

PRIVATE SPECIFICATION

Prepared for the

South African Air Force



**RANK INSIGNIA,
EMBOSSSED SHOULDER BOARDS
for
CEREMONIAL DRESS & SERVICE DRESS
of
General Officers
Chaplains
Officers
Candidate Officers**



**SALM 573
Verion 07.0/July 2022**

1. Scope

This specification covers the materials, design and make of embossed shoulder boards for specific ranks of the South African Air Force.

The ranks covered by this specification are as follows:

- a) General Officers
- b) Chaplains
- c) Officers
- d) Candidate Officers

The applicable uniform applications covered by this specification are as follows:

- a) Ceremonial Dress
- b) Service dress

NOTE: Various National and International patents may apply.

2. Definitions and Abbreviations

For the purposes of this specification, the following definitions apply:

Acceptable: Acceptable to the South African Air Force.

Nominal: Subject to the tolerances normal to good manufacturing practice.

NSN: National Stock Number as reflected as Item Number on a Government Order.

3. General

No materials will be supplied by the South African Air Force.

The materials as specified in paragraphs 4.1 to 4.4 shall be supplied and used by the manufacturer. Trim charts shall accompany the pre-production samples (see Annex A).

4. COMPONENT MATERIALS

4.1 Base fabric

- ◆ an acceptable coated high bulk continuous filament knitted fabric
- ◆ to comply with the requirements as given in table 1
- ◆ permissible number of defects to comply with the requirements as given in table 2
- ◆ to comply with the requirements as given in 3.1 and 3.2 of table 3

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- ♦ the colour shall be a match, in terms of SANS 10076-4 "The assessment of defects in textile piece-goods and made-up articles Part 4: Defects in knitted piece-goods", to Colour No. 2119c-02 "SAAF Dark blue" of CKS 129 "Colours for textiles"

Table 1 – Base fabric requirements

1	2	3
Property	Requirement	SANS number (unless otherwise indicated)
Composition, % Nylon or Polyester ^a	100	AATCC 20
Construction	Knitted interlock ^b and coated with a heat-resistant compound ^{c & d}	Visual examination and physical analysis
Mass per area, g/m², min.	260 ^{c & d}	5385 ^e
Colour fastness to:		
Washing, rating, min.		105-C10:2007 Test number C(3)
Change in colour	4	
Staining of adjacent fabrics	4	
Dry-cleaning, rating, min.		105-D01
Change in colour	4-5	
Light, rating, min.	4	105-B02

^a High bulk continuous filament yarn.
^b Fine gauge.
^c The mass reflected in column 2 is the mass of the fabric before it has been coated with a heat-resistant compound. The coated fabric shall be of minimum mass 320 g/m² when tested in accordance with SANS 5385.
^d If a locally manufactured alternative fabric of mass 220 g/m² without a heat-resistant compound is offered, and it can be proven that the end-product is of the same quality as the previously sealed sample, it may be considered by the SAAF.
^e Tested after conditioning in accordance with SANS 70.

Table 2– Permissible number of defects of base fabric

1	2	3
Limit of acceptable quality	Requirement	SANS Number
LAQ for a piece	10	10076-4
LAQ for a lot	12	10076-4

Table 3 – Pneumatic heat press requirements

1	2	3	4	5
Test area	Time	Pressure	Temperature, min.	Requirement
3.1 Coated surface	30 seconds	2 bar	280° C	To retain original shape and texture
3.2 Knitted surface	30 seconds	2 bar	230° C	To retain original shape
3.3 Indentation groove of shoulder board	30 seconds	2 bar	250° C	To retain original shape and depth
3.4 Embossing/Flat embossed material	30 seconds	2 bar	280° C	To retain original shape and depth

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4.2 Adhesive Compound Filler

- ♦ used as a filler between the two layers of outer material (fused together)
- ♦ a heat resistant compound
- ♦ an acceptable co-polymer (synthetic) rubber paint compound adhesive
- ♦ minimum mass of 90 g/m²
- ♦ to be able to withstand the conditions as specified in 3.1 (columns 2 to 5) of table 3

4.3 Embossing material

- ♦ a synthetic rubber paint compound
- ♦ to be able to withstand the conditions as specified in 3.4 of table 3
- ♦ to have the same colour fastness properties as specified for the base fabric
- ♦ colours to be as given in table 4

4.4 Non-PVC polyester film

- ♦ minimum 200 microns
- ♦ an acceptable non-PVC polyester film

5. Workmanship

Each shoulder board shall be:

- ♦ cut, made and embossed with first-class workmanship throughout
- ♦ of uniform and acceptable make, colour and finish

Each shoulder board shall be free from:

- ♦ defects, that affect the appearance or may affect their serviceability (or both)
- ♦ marks, spots and stains, incurred in the making-up

Each shoulder board shall be:

- ♦ neatly double sealed using a cure and press system
- ♦ made with permanent indentation grooves
- ♦ free from fraying

Shoulder boards shall be:

- ♦ completely durable at all times
- ♦ such that no separation shall occur between the compound and the fabric of the shoulder board

6. Design and make

6.1 The shoulder boards shall:

- ♦ be made according to the dimensions given in paragraph 7
- ♦ be constructed from two layers of knitted outer fabric, laminated together with an adhesive compound filler to stabilise and support the shoulder boards
- ♦ a non-PVC Polyester film shall be laminated in-between the layers of the outer material

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- ♦ have permanent double sealed edges
 - sealed with a cure and press system
- ♦ have a permanent indentation groove (marked with a dotted line on the profiles in paragraph 9)
 - fully heat resistant to ironing
 - 3 mm from the edge (short edges)
 - shall comply with the requirements as given in 3.3 of Table 3
- ♦ be embossed with a specific rank as per the attached profiles (see paragraph 9), on the face side

Design and embossing:

- ♦ to have explicit detail
- ♦ be such that all ranking shall be 100% proportionate in size to the original
- ♦ be such that all ranks, where duplication occurs, will be identical
- ♦ corner sharpening and engraving will be used
- ♦ contour effect must be used as a definition
- ♦ comply with the requirements as given in table 4

Table 4 – Design and colour requirements

1	2	3	4	5	6	7
Applicable to the following ranks	Design item	Type of print	Embossing/print effect	Colour reference	Colour Number	Colour title
General Officers	Crossed sword & baton	Embossed	3-D effect	CKS 129	868c-08	SAAF Gold Mother of pearl
	Coat of Arms					
All ranks (excluding General Officers)	SAAF Eagle					
All ranks (excluding Candidate Officers and Chaplains)	Braided stripes		sculptured with a uni-fractional pattern			
Chaplains	Christian emblem	Flat embossing	3-D effect	CKS 129	545c-06	Spectrum violet
	Horizontal stripes and sides of triangle		sculptured using a mock embroidered braid effect			
	Purple stripe of depth 28 mm and background of Christian emblem					
Candidate officers	White stripe of depth 21 mm		Smooth, semi-gloss appearance		2200c-09	National Flag White
Colonel Chaplain	Purple stripes				545c-06	Spectrum violet

SAAF Eagle:

- ♦ shall be identical to the attached profiles
- ♦ being supplied in pairs, the SAAF Eagle shall face forward on both shoulder boards
- ♦ shall be such that the lettering is legible
- ♦ shall be such that the multi-level eagle figures are sculptured in 9 levels

A uni-fractional pattern (see paragraph 8):

- ♦ shall be proportionally structured in all ranks to the following measurement:
 - 7 mm divided into 2 x 3.5 mm
 - 14 mm divided into 1 x 7 mm and 2 x 3.5 mm
- ♦ lowest level of uni-fractional pattern to be of height 0.5 mm

