PRIVATE SPECIFICATION

Prepared for

A STAR ALLIANCE MEMBER ™

SHEER STOCKINGS

ORIGINAL

Item Number: CO25
Document Number: SAA 920
Version 01.0/April 2014

1. Scope

This specification[1] covers the requirements for sheer pantihose suitable for use by the female personnel of South African Airways.

2. Definitions and Abbreviations

For the purposes of this specification, the definitions given in SANS 10004 and the following definitions apply:

acceptable: acceptable to South African Airways
nominal: subject to the tolerances normal to good manufacturing practice

3. Style

The style is as follows:

- **Panty and toe sections:** micromesh knitted structure
- **Leg sections:** plain jersey knitted structure
- **Gusset:** cotton
- **Waistband:** to include elastomeric yarns

4. Client furnished materials

No materials will be supplied by SAA.

5. Component materials

The following materials shall be supplied and used by the manufacturer.

NOTE: *All components listed below shall be manufactured in the Republic of South Africa. In instances where the raw material and/or finished components are not available in the Republic of South Africa, the onus shall be on the bidder to apply for exemption certificates from DTI. Exemption certificates, where relevant, shall be submitted together with each bid.*

5.1 Yarn

5.1.1 Composition

The composition of the yarns (excluding the waistband), when tested in accordance with AATCC test method 20, *Fiber analysis: Qualitative,* shall be

[1] This private specification has been compiled by National Private Specifications (Pty) Ltd. privatespecs@vodamail.co.za

ORIGINAL

- 100% polyamide 6.6

5.1.2 Yarn linear density, number of filaments and crimp rigidity

Recommended yarn linear densities and number of filaments, when tested in accordance with SANS 6103, *Linear density of yarns in weft-knitted fabrics,* shall be:

- **for the panty and toe sections**: 33 dtex f 10
- **for the legs**: 18 to 20 dtex f 7

Recommended crimp rigidity, when tested in accordance with BS 6663, *Methods for determination of crimp rigidity of textured nylon yarns,* shall be:

- not less than 48 %

5.1.3 Colour

The colour shall be an acceptable match to the colour "BLUE NOTE" as per sample held by SAA, or as agreed upon between SAA and the successful tenderer.

5.1.4 Colour fastness to washing

The numerical ratings for change in colour and for staining of adjacent fabrics, determined in accordance with procedure 1 (A) of SANS 105-C10, *Textiles – Tests for colour fastness – Part C10: Colour fastness to washing with soap or soap and soda*, shall be not lower than 3 — 4

5.2 Sewing thread

Sewing thread used in the making-up of pantihose, when tested in accordance with AATCC test method 20, *Fiber analysis: Qualitative* shall be

- continuous filament high-bulked synthetic thread
- of a linear density sufficient to prevent seam-cracking.

5.3 Waistband and welt

Waistband and welt shall include

- **elastomeric yarns** that have sufficient elasticity to enable the pantihose to comply with the relevant requirements of table 1.

ORIGINAL

6. Workmanship

Pantihose shall be:

- made in accordance with sound manufacturing practice
- of uniform and acceptable make, colour and finish
- such that any difference between the unstretched legs of the two halves is acceptable
- such that seams and the thread are sufficiently extensible to obviate seam-cracking or seam breakdown when subjected to the tension used to determine the panty dimensions
- semi-boarded to increase the resistance to snagging, preserve elasticity and improve appearance.
- at least equal to the sealed sample that is acceptable to South African Airways.

