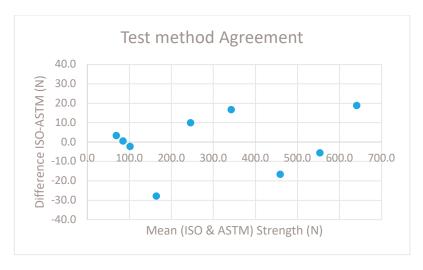


Figure 1 - Agreement between ASTM D5035-11 and ISO 13934-1

A simple correlation coefficient is not recommended because a high degree of correlation is almost guaranteed but there is also a potential for bias. An alternative approach (*Reference: Bland JM*, *Altman DG.* (1992) Comparing methods of clinical measurement. Current Contents, CM20(40) Oct 5, 8.) is suggested. The quality of the conversion between two tests eg ASTM and ISO will depend on the bias and the variability of the data. The example (fictitious tensile strength data) in Fig 1 shows an average difference from the mean of the two test results (bias) of -0.3N (+/-4.2) and its 95% confidence limits of agreement are from -31N to +30N (Limits of agreement = mean observed difference ± 1.96 × standard deviation of observed differences) The bias can be added, or subtracted, but the suggested limit of agreement (upper - lower limit) for the variability is that it should be no greater than the difference between any two levels of performance (Basic v Moderate or Moderate v Aspirational). If the variability of the data increases with the magnitude of test result, then differences should be expressed as percentages of the ISO test result.

Non-parametric Test data

For test methods that generate a grade, the statistics are non-parametric and will need to be treated differently. An example below shows two fictitious sets of test grades for pilling performance (16 samples of fabric).

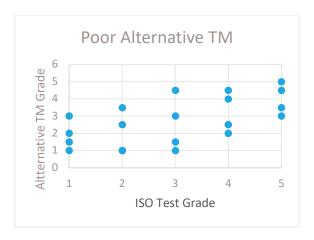


Figure 2 - Poor Alternative Test Method Example



Figure 3 - Good Alternative Test Method Example

A suggested approach is that the grades from ISO tests and the grades from the alternative test are presented as a contingency table of the frequency of agreements (A_f) so that Cohen's Kappa can be calculated.

Where Cohen's Kappa = Proportion Observed-Proportion by chance/1-Proportion by chance. To take into account the influence of large differences between grades a Cohen's Weighted Kappa is used – see figures in brackets in the below table for weighting.

The below table considers full grades but could easily work with half grade data points.

Table 69 - Proposed Assessment Framework for Graded Test Comparison

		Alternative Test				Totals	
		Grade 1	Grade 2	Grade3	Grade 4	Grade 5	
ISO Test	Grade 1	A _f [1.0]	A _f [0.94]	A _f [0.75]	A _f [0.43]	A _f [0]	
	Grade 2	A _f [0.94]	A _f [1.0]				
	Grade 3	A _f [0.75]		A _f [1.0]			
	Grade 4	A _f [0.43]			A _f [1.0]		
	Grade 5	A _f [0]				A _f [1.0]	
Total		Σ					ΣA _f

The main diagonal cells from top left to bottom right represent frequency of agreement (A_f) and the off-diagonal cells represent disagreement. Figures in brackets represent the weighting to be applied.

If the lower confidence interval for the weighted kappa is above 0.6 then the agreement can be considered good (*Reference Basu S, Basu A (1995) Comparison of several goodness-of-fit tests for the kappa statistic based on exact power and coverage probability. Statistics in Medicine 14: 347-356).* In the above examples the Poor Alternative TM yields a Cohen's weighted Kappa of -0.39 +/- 0.23 whereas the Good Alternative TM yields a weighted Kappa of 0.9 +/- 0.08.

Summary

The objective of this working group has been to design a protocol to enable data from an alternative test method to be accepted. No attempt has been made to establish different thresholds.

Protocols for test methods yielding parametric and non-parametric data have been identified along with suggested limits; to enable decisions to be made regarding the suitability of an alternative test method.

The onus is on the manufacturer, or brand, to supply the necessary evidence to enable conversion to ISO test data. If this is not possible then the ISO /EN test will have to be carried out.

To avoid duplication of effort it is recommended that whenever a new method is approved it be listed, along with its bias and limits of agreement, within an appendix or on a PEFCR related website.