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- ♦ highest level of uni-fractional pattern to be of height 1.6 mm

The levels of the uni-fractional patterned braid:

- ♦ shall be defined into the measurements as above

Embossing of Coat of Arms and crossed sword and baton:

- ♦ shall be identical to the attached profiles
- ♦ where pairs are applicable, the Secretary bird (that forms part of the Coat of Arms) shall face forward
- ♦ where pairs are applicable, the knobkierie-and-spear combination as well as the crossed-sword-and-baton combination shall be mirror images
- ♦ shall be such that the lettering is legible
- ♦ shall be such that the multi-level figures are sculptured :
 - 13 levels for the Coat of Arms
 - 9 levels for the crossed sword and baton
- ♦ shall be such that corner sharpening is used as a finish
- ♦ shall be such that contours are used to shape levels

The synthetic rubber paint compound used between the layers of the material and the curing and pressing system must render an article which is:

- ♦ heat resistant to a temperature of a minimum of 280°C
- ♦ machine washable
- ♦ dry cleanable
- ♦ soft and pliable
- ♦ sealed at the edges

6.2 Printing on back of each shoulder board

- ♦ the back surface of each shoulder board shall be clearly printed with either a capital "L" (identifying the left shoulder board) or capital "R" (identifying the right shoulder board) as given in section 7
- ♦ letter to be printed in white, or any other acceptable alternative contrast colour to the base fabric
- ♦ printed in such a way that the embossed Secretary Bird and SAAF eagle shall face forward on the respective shoulder boards when worn

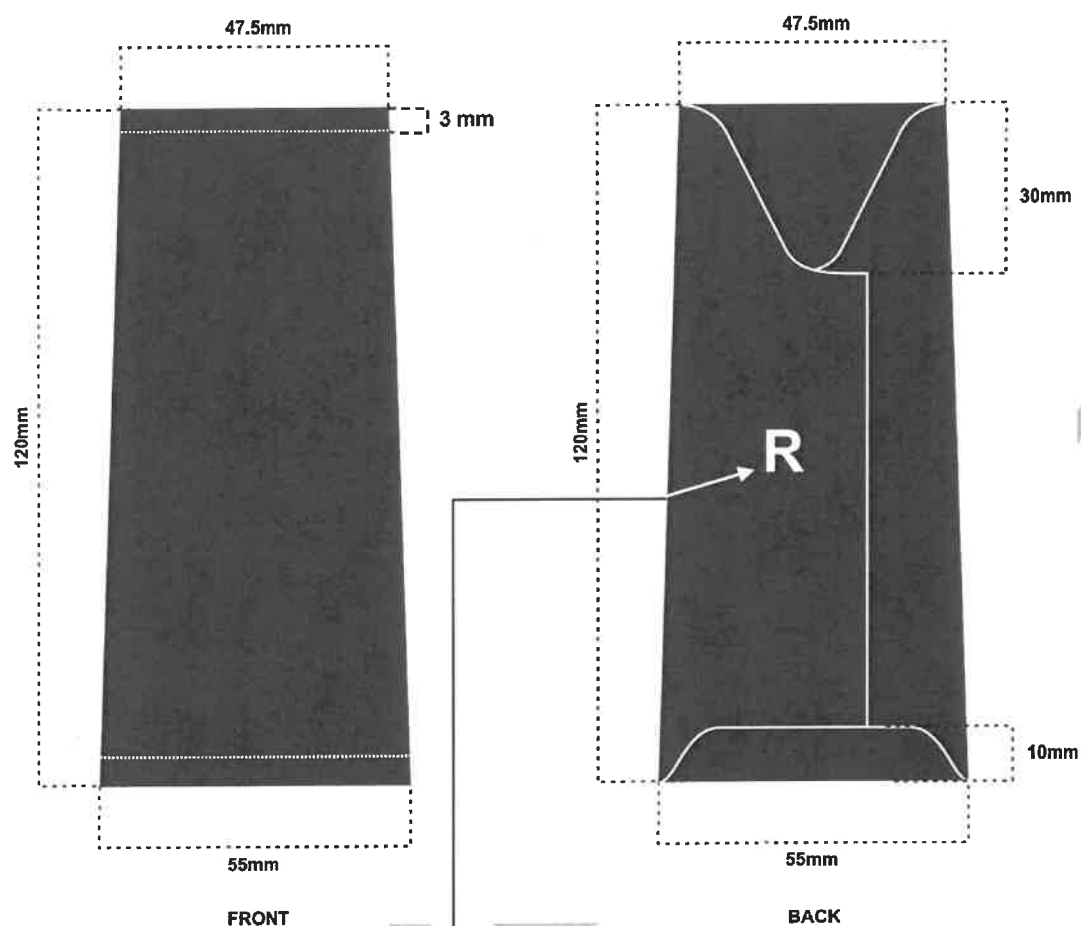
6.3 Delivery requirement

The shoulder boards shall be delivered:

- ♦ in pairs
- ♦ All ranks except General Officers: left and right-facing SAAF Eagle
- ♦ General officers: left and right facing secretary bird and mirror images of the knobkierie-and-spear

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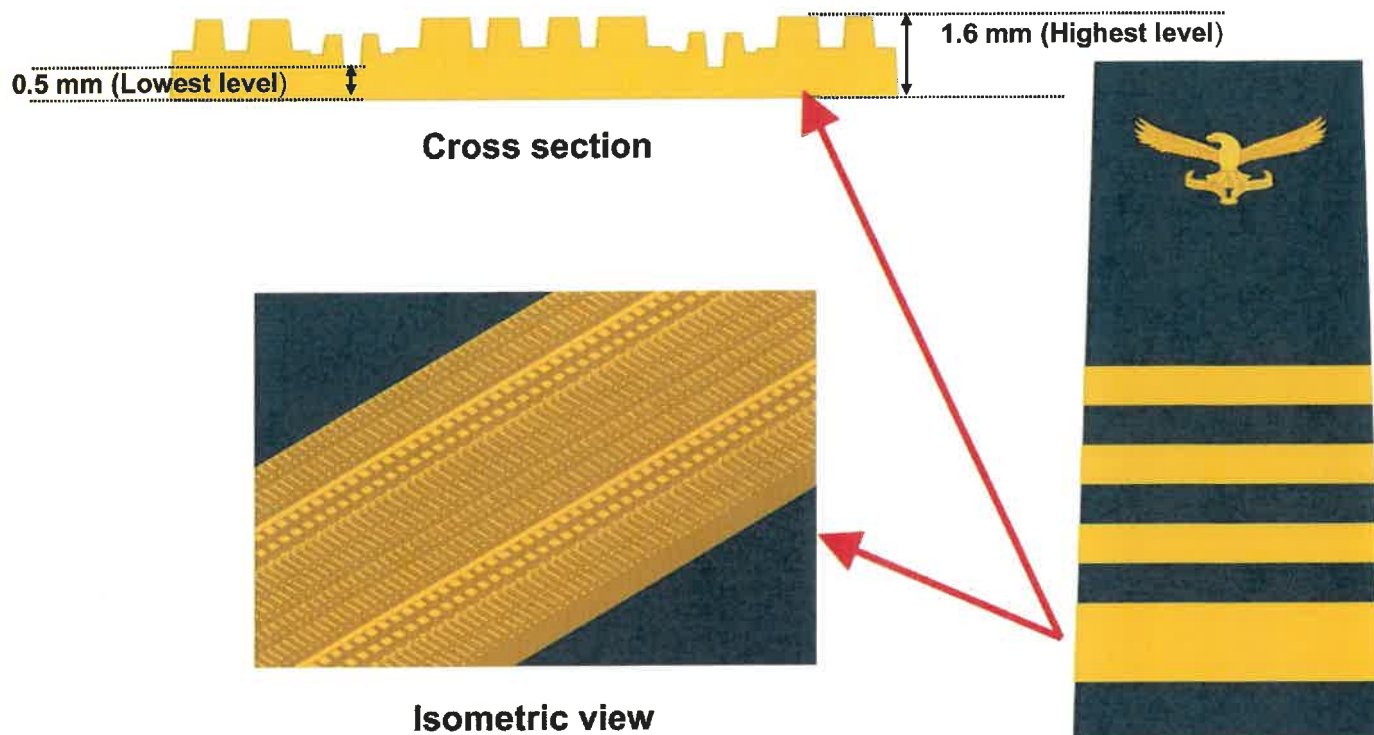
7. Shoulder board dimensions