Shall be free from:

- defects, described in SANS 8499, *Knitted fabrics – Description of defects –Vocabulary*, that affect their appearance or may affect their serviceability (or both), when assessed in accordance with SANS *The assessment of defects in textile piece-goods and made-up articles – Part 4: Defects in knitted piece-goods*.
- spots
- stains that might have occurred during manufacture

ORIGINAL

7. Sizes

After conditioning in accordance with SANS 70, *Conditioning of textiles and standard temperate atmosphere for determining their physical and mechanical properties,* **and measured in accordance with SANS 5766,** *Measurement of girth and length extended dimensions of pantihose* **the dimensions of the pantihose shall comply with the appropriate requirements given in table 1.**

Table 1 — Pantihose dimensions

Dimensions in cm

1	2	3	4	5	6	7
Dimensions	**Requirements**					
	Size					
	Small	**Medium**	**Large**	**Extra Large**	**Super Large**	**Extra super Large** [a]
Waistband girth						
Flat, range [b]	21 to 23	23 to 25	21 to 23	21 to 23	23 to 25	23 to 25
Extended, range	63 to 72	63 to 72	63 to 72	63 to 72	68 to 77	85 to 98
Waistband depth, min.	3					
Panty, micromesh						
Length, range	45 to 51	50 to 56	55 to 61	59 to 67	66 to 75	63 to 73
Width, range	71 to 79	71 to 79	71 to 79	74 to 82	79 to 89	98 to 114
Leg, plain , 2-stage reduction						
Length, range	165 to 185	182 to 202	201 to 223	216 to 238	226 to 250	230 to 256
Width, range	41 to 45	41 to 45	41 to 45	42 to 46	42 to 47	42 to 49
Foot width, range	28 to 32	28 to 32	28 to 322	28 to 32	29 to 33	29 o 33
Toe depth, range	3 to 5					

[a] This size is recommended for a figure with a shorter crotch length but broader.

[b] Measured in flat and relaxed state.

ORIGINAL

8. Make

Illustrations are not to scale and are for guidance only, and unless inconsistent with the text, all measurements are nominal.

8.1 Panty section

The panty section of the pantihose to

- be formed by slitting lengthwise the portions, marked “a” in figure 1, of two identical leg blanks
- be seamed together

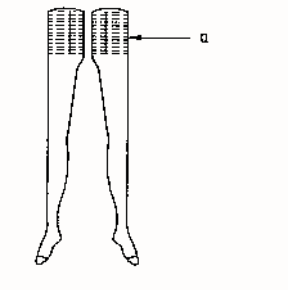

Figure 1 — Pantihose makeup

- **for normal sizes**: include a gusset of suitable size sewn in the crotch
- **for the larger sizes**: include a panel gusset , i.e. either
  - a long gusset with parallel sides that extends over half of the crotch length at the back of the pantihose or
  - a full panel gusset that extends over the whole of the crotch length (from to back)

8.2 Marking of sizes

A thread of the appropriate colour and that is bright enough to provide a strong contrast with that of the pantihose shall be knitted into the waistband of each pair of pantihose to indicate its size as follows:

Size	Colour
Small	Yellow
Medium	Red
Large	Green
Extra Large	Blue
Super Large	Black
Extra super large	Orange

9. Seams

Seams shall be

- extensible to prevent cracking and undue shrinkage
- flat enough to prevent discomfort

10. Label

Each label encasing pantihose shall:

- be a cardboard printed label: die-cut, creased and folded into a boxed-shape of nominal size 210 mm x 95 mm and punched at the extended top-end

ORIGINAL

- provide appropriate care instructions (in accordance with SANS 10011 *Care-labelling of textile piece-goods, textile articles and clothing*) in words and symbols
- provide the fibre composition of the fabric in accordance with the requirements of SANS 10235 *Fibre content labelling of textiles and textile products*
- information to be in legible and indelible block letters of height at least 3 mm
- include the following information:
  - the size designation
  - the colour
  - the item number
  - the item description
  - the month and year of manufacture
  - the order number
  - the VAT no of the contractor
  - the country of origin, i.e. “Made in the RSA”

11. Packaging and marking of packaging

11.1 Packing

Pantihose shall be

- individually packed in a cardboard-boxed label described in clause 10
- delivered in a clean and commercially dry condition
- so packed that they will not be damaged during transit or in storage
- packed as given in table 2.

