Quality Standards

Textiles/Garment

November 2004

FIRST WORLD FASHION
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First World Fashion
1 DIMENSIONAL SPECIFICATIONS AND TOLERANCES

The dimensional specifications and tolerances are defined in the quality and test specifications. The specified tolerances are binding.

In addition the following minimum widths must be complied with:

- The minimum width of the fully-opened access of skirts and trousers (waistband width and zipper opening) must be at least 2cm larger than the hip size required for the size.
- Necklines must have a minimum width when stretched:
  - Women’s and men’s clothing 60 cm
  - Children’s clothing 54 cm

2 MATERIAL PROPERTIES

2.1 Material composition

The material composition, given in the quality and test specifications, must be tested in accordance with the TKG (= Textile Labelling German aLaw) and must not differ by more than 3% points. The material information must correspond to the product as well as the sew-in label and the packaging.

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2.2 Slip resistance

The slip resistance must be adjusted to the intended use and be adequately high.

If required in the quality and test specifications, the testing is carried out in accordance with ISO 13936-2 “Slip resistance at standard seam”:

- Slip resistance of the fabric: 10N
- Seam opening in warp and weft direction: 3mm

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2.3 Microfibres

The maximum fineness of the microfibre must not exceed 1dtex per filament.

Exception:
For maximum microfibre fineness of seamless underwear is 1.4 dtex per filament.

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3 COLOUR FASTNESSES

The colour fastness tests required are given in the quality and test specifications.

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Irrespective of the colour fastnesses required, it must be guaranteed that no discolorations occur if the garment is treated in accordance with the care instructions or during use.

Colour fastnesses and corresponding test standard

<table>
<thead>
<tr>
<th>Colour fastness</th>
<th>Test standard (Use the currently valid test standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fastness to light</td>
<td>DIN EN ISO 105 - B02</td>
</tr>
<tr>
<td>Fastness to water</td>
<td>DIN EN ISO 105 - E01</td>
</tr>
<tr>
<td>Fastness to sea water</td>
<td>DIN EN ISO 105 - E02</td>
</tr>
<tr>
<td>Fastness to washing 40°C</td>
<td>DIN EN 20105 - C01</td>
</tr>
<tr>
<td>Fastness to washing 60°C</td>
<td>DIN EN 20105 - C03</td>
</tr>
<tr>
<td>Fastness to washing 95°C</td>
<td>DIN EN 20105 - C04</td>
</tr>
<tr>
<td>Fastness to chlorinated water</td>
<td>DIN EN ISO 105 - E03</td>
</tr>
<tr>
<td>Fastness to sweat – alkaline and acid</td>
<td>DIN EN ISO 105 - E04</td>
</tr>
<tr>
<td>Fastness to rubbing</td>
<td>DIN EN ISO 105 - X12</td>
</tr>
<tr>
<td>Fastness to rubbing for leather</td>
<td>DIN-EN-ISO-11640</td>
</tr>
<tr>
<td>Fastness to ironing</td>
<td>DIN EN ISO 105 - X11</td>
</tr>
<tr>
<td>Fastness to dry cleaning</td>
<td>DIN EN ISO 105 - D01</td>
</tr>
<tr>
<td>Fastness to splashing water</td>
<td>DIN EN ISO 15700</td>
</tr>
<tr>
<td>Fastness to dry cleaning for leather</td>
<td>DIN EN ISO 11643</td>
</tr>
<tr>
<td>Fastness to saliva and sweat</td>
<td>DIN EN ISO 53160</td>
</tr>
</tbody>
</table>
4 CARE AND WEAR PROPERTIES

4.1 Washing test and dry cleaning

The applicable care instructions are given in the quality and test specifications.