Printed letter identifying the shoulder on which the board should be worn

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8. Uni-fractional pattern



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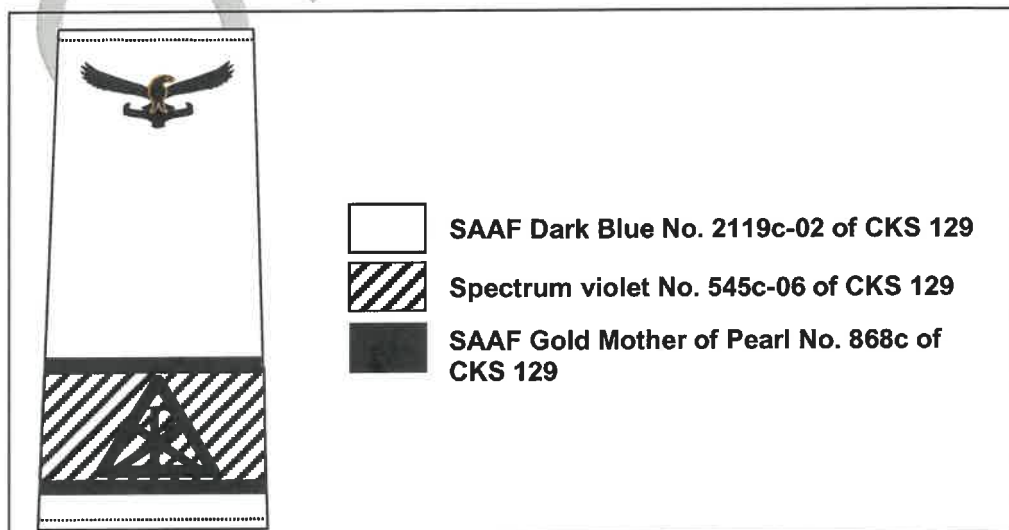
9.PROFILES: CEREMONIAL & SERVICE DRESS

9.1 Chaplains

National Stock Number	Item description
18-097-6526	Insignia, Rank, Officer, for Chaplain, Ceremonial and Service Dress; SAAF Embossed



COLOUR BREAKDOWN



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9.2 Candidate Officer

National Stock Number	Item description
18-097-6525	Insignia, Rank, Officer for Officer Candidate, Ceremonial and Service Dress; SAAF Embossed



FABRIC

 SAAF Dark Blue
2119c-02 of CKS129

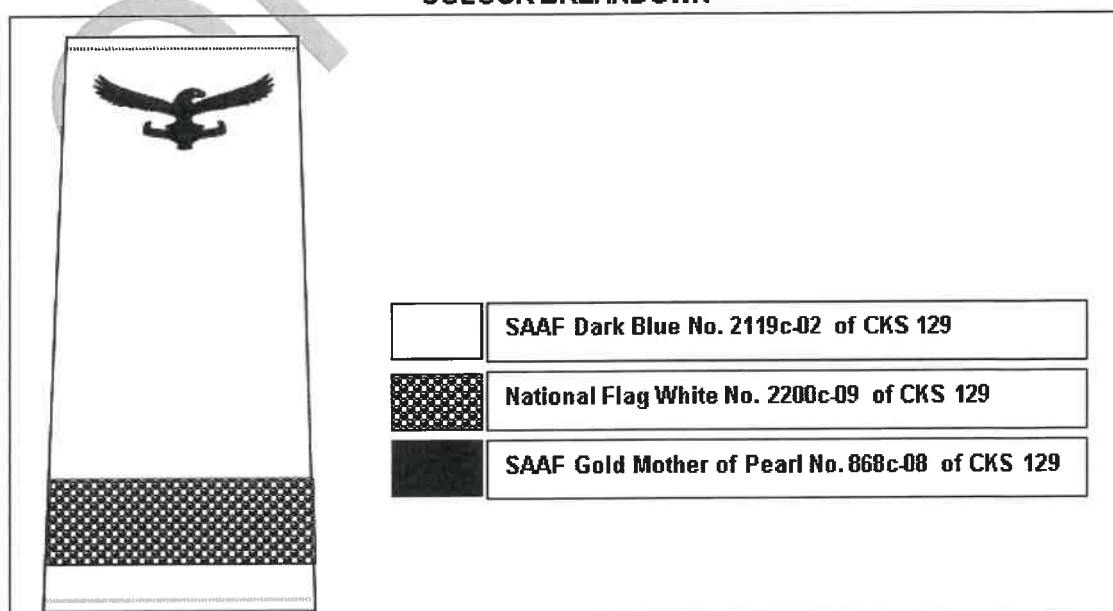
EMBOSSED

 SAAF Gold
Mother of Pearl
No. 868c of CKS129

FLAT EMBOSSED

 White

COLOUR BREAKDOWN



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9.3 2nd Lieutenant

National Stock Number	Item description
18-097-6527	Insignia, Rank, Officer for 2 nd LT, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

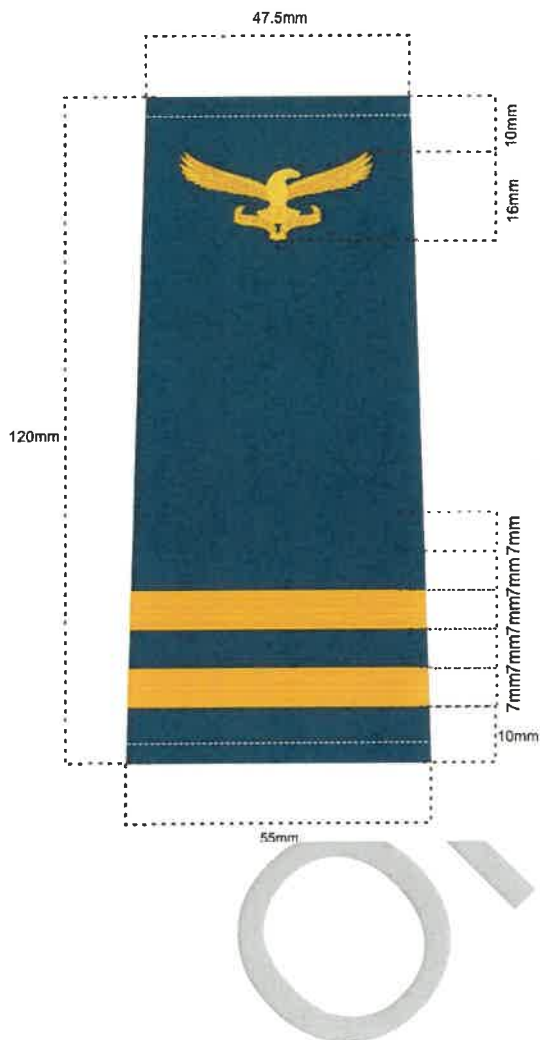
EMBOSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.4 Lieutenant

National Stock Number	Item description
18-097-6528	Insignia, Rank, Officer for LT, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.5 Captain