Part V: Calculation examples

Introduction

This section provides concrete examples of how to apply the testing protocol described earlier in this document to a fictional apparel and footwear product, the determination of the test score based on Table 7 in the PEFCR and the test results, as well as the calculation of the IDPS and the IDM based on Equations 4 and 5 in Section 3.3.3 in the PEFCR.

Example calculation for Apparel

An example of a t-shirt "Woven, All uses" (see Table 5) is provided below:

Table 70 - Intrinsic durability calculation - standard example

Test	Test result	Test score	Weighting	Total
Product deformation	moderate	10	10	10 * 10 = 100
Fabric strength test 1	moderate	10	10	10 * 10 = 100
Fabric strength test 2	basic	5	10	5 * 10 = 50
Fabric strength test 3	basic	5	10	5 * 10 = 50
Fabric aspect damage test 1	moderate	10	8	10 * 8 = 80
Fabric aspect damage test 2	basic	5	10	5 * 10 = 50
Fabric aspect damage test 3	moderate	10	4	10 * 4 = 40
Seam aspect damage	aspirational	15	10	15 * 10 = 150
Accessories aspect damage test 1	basic	5	10	5 * 10 = 50
Accessories aspect damage test 2	moderate	10	4	10 * 4 = 40
Colour damage test 1	moderate	10	4	10 * 4 = 40
Colour damage test 2	aspirational	15	10	15 * 10 = 150

To obtain the test score from a test result, an example is provided for the product deformation of a woven t-shirt (first line in Table 70):

- The woven t-shirt reaches a deformation of 3%, reaching the moderate level and obtaining 10 points
- The weighting of this test being 10, the weighted individual test score obtained is 10*10 = 100

IDPS = (100+100+50+50+80+50+40+150+50+40+40+150)/(10+10+10+10+8+10+4+10+10+4+4+10) = 9.000 pts

 $IDM = 0.514 + (0.0624 \times 9.000) = 1.076$

In the case of **omitted individual tests**, the weighting of that test shall not be included in the total weighting for the product. For example, for a t-shirt with no accessories:

Table 71 - Intrinsic durability calculation - omitted test example (apparel)

Test	Test result	Test score	Weighting	Total	
Product deformation	moderate	10	10	10 * 10 = 100	
Fabric strength test 1	moderate	10	10	10 * 10 = 100	
Fabric strength test 2	basic	5	10	5 * 10 = 50	
Fabric strength test 3	basic	5	10	5 * 10 = 50	
Fabric aspect damage test 1	moderate	10	8	10 * 8 = 80	
Fabric aspect damage test 2	basic	5	10	5 * 10 = 50	
Fabric aspect damage test 3	moderate	10	4	10 * 4 = 40	
Seam aspect damage	aspirational	15	10	15 * 10 = 150	
Accessories aspect damage test 1		not a	pplicable		
Accessories aspect damage test 2	not applicable				
Colour damage test 1	moderate	10	4	10 * 4 = 40	
Colour damage test 2	aspirational	15	10	15 * 10 = 150	

IDPS = (100+100+50+50+80+50+40+150+40+150)/(10+10+10+10+8+10+4+10+4+10) = 9.419 pts IDM = $0.514 + (0.0624 \times 9.419) = 1.102$

Finally, the three situations below illustrate the criticality concept on a t-shirt.

Situation 1 – a non-critical test is below the basic level:

Table 72 - Intrinsic durability calculation - non-critical test failure example (apparel)

Test	Test result	Test score	Weighting	total
Product deformation	moderate	10	10	10 * 10 = 100
Fabric strength test 1	moderate	10	10	10 * 10 = 100
Fabric strength test 2	basic	5	10	5 * 10 = 50
Fabric strength test 3	basic	5	10	5 * 10 = 50
Fabric aspect damage test 1 (non-	below	0	8	0 * 8 = 0
critical)	basic			
Fabric aspect damage test 2 -> no change due to criticality of fabric aspect damage test 1	basic	5	10	5 * 10 = 50
Fabric aspect damage test 3 -> no change due to criticality of fabric aspect damage test 1	moderate	10	4	10 * 4 = 40
Seam aspect damage	aspirational	15	10	15 * 10 = 150
Accessories aspect damage test 1	basic	5	10	5 * 10 = 50
Accessories aspect damage test 2	moderate	10	4	10 * 4 = 40
Colour damage test 1	moderate	10	4	10 * 4 = 40
Colour damage test 2	aspirational	15	10	15 * 10 = 150