4.1.1 Machine washing

- **Execution**
  - Machine washing in household washing machines (Miele ®), max. load of 5kg dry laundry, drum diameter 48cm.
  - The washing is carried out with standard commercial detergents.
    - The following detergents are used internally:
      - Persil ® all-purpose soap powder (contains optical bleach)
      - Fewa ® mild detergent
      - Ariel ® Color - detergent for coloureds
      - Woolite ® for woollens
  - 95°C hot wash
    - based on DIN EN ISO 6330, section 4.1. "95°C hot wash", 4.0 – 4.5kg load
    - after removing from the washing machine, pulls into shape, then hang up to dry or dry in a tumble dryer
  - 60°C hot wash, coloured wash
    - based on DIN EN ISO 6330, section 4.3 “60°C hot wash (coloured wash)”, 4.0 – 4.5kg load
    - after removing from the washing machine, pull into shape, then hang up to dry or dry in a tumble dryer
  - 60°C easy care
    - based on DIN EN ISO 6330, section 4.4 "60°C easy care with reduced load" and reduced mechanical effect and subsequent short spin, 1.25 – 1.5kg load
    - after removing from the washing machine, pull into shape, then hang up or lay flat to dry or dry in a tumble dryer
  - 40°C coloured wash
    - based on DIN EN ISO 6330, section 4.8. “40°C coloured wash”, 4.0 – 4.5kg load
    - after removing from the washing machine, pull into shape, then hang up or lay flat to dry or dry in a tumble dryer
  - 40°C easy care
    - based on DIN EN ISO 6330, section 4.5. "40°C easy care with reduced load" and reduced mechanical effect and subsequent short spin, 1.25 – 1.5kg load
    - after removing from the washing machine, pull into shape, then hang up or lay flat to dry or dry in a tumble dryer
• 30°C delicates wash
  - based on DIN EN ISO 6330, section 4.7. “30°C delicates wash”, approx. 1.0kg load and subsequent short spin
  - after removing from the washing machine, pull into shape, then hang up or lay flat to dry or dry in a tumble dryer

4.1.2 30°C hand-washing
  - liquor ratio 1 : 30
  - length of treatment in the washing liquid 15 mins
  - During this time press the samples with your hand 10 x 5 seconds each in roughly the same intervals.
  - Then lightly squeeze the samples and rinse 4 x in plenty of water.
  - After rinsing the samples, roll up in towels and then dry flat.

4.1.3 Number of tests to be performed

<table>
<thead>
<tr>
<th>Test</th>
<th>Evaluation</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st wash</td>
<td>comparable appearance to the product when new</td>
<td>1x wash, dry/iron in accordance with care instructions</td>
</tr>
<tr>
<td>3rd wash</td>
<td>comparable appearance to the product when new</td>
<td>3x wash, dry/iron in accordance with care instructions after each wash cycle</td>
</tr>
<tr>
<td>5th wash</td>
<td>comparable appearance to the product when new</td>
<td>5x wash, dry/iron in accordance with care instructions after each wash cycle</td>
</tr>
<tr>
<td>dry cleaning</td>
<td>comparable appearance to the product when new</td>
<td>1x dry cleaning, iron in accordance with care instructions</td>
</tr>
</tbody>
</table>

4.1.4 Quality requirements after washing and dry cleaning

The following quality requirements must be fulfilled after at least five washes and if applicable five times drying in a tumble dryer and one dry cleaning:

• There must be no visible signs of wear beyond the normal extent.
• Discolorations, noticeable changes in shade or decrease in print intensity and/or colour abrasion must not occur.
• Irreparable deformations and damage must not occur.
• The hand-feel of the textile must be comparable with the product when new.
• The pilling and fluffing must not have a negative effect on the overall look. No felting may occur.
• The elasticity of the basic materials and all other accessories must not be impaired.
• **Interlinings, coatings**, laminates, bonding, latexing and tape strips must not be blistered, loosen or detached.
• The **latexing** (slip resistance) must exist as before.
• The **elasticity of the elastic tapes** must not be impaired.
• The **function of the zippers** and other fastenings must not be impaired.
• The **bulkiness of the filling/wadding** must not be impaired.
• The **filling/wadding** must not displace or lump together.