National Stock Number	Item description
18-097-6529	Insignia, Rank, Officer for Capt, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.6 Major

National Stock Number	Item description
18-097-6530	Insignia, Rank, Officer for Maj, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.7 Lieutenant Colonel

National Stock Number	Item description
18-097-6586	Insignia, Rank, Officer for LT Col, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.8 Colonel

National Stock Number	Item description
18-097-6587	Insignia, Rank, Officer for Col, Ceremonial and Service Dress; SAAF Embossed



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9.9 Colonel Chaplain

National Stock Number	Item description
18-189-3491	Insignia, Rank, Officer, Embossed shoulder boards, Colonel Chaplain



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

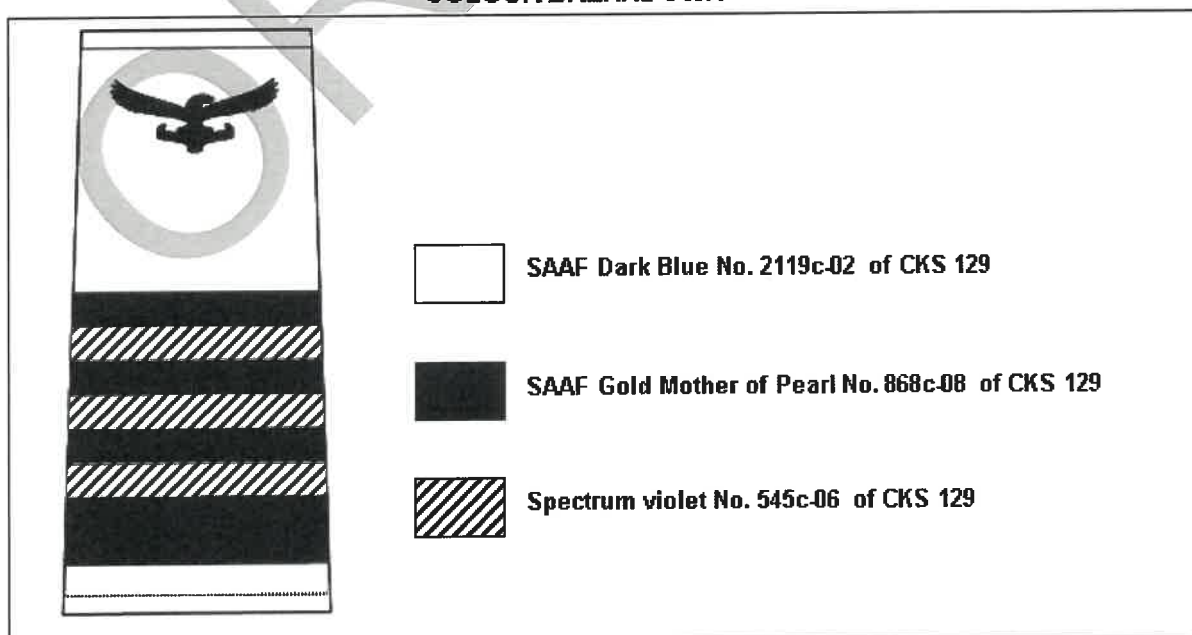
EMBOSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

FLAT EMBOSSED

Spectrum Violet
545c of CKS 129

COLOUR BREAKDOWN



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9.10 Brigadier General

National Stock Number	Item description
18-097-6589	Insignia, Rank, Officer, for Brig Genl; Ceremonial and Service Dress; SAAF embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.11 Major General

National Stock Number	Item description
18-097-6591	Insignia, Rank, Officer, for Maj Genl; Ceremonial and Service Dress; SAAF embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.12 Lieutenant General

National Stock Number	Item description
18-097-6592	Insignia, Rank, Officer, for Lt Genl; Ceremonial and Service Dress; SAAF embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSSED

SAAF Gold
Mother of Pearl
No. 868c of CKS129

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9.13 General



10. Packing and marking

10.1 Packing

The rank insignia shall be:

- delivered in a commercially dry condition
- so packed that they will not be damaged in transit or in storage
- packed as given in table 5

Table 5 – Packaging

1		2
PACKAGING MATERIAL ^a		CONTAINING ^b
A.	Small plastics envelope with a pull and press opening	1 pair in a plastics envelope.
	Officers, Chaplains, Colonel Chaplains & Candidate Officers	The pair to incorporate a left and a right facing Eagle
	General Officers	The pair to incorporate a left and a right facing secretary bird, mirror images of the knobkierie and spear
B.	Bulk container for transit of dimensions 46 cm x 31 cm x 31 cm	Groupings of 5 pairs

^a Of suitable size and shape.
^b Of the same designation and rank.

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10.2 Marking

10.2.1 Small plastics envelopes

Small plastics envelopes to have a label clearly showing the following information:

- ♦ the National Stock Number (NSN)
- ♦ the manufacturer's name or trade mark or both
- ♦ the year of manufacture

10.2.2 Bulk containers

Each bulk container shall be labelled as given in paragraph 11.2 of SALM 108 "Corrugated board boxes for clothing".

10.3 Additional marking

When so required by the South African Air Force, embossed shoulder boards, envelopes or containers (or any combination of these) to bear information additional to that specified above.

11. Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of a standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards may be obtained from the Bureau of Standards*.

AATCC method 20, *Fiber analysis: Qualitative*. Available from World Wide Web
<http://www.aatcc.org/Technical Test Methods/scopes/m20.cfm>

CKS 129, *Colours for textiles*.

SALM 108, *Corrugated board boxes for clothing*.

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

SANS 105-B02/ISO 105-B02, *Textiles - Tests for colour fastness Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*.

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

SANS 105-D01, *Textiles – Tests for colour fastness – Part D01: Colour fastness to dry-cleaning*.

SANS 5385, *Mass per unit area of conditioned knitted textiles*.

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

* Standards South Africa: Tel. +27 (0) 12 4287911

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ANNEX A

(Normative)

Special conditions of bid

A-1 GENERAL

- A-1.1** Unless otherwise stated, the South African Air Force (or an organization appointed by it), shall be the inspecting authority.
- A-1.2** Three pre-production sample pairs of shoulder boards, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. Each one of these samples shall be accompanied by a trim chart containing a sample of each component material (as given in 4) and the relevant certificates. 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 shoulder boards 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 shoulder boards supplied to this specification may be in progress.
- A-1.4** The contractor shall inspect the finished shoulder boards for compliance with the specification before submitting them to the inspecting authority for final inspection.
- A-1.5** Before acceptance, the shoulder boards 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 shoulder boards, 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. National Stock Number quantity, etc

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ANNEX B

(Normative)

CKS 129 Colours

Due to the fact that colours can change over a period of time, any colour standard which has been registered for a period of SEVEN YEARS or more shall be considered obsolete. These standards shall then be allocated an archived status (as opposed to current status) and re-registration shall be required.

A. The following scenarios require a submission of three metres of fabric from the successful bidder:

1. A colour standard is archived (meaning: older than seven years from date of registration).
2. First time registration is required.
3. Colour swatch stock at the custodian of the colour library is no longer available.

B. Requirements of the submission of fabric as identified in A:

1. The colour shall be as agreed upon between the South African Air Force and the successful bidder.
2. The fabric shall be used to make new colour swatches by the custodian of the relevant colour library as decided by SAAF.
3. The cost of the three metres of fabric shall be incorporated in the relevant bid submission.