IDPS = (100+100+50+50+0+50+40+150+50+40+40+150) / (10+10+10+10+8+10+4+10+10+4+4+10) = 8.200 pts

 $IDM = 0.514 + (0.0624 \times 8.200) = 1.026$

Situation 2 – a critical test is below the basic level:

Table 73 - Intrinsic durability calculation - critical test failure example (apparel)

Test	Test result	Test score	Weighting	total
Product deformation	moderate	10	10	10 * 10 = 100
Fabric strength test 1	moderate	10	10	10 * 10 = 100
Fabric strength test 2	basic	5	10	5 * 10 = 50
Fabric strength test 3	basic	5	10	5 * 10 = 50
Fabric aspect damage test 1	moderate	10	8	0 due to criticality of fabric aspect damage test 2
Fabric aspect damage test 2 (critical)	below basic	0	10	0 * 10 = 0
Fabric aspect damage test 3	moderate	10	4	0 due to criticality of fabric aspect damage test 2
Seam aspect damage	aspirational	15	10	15 * 10 = 150
Accessories aspect damage test 1	basic	5	10	5 * 10 = 50
Accessories aspect damage test 2	moderate	10	4	10 * 4 = 40
Colour damage test 1	moderate	10	4	10 * 4 = 40
Colour damage test 2	aspirational	15	10	15 * 10 = 150

IDPS= (100+100+50+50+0+0+0+150+50+40+40+150) / (10+10+10+10+8+10+4+10+10+4+4+10) = 7.300 pts

 $IDM = 0.514 + (0.0624 \times 7.300) = 0.970$

Situation 3 – a "2 out of 3" critical test is failed:

Table 74 - Intrinsic durability calculation - "2 out of 3" critical test failure example (apparel)

Test	Test result	Test score	Weighting	total
Product deformation	moderate	10	10	10 * 10 = 100
Fabric strength test 1	moderate	10	10	0 due to criticality of fabric strength tests 2 and 3 combined
Fabric strength test 2	below basic	0	10	0 * 10 = 0
Fabric strength test 3	below basic	0	10	0 * 10 = 0
Fabric aspect damage test 1	moderate	10	8	10 * 8 = 80
Fabric aspect damage test 2	basic	5	10	5 * 10 = 50
Fabric aspect damage test 3	moderate	10	4	10 * 4 = 40
Seam aspect damage	aspirational	15	10	15 * 10 = 150
Accessories aspect damage test 1	basic	5	10	5 * 10 = 50
Accessories aspect damage test 2	moderate	10	4	10 * 4 = 40
Colour damage test 1	moderate	10	4	10 * 4 = 40
Colour damage test 2	aspirational	15	10	15 * 10 = 150

 $\textbf{IDPS} = 100 + 0 + 0 + 0 + 80 + 50 + 40 + 150 + 50 + 40 + 40 + 150) / (10 + 10 + 10 + 10 + 8 + 10 + 4 + 10 + 10 + 4 + 4 + 10) = \textbf{7.000} \\ \textbf{pts}$

 $IDM = 0.514 + (0.0624 \times 7.000) = 0.951$

Example calculation for Footwear

An example of a shoe, "non-sport, adult multi-purpose" (see Table 46) is provided in Table 75. The functionality test on waterproofness is added as it is a relevant functionality claimed by the fictional product.

Table 75 - Intrinsic durability calculation – standard example (Footwear)

Test	Test result	Test score	Weighting	Total
Whole shoe Flexion	moderate	10	12	10 * 12 = 120
Martindale Abrasion	moderate	10	6	10 * 6 = 60
Outsole Abrasion	moderate	10	12	10 * 12 = 120
Zipper failure	aspirational	15	12	15 * 12 = 180
Accessories Attachment test 1	basic	not applicable		
Accessories Attachment test 2	basic	5	12	5 * 12 = 60
Bond Strength test 1	moderate	10	17	10 * 17 = 170
Bond Strength test 2	aspirational	15	17	15 * 17 = 255
Functionality - Waterproofness	Intermediate	10	10	10 * 10 = 100

IDPS = (120+60+120+180+60+170+255+100)/(12+6+12+12+12+17+17+10) = 10.867 pts

IDM = 0.514 + (0.0624 x 10.294) = **1.192**