4.2 **Dimensional change and tolerances**

• **Determination of the dimensional change of a finished product**

In order to determine the percentage dimensional change of a finished product, the width and length (the longest measured length in each case) are measured before and after domestic washing (incl. drying and ironing according to the care instructions).

**Example:**
½ chest girth before washing = 50 cm
½ chest girth after washing/drying/ironing = 48 cm

1. \(48 \text{ cm} - 50 \text{ cm} = -2 \text{ cm}\)
2. \(\frac{-2 \text{ cm} \cdot 100}{50 \text{ cm}} = -4\%\)

• **Dimensional change tolerances**

The dimensional changes of all the materials in a product after washing and dry cleaning must be matched with each other.
The product’s proportions, i.e. width and length must be preserved after washing.

<table>
<thead>
<tr>
<th>Type of material</th>
<th>Dimensional change in accordance with care instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>knitted/knitwear</td>
<td>+/-4%</td>
</tr>
<tr>
<td>coarse knit</td>
<td>+/-6%</td>
</tr>
<tr>
<td>fine-ribbed</td>
<td>+/-7%</td>
</tr>
<tr>
<td>interlock material</td>
<td>+/-6%</td>
</tr>
<tr>
<td>woven material:</td>
<td></td>
</tr>
<tr>
<td>• cotton</td>
<td>+/-3%</td>
</tr>
<tr>
<td>• blended wool</td>
<td>+/-2%</td>
</tr>
<tr>
<td>• linen/viscose</td>
<td>+/-4%</td>
</tr>
<tr>
<td>• chemical fibres</td>
<td>+/-2%</td>
</tr>
<tr>
<td>hosiery</td>
<td>+/-4% (the fit is decisive)</td>
</tr>
<tr>
<td>embroidery</td>
<td>+/-4%</td>
</tr>
<tr>
<td>lace</td>
<td>+/- 4%</td>
</tr>
</tbody>
</table>
4.3 Twisting
No twisting may occur in the material before washing.

Seam twisting according to the specified care instructions

<table>
<thead>
<tr>
<th>Type of material</th>
<th>Twisting (seam twisting at the hem)</th>
</tr>
</thead>
<tbody>
<tr>
<td>knitted and knitwear</td>
<td>3% related to the width</td>
</tr>
<tr>
<td>woven material</td>
<td>2% related to the width</td>
</tr>
<tr>
<td>all other textile fabrics</td>
<td>no twisting</td>
</tr>
</tbody>
</table>

Example: Measure of twisting at the hem of a T-shirt.
4.4 Corrosion resistance

The metal parts on textiles and accessories must be protected against tarnishing and must be resistant to corrosion. The basis of testing is Test Plan 3:

Climatic conditions for determination of corrosion resistance
Test Plan 3 – dated July 1998
Product loose – examination after the test – reference DIN 50016

- **Application:** Simulation of a humid climate incl. dewing of the product for the exposure of corrosive materials.
- **Evaluation:** Visual examination of the corrosion appearance and classification into strong, medium, light. Additional functional test on technical products for determination of hidden corrosion after acclimation.

![Diagram](image)

Documented evidence of conformity is required from an accredited institute

Alternatively, the iron content of the metal parts can be checked, no detectable iron is permitted.

Documented evidence of conformity is required from an accredited institute

4.5 Best-before date

Battery-operated products must give the supplier’s best-before date and this must be confirmed.
5 TESTING FOR HARMFUL SUBSTANCES

The seller assures that the product does not contain any dyes and/or substances harmful or detrimental to health in the meaning of Art. 30 LMBG (German Food and Consumer Goods Law).

Screening of harmful substances according to LMBG Art. 30 must be carried out on all coated materials.

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5.1 Testing for harmful substances for products with “TCM kind to skin” seal

The requirements for harmful substances of the quality and test specifications have to be applied.