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HISTORY SHEET		
DOC ISSUE	DATE	AMENDMENTS/HISTORY
1		First release
2	May 2007	
3	February 2008	a) Updated format and layout of spec. b) Corrected reference to colours of chaplains; added blue colour on inside of triangles (text contradicted profiles) c) Add SANS test methods d) Add reference to SANS 10076-4 e) Deleted reference to SANS 985 in Normative References f) Deleted reference to SA Army Specification 05741-100-054 g) Add Annex B. h) Omit General Officers' ranks
4	August 2008	a) Add General Officers' ranks b) Change mass of knitted material according to SABS test report. c) Lowered LAQs requirement. d) Add reference to SALM 108 and markings on bulk containers. e) Add reference to SANS 70. f) Deleted reference to "hot melt" in 4.2 Adhesive compound filler. g) Add reference to "retain original texture" in row 3.1 of table 3. h) Add highest and lowest levels of uni-fractional pattern.
5	June 2014	Add Colonel Chaplain rank
6	February 2015	Add printing of L & R on back of shoulder board
6.1	April 2022	Add NSN Change outer material to be of minimum weight 220 g/m ² Specify outer material to be polyester or nylon
6.2	June 2022	Revert back to original fabric table, BUT include note "c" and "d" in table 1 regarding the locally manufactured 220 g/m ² fabric.
7.0	July 2022	Remove blue background in Chaplains Triangle 7 th Release

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EMBOSSSED SHOULDER BOARDS
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CEREMONIAL DRESS & SERVICE DRESS
of
Non-Commissioned Officers:
Lance Corporal to Flight Sergeant**



SALM 572

Version 07.0/July 2022

1. Scope

This specification covers the materials, design and make of embossed shoulder boards for Non-Commissioned Officers of the South African Air Force.

The ranks covered by this specification are as follows:

- a) Lance Corporal
- b) Corporal
- c) Sergeant
- d) Flight Sergeant

The applicable uniform applications covered by this specification are as follows:

- a) Ceremonial Dress
- b) Service dress

NOTE: Various National and International patents may apply.

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- ♦ the colour shall be a match, in terms of SANS 10076-4 "The assessment of defects in textile piece-goods and made-up articles Part 4: Defects in knitted piece-goods", to Colour No. 2119c-02 "SAAF Weft Knitted Dark blue" of CKS 129 "Colours for textiles"

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Dry-cleaning, rating, min.		105-D01
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1	2	3	4	5
Test area	Time	Pressure	Temperature, min.	Requirement
3.1 Coated surface	30 seconds	2 bar	280° C	To retain original shape and texture
3.2 Knitted surface	30 seconds	2 bar	230° C	To retain original shape
3.3 Indentation groove of shoulder board (Service dress)	30 seconds	2 bar	250° C	To retain original shape and depth
3.4 Embossing material	30 seconds	2 bar	280° C	To retain original shape and depth

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4.2 Adhesive Compound Filler

- ♦ used as a filler between the two layers of outer material (fused together)
- ♦ a heat resistant compound
- ♦ an acceptable co-polymer (synthetic) rubber paint compound adhesive
- ♦ minimum mass of 90 g/m²
- ♦ to be able to withstand the conditions as specified in 3.1 (columns 2 to 5) of table 3

4.3 Embossing material

- ♦ a synthetic rubber paint compound
- ♦ to be able to withstand the conditions as specified in 3.1 (columns 2 to 5) of table 3
- ♦ to have the same colour fastness properties as specified for the base fabric
- ♦ colour to be an acceptable match to colour No. 882c-2008 "SAAF Blue Mother of Pearl" of CKS 129 "Colours for textiles"

4.4 Non- PVC polyester film

- ♦ minimum 200 microns
- ♦ an acceptable non-PVC polyester film

5. Workmanship

Each shoulder board shall be:

- ♦ cut, made and embossed with first-class workmanship throughout
- ♦ of uniform and acceptable make, colour and finish

Each shoulder board shall be free from:

- ♦ defects, that affect the appearance or may affect their serviceability (or both)
- ♦ marks
- ♦ spots
- ♦ stains, incurred in the making-up

Each shoulder board shall be:

- ♦ neatly double sealed using a cure and press system
- ♦ made with permanent indentation grooves
- ♦ free from fraying

Shoulder boards shall be:

- ♦ completely durable at all times
- ♦ such that no separation shall occur between the compound and the fabric of the shoulder board

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6. Design and make

6.1 Design and embossing:

The face side of each shoulder board shall be embossed with a specified design as specified in the order or contract (see paragraph 9)

The shoulder boards shall be:

- ◆ made according to the dimensions given in paragraph 7
- ◆ finished by means of a 3-D effect that has explicit detail

The shoulder boards shall have the following properties:

- ◆ all ranking shall be 100% proportionate in size to the original
- ◆ all ranks, where duplication occurs, will be identical
- ◆ all 3-D effects will be sculptured using a uni-fractional pattern (see paragraph 8)
- ◆ corner sharpening and engraving will be used throughout
- ◆ contour effect must be used as a definition

The shoulder boards shall:

- ◆ be constructed from two layers of knitted outer fabric, laminated together with an adhesive compound filler to stabilise and support the shoulder boards
- ◆ a non-PVC Polyester film shall be laminated in-between the layers of the outer material
- ◆ be embossed with a specific rank as per the attached profiles (see paragraph 9), on the face side
- ◆ have permanent double sealed edges
 - sealed with a cure and press system
- ◆ have a permanent indentation groove (marked with a dotted line on the profiles in paragraph 9)
 - fully heat resistant to ironing
 - 3 mm from the edge (short edges)
 - shall comply with the requirements as given in 3.3 of Table 3

Embossing of Coat of Arms and SAAF Eagle:

- ◆ shall be identical to the attached profiles
- ◆ being supplied in pairs, the Secretary bird (that forms part of the Coat of Arms) and Eagle shall face forward on both shoulder boards
- ◆ shall be such that the lettering is legible
- ◆ shall be such that the multi-level figures are sculptured in 13 levels for the Coat of Arms, 9 levels for the Eagle
- ◆ shall be such that corner sharpening is used as a finish
- ◆ shall be such that contours are used to shape levels

Embossing of Chevron stripes:

- ◆ shall be identical to the attached profiles
- ◆ shall have a 3-D mock-embroidered braid effect

A uni-fractional pattern (see paragraph 8):

- ◆ shall be used throughout
- ◆ shall be proportionally structured in all ranks to the following measurement: 6 mm divided into 2 x 3 mm
- ◆ lowest level of uni-fractional pattern to be of height 0.5 mm
- ◆ highest level of uni-fractional pattern to be of height 1.6 mm

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The levels of the uni-fractional patterned braid:

- ◆ shall be defined into the measurements as above

The synthetic rubber paint compound used between the layers of the material and the curing and pressing system must render an article which is:

- ◆ heat resistant to a temperature of a minimum of 280°C
- ◆ machine washable
- ◆ dry cleanable
- ◆ soft and pliable
- ◆ sealed at the edges

6.2 Printing on back of each shoulder board

- ◆ the back surface of each shoulder board shall be clearly printed with either a capital "L" (identifying the left shoulder board) or capital "R" (identifying the right shoulder board) as given in section 7
- ◆ letter to be printed in white, or any other acceptable alternative contrast colour to the base fabric
- ◆ printed in such a way that the embossed Secretary Bird and SAAF eagle shall face forward on the respective shoulder boards when worn