Table 2 – Packaging

1			2
PACKAGING MATERIAL			**CONTAINING**
A.	Cardboard -boxed label with a small transparent window		Folded pantihose, individually packed.
B.	Bulk container for transit.		Pantihose of the same size unless ♦ quantities ordered are such that packing together of the same size only is not justified, or ♦ to accommodate the last part of an order or contract.
	B.1	**Large quantities:** corrugated board bulk containers.	
	B.2	**Small quantities:** corrugated board bulk containers to have a maximum height of 288 mm ± 3 mm.	

ORIGINAL

11.2 Marking of bulk containers

Each bulk container shall have a label securely attached to the outside. This label shall be visible when the containers are stacked and shall provide the information in legible and indelible markings as follows:

- the manufacturer's name or trade mark or both
- the order number or contract number
- the item description
- the item number
- the size designation
- the colour
- the quantity of the item
- the month and year of manufacture
- the order number
- the box number, e.g. “1 of 5”
- the total mass of the packed container

11.3 Additional marking

When so required, pantihose cardboard-boxed labels or bulk containers (or both) shall bear information additional to that specified above.

ORIGINAL

13. Normative references

The following referenced documents are indispensable for the application of this document. All normative documents are subject to revision and, since any reference to a normative document is deemed to be a reference to the latest edition of that document, parties to agreements based on this document are encouraged to take steps to ensure the use of the most recent editions of the normative documents indicated below. Information on currently valid national and international standards can be obtained from the South African Bureau of Standards (SABS)[2].

AATCC test method 20, *Fiber analysis: Qualitative.* Available from World Wide Web http://www.aatcc.org/Technical/Test_Methods/scopes/tm20.cfm

BS 6663, *Methods for determination of crimp rigidity of textured nylon yarns.*

SANS 70, *Conditioning of textiles and standard temperate atmosphere for determining their physical and mechanical properties.*

SANS 105-C10/ISO 105-C10, *Textiles – Tests for colour fastness – Part C10: Colour fastness to washing with soap or soap and soda.*

SANS 5766, *Measurement of girth and length extended dimensions of pantihose.*

SANS 6103, *Linear density of yarns in weft-knitted fabrics.*

SANS 8499, *Knitted fabrics – Description of defects –Vocabulary.*

SANS 10004, *Terms and definitions for textiles and textile merchandise*.

SANS 10076-4, *The assessment of defects in textile piece-goods and made-up articles – Part 4: Defects in knitted piece-goods.*

SANS 10011, *Care-labelling of textiles and clothing.*

SANS 10235, *Fibre-content labelling of textiles and textile products.*

ORIGINAL

[2] ***South African Bureau of Standards: Tel. +27 (0) 12 4287911***
www.sabs.co.za

ANNEX A

(Normative)

Special conditions of tender

A-1 GENERAL

A-1.1 Unless otherwise stated, the South African Bureau of Standards shall be the inspecting authority.

Any applications for deviations from drawings or the specification, or any laid down process, treatment or procedures as set out in this specification, must be made to the SA Airways and verified by the SABS[3]. All applications must be submitted in writing.

A-1.2 The following shall have been submitted, inspected, tested and approved by the inspecting authority before bulk production is commenced:

a) Three pre-production pairs of pantihose (of different sizes).
b) It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

A-1.3 The pantihose shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on pantihose supplied to this specification may be in progress

A-1.4 The contractor shall inspect the finished pantihose for compliance with the specification before submitting them to the inspecting authority for final inspection.

A-1.5 Before acceptance, the pantihose shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

A-2 DOCUMENTATION

One container of each consignment shall be marked “DOCUMENTS” and in addition to the pantihose, shall contain the following:

a) The packaging slip or delivery note;
b) where applicable the inspection certificate(s);
c) a copy of the invoice containing the following information:
- the order number
- the financial authority number
- a full description of the consignment, i.e. Item Number, quantity, etc

ORIGINAL

[3] ***SABS Inspection Authority: (Tel) 012 4287371.***