“TCM kind to skin” seal:

Testing conditions:

- A fully made-up product with all its component parts must always be tested.
- The limit value category to be applied is given in the quality and test specifications:
  A = not in direct skin contact
  B = direct skin contact
  C = Baby and children’s wear
- No “Eco Tex Standard 100” certificates are accepted as confirmation of the compliance to the catalogue of harmful substances.

The documented evidence of conformity from an accredited institute, that the product is compliant to the catalogue of harmful substances, must be submitted together with the article samples.

Documented evidence of conformity is required from an accredited institute

5.2 Testing for harmful substances for products without “TCM kind to skin” seal

Products concerned:

- Curtains and net curtains
- Doormats
- Washing machine covers, laundry nets
- Ironing board covers, ironing cushions, ironing cloths
- Cleaning cloths
- Carpets / runners
- Outdoor shoes (leather), other leather products
- Leather clothing (attention: the other parts which are not made of leather, are tested according to the textile material requirements for “TCM kind to skin seal”)
- Non-washable shoes
• Textile animal products

**Testing conditions:**

• A fully made-up product with all its component parts must always be tested.
• The documented evidence of conformity from an accredited institute, that the product is compliant to the catalogue of harmful substances, must be submitted together with the article samples.

*Documented evidence of conformity is required from an accredited institute*

**Requirements:**

a) The following limit values of harmful substances must not be exceeded:

<table>
<thead>
<tr>
<th>Harmful substances</th>
<th>Limit values</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>not in direct skin contact: 300 mg/kg direct skin contact: 75 mg/kg baby/small children: 20mg/kg</td>
<td>DIN EN ISO 14184/1 Japanese Law 112</td>
</tr>
<tr>
<td>PCP</td>
<td>0.5mg/kg</td>
<td>Extraction with ASE or COH, preparation and detection (GC/MS) based on LMBG Art, 35 B 82.02-8</td>
</tr>
<tr>
<td>TeCP</td>
<td>0.5mg/kg</td>
<td>Extraction with ASE or COH, preparation and detection (GC/MS) based on LMBG Art, 35 B 82.02-8</td>
</tr>
<tr>
<td>Cadmium in PVC products including coatings</td>
<td>100mg/kg</td>
<td>DIN EN 1122</td>
</tr>
<tr>
<td>TBT</td>
<td>not in direct skin contact:1.0 mg/kg direct skin contact: 1.0 mg/kg baby/small children: 0.5 mg/kg</td>
<td>Extraction with organic solvent, derivation and detection (GC/MS) based on DIN 38407</td>
</tr>
<tr>
<td>Antimony</td>
<td>2.0 mg/kg</td>
<td>Extraction with acidic perspiration solution according to DIN EN ISO 105 E 04, determination using ICP-OES, AAS</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.2 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.1 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Chrome, total</td>
<td>2.0 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Cobalt</td>
<td>4.0 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>60 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>0.8 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.02 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>1.0 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>100 mg/kg</td>
<td>DIN EN 1122</td>
</tr>
<tr>
<td>Antimony</td>
<td>100 mg/kg</td>
<td>DIN EN 1122</td>
</tr>
</tbody>
</table>
b) The following harmful substances must not be used and must not be detectable:

<table>
<thead>
<tr>
<th>Harmful substances</th>
<th>Limit values</th>
<th>Test method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB</td>
<td>Not detectable</td>
<td>Extraction with organic solvent, detection with GC/MS based on DIN 38407-2 + 3; EN ISO 6468, DIN 51527 T1, DIN 38414-20, DIN ISO 10382</td>
</tr>
<tr>
<td>Azo dye</td>
<td>Not to be used (detectable limit 30 mg/kg)</td>
<td>LMBG § 35 B 82.02-2 general textiles B 82.02-4 / PES fibres B 82.02-3 leather</td>
</tr>
<tr>
<td>Allergenic and carcinogenic dyes</td>
<td>Not to be used</td>
<td>LMBG Art. 30 recommendation of the BfR - TLC and LC-MS / DIN NMP 512 P - 2003</td>
</tr>
<tr>
<td>Vinyl chloride monomers for PVC products including coatings</td>
<td>Not detectable</td>
<td>Gas chromatography and mass spectrometer in accordance with Eco Tex 200</td>
</tr>
<tr>
<td>Chrome VI For leather products</td>
<td>Not detectable</td>
<td>DIN 53314 / (pre-standard) DIN CEN/TS 14495 (leather)</td>
</tr>
</tbody>
</table>