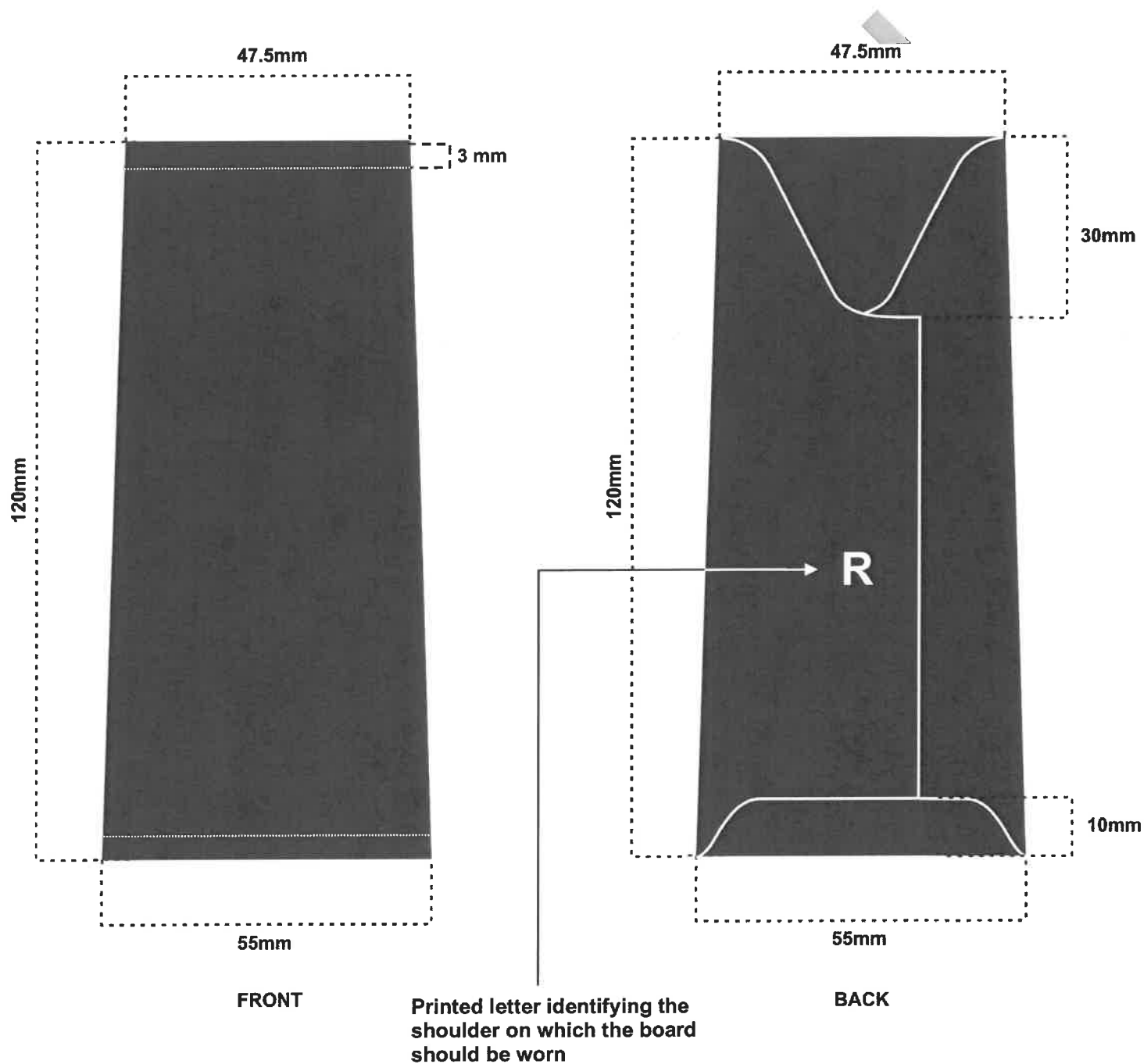
6.3 Delivery requirement

The shoulder boards shall be delivered:

- ◆ in pairs
- ◆ with a left and right-facing Secretary bird and SAAF Eagle

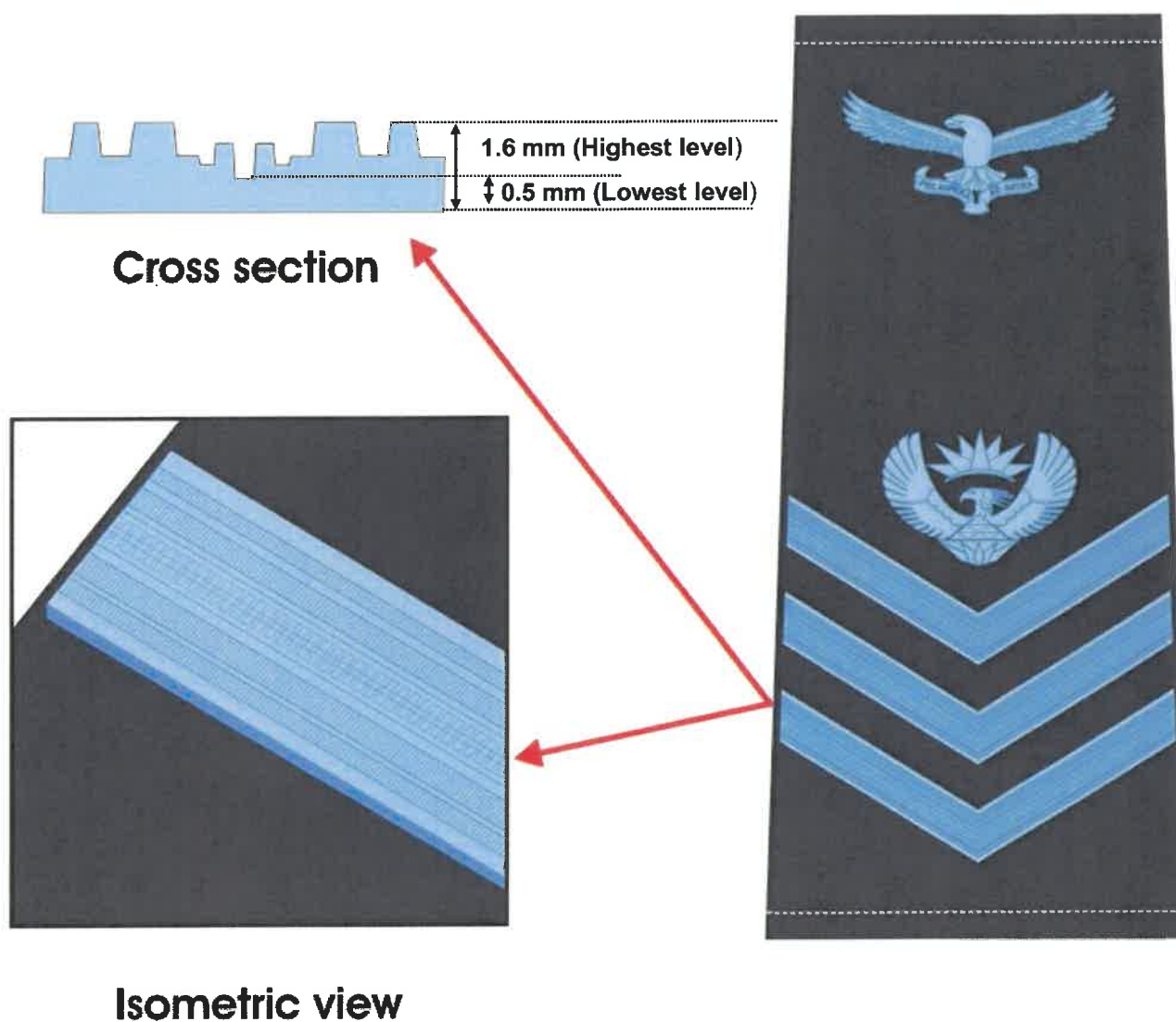
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7. Shoulder board dimensions



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8. Uni-fractional pattern



Maximum Height of all images - 1.6mm

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9.PROFILES: CEREMONIAL & SERVICE DRESS