5.3 Nickel
The nickel discharged from consumer goods containing nickel must not exceed the limit nickel discharge value of 0.5µg/cm²/week, in accordance with the current consumer goods regulations.
For consumer goods containing nickel with a nickel-free coating, the nickel discharge must also not exceed this maximum value within a use period of 2 years.

<table>
<thead>
<tr>
<th>Consumer goods</th>
<th>Substance</th>
<th>Maximum quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer goods containing nickel</td>
<td>Nickel and its compounds</td>
<td>0.5µg nickel/cm²/week released</td>
</tr>
<tr>
<td>Consumer goods containing nickel with a nickel-free coating</td>
<td>Nickel and its compounds</td>
<td>0.5µg nickel/cm²/week released, but compliance with the maximum quantity for a period of at least two years under normal use</td>
</tr>
</tbody>
</table>

Nickel discharge to be tested in accordance with the current DIN EN standards 1811 and 12472.

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6 ACCESSORIES

- All accessories, e.g. buttons, zippers, must be matched with the care instructions given in the quality and test specifications, as well as the materials.
- All accessories must be colour fast and rustproof. The paint must not come off painted accessories.
- No sharp edges or splintering, which could lead to injuries, are permitted.
- All accessories are subject to the respective contaminant specifications, as given in the quality and test specifications.

6.1 Fastenings

- The fastenings must be smooth and easy moving, firm and close completely.
- All fastenings and rivets must withstand 2000 actuations.
- All fastenings and rivets must be securely attached and must not come off by themselves.

6.1.1 Buttons and other fastening elements

- Buttons must be resistant to washing and dry cleaning
- Bed linen buttons must be resistant to mangle.
- Buttons must be colour fast.
- Buttons must not have sharp edges.

Fixing of buttons:

- A spare button must be provided for each button size. The spare buttons must be fixed to the sew-in label or be enclosed in a polybag (see details in the quality and test specifications).
- Buttons must be fixed safely, durably and without thread ends.
- In the case of fastening buttons, the stem must always be wound round with the thread. The stem height must be adapted to the thickness of the material to make it easy to button up or open.
- Depending on the product, buttons must be secured with a counter button (see quality and test specifications).

6.1.2 Press studs

- Press studs must – if necessary – be fitted with a plastic shim, to prevent the press stud from being ripped out.

- The opening force of press studs must be 10 N.
The opening force is checked on the basis of the strip tensile test according to DIN ISO 13934

⚠️ Documented evidence of conformity is required from an accredited institute
6.1.3 Hooks and eyes

Hooks and eyes on underwear:

- Hooks and eyes on items of underwear must be painted, unless required otherwise in the quality and test specifications.
- The paint must not come off.

Bras and body fastenings:

- For bra and body fastenings the bearer materials must be roughened and soft on the inside (skin contact).
- The edges of the bearer material must not be sharp edged or scratch.

6.1.4 Riveting

The rivets must be fastened so that they do not become loose or detach when a tensile force of 90N is applied (testing in accordance with DIN EN 71).

The rivet connection must not display any crushing/folding.

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6.1.5 Zippers

The zippers must be tested in accordance with DIN 3416 to 3419 (the tests are listed in the following).

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1- Transverse strength of the zipper

The transverse strength of the zipper is the tensile force related to a certain length, at which the chain or support tape tears.