9.1 Lance Corporal

National Stock Number	Item description
18-097-6519	Insignia, Rank, Noncommissioned Officer, for L/CPL, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSED

SAAF Blue
Mother of Pearl
No. 882c of CKS129

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9.2 Corporal

National Stock Number	Item description
18-097-6520	Insignia, Rank, Noncommissioned Officer, for CPL, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

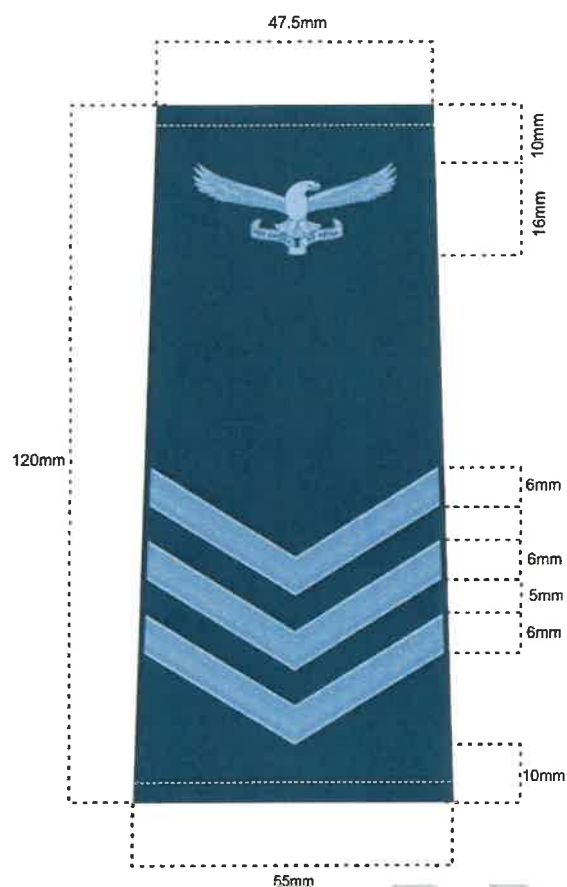
EMBOSSSED

SAAF Blue
Mother of Pearl
No. 882c of CKS129

Ref. No	Date	Responsibility	Version	Page	No of pages
SALM 572	July 2022	SAAF	07.0	10	17

9.3 Sergeant

National Stock Number	Item description
18-097-6521	Insignia, Rank, Noncommissioned Officer, for SGT, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

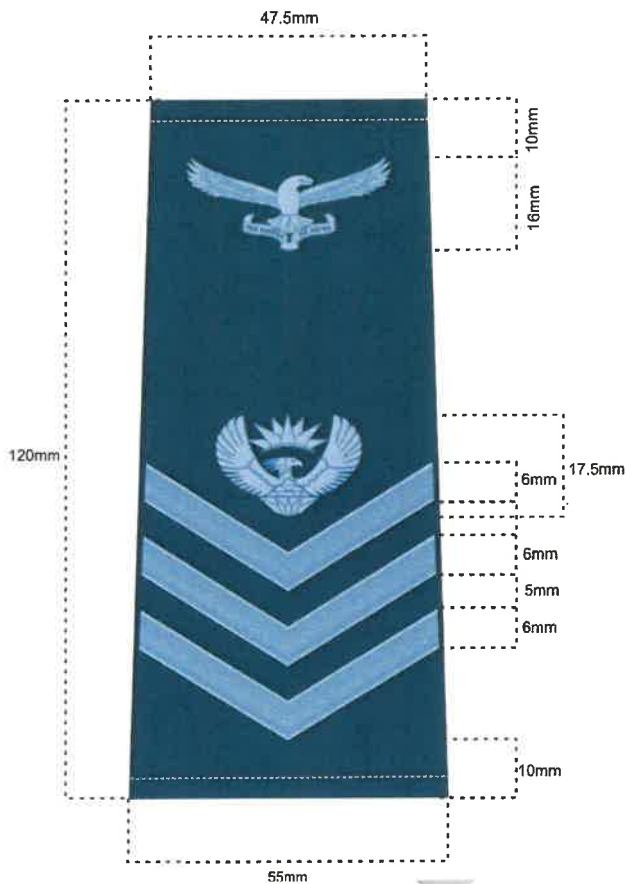
EMBOSSSED

SAAF Blue
Mother of Pearl
No. 882c of CKS129

Ref. No	Date	Responsibility	Version	Page	No of pages
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9.4 Flight Sergeant

National Stock Number	Item description
18-097-6522	Insignia, Rank, Noncommissioned Officer, for F/SGT, Ceremonial and Service Dress; SAAF Embossed



FABRIC

SAAF Dark Blue
2119c-02 of CKS129

EMBOSSED

SAAF Blue
Mother of Pearl
No. 882c of CKS129

Ref. No	Date	Responsibility	Version	Page	No of pages
SALM 572	July 2022	SAAF	07.0	12	17

10. Packing and marking

10.1 Packing

The rank insignia shall be:

- ♦ delivered in a commercially dry condition
- ♦ so packed that they will not be damaged in transit or in storage
- ♦ packed as given in table 4

Table 4 – Packaging

1		2
PACKAGING MATERIAL ^a		CONTAINING ^b
A.	Small plastics envelope with a pull and press opening	1 pair in each plastics envelope.
	All ranks	Each pair to incorporate a left and a right facing SAAF Eagle.
	Rank of flight Sergeant	Each pair to incorporate a left and a right facing Secretary bird.
B.	Bulk container for transit of dimensions 46 cm x 31 cm x 31 cm	Groupings of 5 pairs
^a Of suitable size and shape.		
^b Of the same designation and rank.		

10.2 Marking

10.2.1 Small plastics envelopes

Small plastics envelopes to have a label clearly showing the following information:

- ♦ the National Stock Number (NSN)
- ♦ the manufacturer's name or trade mark or both
- ♦ the year of manufacture

10.2.2 Bulk containers

Each bulk container shall be labelled as given in paragraph 11.2 of SALM 108 "Corrugated board boxes for clothing".

10.3 Additional marking

When so required by the South African Air Force, embossed shoulder boards, envelopes or containers (or any combination of these) to bear information additional to that specified above.

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11. Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of a standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards may be obtained from Standards South Africa*.

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

CKS 129, *Colours for textiles*.

SALM 108, *Corrugated board boxes for clothing*.

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

SANS 105-B02/ISO 105-B02, *Textiles - Tests for colour fastness Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*.

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

SANS 105-D01, *Textiles – Tests for colour fastness – Part D01: Colour fastness to dry-cleaning*.

SANS 5385, *Mass per unit area of conditioned knitted textiles*.

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

* Standards South Africa: Tel. +27 (0) 12 4287911

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ANNEX A

(Normative)

Special conditions of bid

A-1 GENERAL

- A-1.1** Unless otherwise stated, the South African Air Force (or an organization appointed by it), shall be the inspecting authority.
- A-1.2** Three pre-production sample pairs of shoulder boards, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. Each one of these samples shall be accompanied by a trim chart containing a sample of each component material (as given in 4) and the relevant certificates. 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 shoulder boards 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 shoulder boards supplied to this specification may be in progress
- A-1.4** The contractor shall inspect the finished shoulder boards for compliance with the specification before submitting them to the inspecting authority for final inspection.
- A-1.5** Before acceptance, the shoulder boards 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 shoulder boards, 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. National Stock Number quantity, etc

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ANNEX B

(Normative)

Colour References

Due to the fact that colours can change over a period of time, any colour standard which has been registered for a period of SEVEN YEARS or more shall be considered obsolete. These standards shall then be allocated an archived status (as opposed to current status) and re-registration shall be required.