2- Pull-off strength of a zipper tooth

Tensile force required to pull a zipper tooth from the support tape (only applies to metal and injected plastic zippers).
3- Transverse strength of the lower limiting part
Tensile force required to pull the end connection apart

4- Strength of the upper limiting part
Tensile force, required to pull the zipper-pull beyond the upper fastening limiter (at the start) or to pull it off the zipper teeth.

5- Transverse strength of the divisible element
Tensile force required to pull apart the divisible element

6- Longitudinal strength of the cam part of the divisible element
Tensile force required to pull the cam part from the support tape.
7- **Pull-off strength of the zipper-pull**

The pull-off strength of the zipper-pull or sliding cap or sliding part is the tensile force, under which the part tears or ceases to function.

![Image of zipper pull](image)

8- **Continuous running performance**

Opening and closing the zipper teeth using a sliding part, in which the slider is moved backwards and forwards on the zipper teeth under a transverse stress and a certain opening angle.

![Image of zipper running](image)

**Attaching the zipper:**

- Zippers must be smoothly sewn in. In clothing they must be backed with a panel and have an appropriate undervent.
- The zippers must be sewn in with an adequate distance from the material, so that the material cannot get stuck in the zipper.
- The zipper start and end pieces must be durably sewn on. Especially where divisible zippers are used, the loading points at the start and end must be secured, and if necessary fixed with a bar stitch.
6.2 Thread

- The threads for sewing and embroidering must be matched to the outer material, lining and all other materials used, with respect to the following points:
  - Tear strength
  - Elasticity
  - Shrink-proof
  - Heat resistance
  - Colour fastness
  - Matching colour with the material (Exception: where contrast colours are required)

- Blind stitch seams must be sewn using a monofilament polyester yarn.

6.3 Interlining

- Interlinings must be matched with the outer material, be sufficiently large, and correctly and durably fastened and guarantee strength. For stretch materials the elasticity of the outer material must continue to be guaranteed.
- Interlinings must comply with all items of the product’s care instructions.
- The colours of the interlinings must be matched to the outer material, in order to prevent colour differences or the interlining becoming visible.
- Layered interlinings, loose reinforcement (e.g. shirt collars) must be properly fastened, must not move and must not push through.
- No breaks, creases or blistering may form in the interlining during and after fabrication.

6.4 Lining

- The slip resistance must be adequately high and be appropriately adapted to the intended use.

Fixing of lining:

- Trousers: Where a crotch lining is inserted the lining must be sufficiently large, smooth and securely fastened.
- Jackets: The lining must be made up and sewn in with sufficient additional width so that the comfort and function of the jacket are not impaired. Equally, the lining must not be visible below the hems from the outside.

6.5 Elastic band

- The elastic band used must be permanently elastic.
- In children’s pyjamas the elastic band must be loosely drawn in and a button hole worked into the waistband for fastening.

6.6 Shoulder band

A seam tape must be sewn into the shoulder seams of knitted garments.
6.7 **Shoulder pads**
- Non covered sewn in pads (e.g. unlined jackets) must be covered with a matching colour.
- Shoulder pads must be fixed on at the shoulder seam and at the front and rear of the armhole so that a durable and correct sit is guaranteed. Exceptions are allowed due to a specific design.

6.8 **Hanger loops**
- The hanger loops must be fixed according to the quality and test specifications.
- Hanger loops must be securely fixed so that the garment is held when hung up and the hanger loops do not tear out.

7 **WORKMANSHIP**

7.1 **General workmanship**
- The technical notation/direction of wales and the direction of fabric must be complied with for cutting according to the quality and test specifications.
- All parts of a product must come from the same roll of fabric.
- No colour/embossing/shining/hand-feel difference in products of the same colour which belong together within a sales unit, nor in the whole delivery.
- Symmetrical pockets and collars
- No shiny areas caused by ironing
- The product must be clean, free of fuzes, with no hanging threads and ironed.
- The packaging must be designed so that no irreparable, permanent imprints and deformations result in the product.

7.2 **Seams**

Seam allowances:
- All parts of pattern must have adequate seam allowances.
- All visible edges must be trimmed and over-edged.
- Open edges must be uniformly cut back.

Seam finishing:
- The **needles** must be selected according to the material and be regularly changed.
- The **minimum stitch density** for fabrics is 4 stitches/cm, for knitwear 5 stitches/cm.
- The **thread tension** must be adjusted to the material.
- The **seam strength** must be adjusted to the material.
- The **elasticity of the seams** must be guaranteed in elastic materials (no tearing of the seams).
- The **end of seams** must be secured.
- Quilting seams must be parallel to the edges.
The following stitching errors must not occur:
- Open seams, jumped stitches, needle holes, marks of the presser foot
- Multiple stitching or visible restarting of a seam
- Skew or wavy seams, twisted seams

### 7.3 Buttonholes
- Buttonholes must be stitched around with an adequate stitch density, the ends well secured and finished without any loose thread ends.
- The size and position of the buttons and buttonholes must match each other. The distance between the buttons/buttonholes must be uniform (exception: where specified otherwise).

Where **piped button holes** are required the piping must be uniformly long and wide and the ends well secured.

### 7.4 Darts
- Darts must be smooth and sewn properly at the tips.
- Dart ends must be adequately secured.
- The marking of the dart tip must not be visible and must not damage the material.

### 7.5 Pocket finishing
- Pockets, including inside pockets, must be securely and durably stitched at the corner points and if necessary must have additional bar tacking.
- The pockets must be flat and properly finished.
- Where necessary, pocket openings are to be reinforced with interlining, in order to prevent them from stretching and distending and to guarantee strength.
- The pockets must be sewn on symmetrically and their position must correspond to the specification.

### 7.6 Belt loops
- Belt loops must be securely and durably attached.
- The positioning must correspond to the specification.

### 7.7 Print quality
The following quality requirements must be fulfilled:
- Well-printed and uniform printed impression
- Sharp print contours, no blurring or fizzling of the print
- Pigment printing without any cracks
- Correct position according to specification
- Neutral material odour
- The outlines of printing must be exactly placed to each other without any space
8 SAFETY AND RISK ANALYSIS

8.1 Safety

The product must be free of injury risks. Burrs and sharp edges are not permitted on or in the metal and plastic parts used. When used in accordance with the foreseeable intended use, the product must not cause any harm or risk to health. Further, the product must be marketable in accordance with all the applicable laws and regulations. At Tchibo’s request, this must be confirmed by an accredited institute. The institute must be agreed with First World Fashion. The seller assures that the product does not contain any dyes and/or other substances in the meaning of Art. LMBG which could harm, be or cause risks to health.

8.2 Risk analysis

For medical products, a risk analysis must be carried out according to E-DIN/EN 1441 Medical Products, and submitted with the product samples.

Documented evidence of conformity is required from an accredited institute

9 INSTITUTE REPORTS AND CERTIFICATES

All the institute reports and certificates required must be submitted, in German or English, together with the article samples at the latest.

For the institute reports, the supplier must arrange testing of the fully made-up product with all its components parts, to be carried out by a neutral accredited institute. If certain institutes are stipulated in the quality and test specifications, they must be commissioned to carry out the testing.

Certificates are to be submitted for each product and order. In all the certificates, the product must be clearly identifiable through the naming of the company First World Fashion, the project number and the project name.
10 SERVICEABILITY AFTER ACCLIMATION

The product and packaging must be designed so that their functionality and serviceability as well as their look are unimpaired after acclimation. Testing to be carried out on the basis of Test Plan 2:

Climatic transport and storage conditions
Test plan 2 – dated July 1998

- **Application**: Simulation of the possible environmental climate in a time-lapse test in which the product can be stored or transported in the package.
- **Evaluation**: Examination of the functionality and serviceability and the look of the product and packaging following acclimation.

![Graph showing temperature and air humidity over time](image)

Documented evidence of conformity is required from an accredited institute.