A. The following scenarios require a submission of three metres of fabric from the successful bidder:

1. A colour standard is archived (meaning: older than seven years from date of registration).
2. First time registration is required.
3. Colour swatch stock at the custodian of the colour library is no longer available.

B. Requirements of the submission of fabric as identified in A:

1. The colour shall be as agreed upon between the South African Air Force and the successful bidder.
2. The fabric shall be used to make new colour swatches by the custodian of the relevant colour library as decided by SAAF.
3. The cost of the three metres of fabric shall be incorporated in the relevant bid submission.

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For office use only		
HISTORY SHEET		
DOC ISSUE	DATE	AMENDMENTS/HISTORY
1		First release
2	July 2002	a) Dimensions changed on profiles for backs of shoulder boards
3	May 2007	
4	February 2008	a) Updated format and layout of spec. b) Corrected reference to colours of base fabric and embossing material (text contradicted profiles) c) Add SANS test methods d) Add reference to SANS 10076-4 e) Deleted reference to SANS 985 in Normative References f) Deleted reference to SA Army Specification 05741-100-054 g) Add reference to Pantone colour no. 659c for the interim (add footnote regarding embossing compound colour). h) Add Annex B.
5	August 2008	a) Change mass of knitted material according to SABS test report. b) Lowered LAQs requirement. c) Add reference to SALM 108 and markings on bulk containers. d) Add reference to SANS 70. e) Deleted reference to "hot melt" in 4.2 Adhesive compound filler. f) Add reference to "retain original texture" in row 3.1 of table 3. Add highest and lowest levels of uni-fractional pattern.
6	February 2015	Update date of colour Add printing of L & R on back of shoulder board
6.1	April 2022	Add NSN Change outer material to be of minimum weight 220 g/m ² Specify outer material to be polyester or nylon
6.2	June 2022	Revert back to original fabric table, BUT include note "c" and "d" in table 1 regarding the locally manufactured 220 g/m ² fabric.
7.0	July 2022	7 th Release

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SALM 572	July 2022	SAAF	07.0	17	17

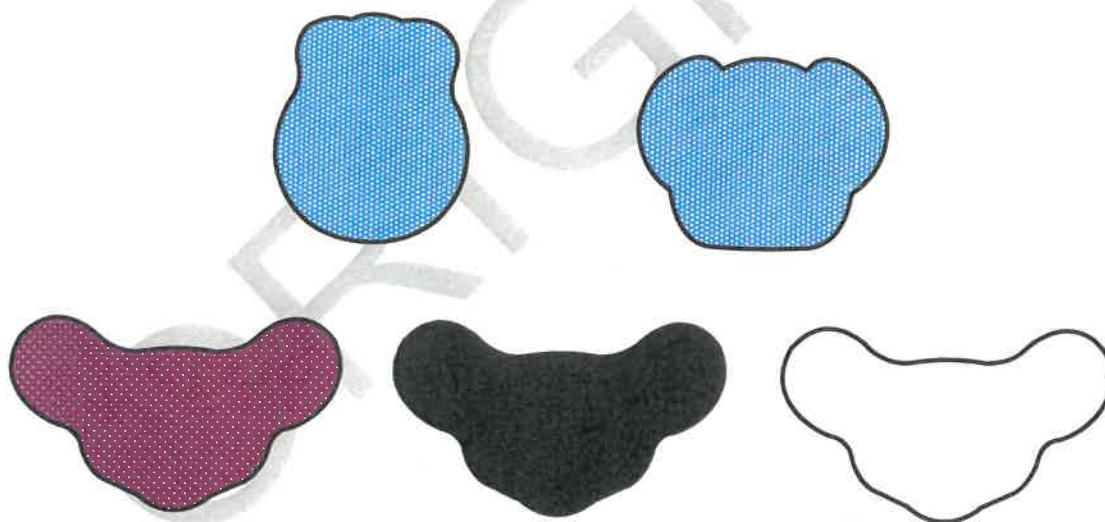
PRIVATE SPECIFICATION

Prepared for the

South African Air Force



CAP BADGES BACKGROUND



1. Scope

This specification covers the materials, design and make of three shape variations (and four different colour variations) of backgrounds for cap badges for personnel of the South African Air Force.

NOTE: Various National and International patents may apply.

2. Definitions and Abbreviations

For the purposes of this specification, the following definitions apply:

Acceptable: Acceptable to the South African Air Force.

Nominal: Subject to the tolerances normal to good manufacturing practice.

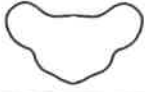
NSN: National Stock Number as reflected as Item Number on a Government Order.

3. General

No materials will be supplied by the South African Air Force.

The materials as specified in paragraphs 4.1 and 4.2 shall be supplied and used by the manufacturer. Trim charts shall accompany the pre-production samples (see Annex A).

Table 1 – National Stock Number

1 National Stock Number	2 Colour	3 Shape
8455-18-015-0235	White	
8455-18-015-0281	Black	
8455-18-176-1256	Violet	
8455-18-015-0233	Blue	
8455-18-175-0278	Blue	
8455-18-187-6376	Blue	

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4. Component Materials

4.1 Base fabric

- ♦ an acceptable coated high bulk continuous filament knitted fabric
- ♦ to comply with the requirements as given in table 2
- ♦ permissible number of defects to comply with the requirements as given in table 3
- ♦ to comply with the requirements as given in table 4
- ♦ the colour of the fabric shall be in one of the four different shades, as required and shall be an acceptable match, in terms of SANS 10076-4, "The assessment of defects in textile piece-goods and made-up articles Part 4: Defects in knitted piece-goods", to the CKS 129 colour numbers specified in table 5

Table 2 – Base fabric requirements

1	2	3
Property	Requirement	SANS number (unless otherwise indicated)
Composition, % Nylon ^a	100	AATCC 20
Construction	Knitted interlock ^b and coated with a heat-resistant compound	Visual examination and physical analysis
Mass per area, g/m², min.	260 ^c	5385 ^d
Colour fastness to:		105-C10:2007 Test number C(3)
Washing, rating, min.		
Change in colour	4	
Staining of adjacent fabrics	4	
Dry-cleaning, rating, min.		105-D01
Change in colour	4-5	
Light, rating, min.	4	105-B02

^a High bulk continuous filament yarn.
^b Fine gauge.
^c The mass reflected in column 2 is the mass of the fabric before it has been coated with a heat-resistant compound. The coated fabric shall be of minimum mass 320 g/m² when tested in accordance with SANS 5385.
^d Tested after conditioning in accordance with SANS 70.

Table 3 – Permissible number of defects of base fabric

1	2	3
LAQ	Number	SANS number
For a piece	10	
For a lot	12	10076-4

4.2 Adhesive Compound Filler

- ♦ used as a filler between the two layers of outer material (fused together)
- ♦ a hot melt and heat resistant compound
- ♦ an acceptable co-polymer rubber paint compound adhesive
- ♦ minimum mass of 90 g/m²
- ♦ to be able to withstand the conditions as specified in table 4

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Table 4 – Pneumatic heat press requirements

1	2	3	4	5
Test area	Time	Pressure	Temperature, min.	Requirement
4.1 Coated surface	30 seconds	2 bar	280° C	To retain original shape
4.2 Knitted surface	30 seconds	2 bar	230° C	To retain original shape

Table 5 – Colours¹

1	2	3
Item	CKS 129 Colour number	Description
A	1c-05	White
B	340c-11	Jet black
C	545c-06	Spectrum violet
D	509c-96	Flight blue

5. Workmanship

Each badge background shall be:

- ♦ cut, made and embossed with first-class workmanship throughout
- ♦ of uniform and acceptable make, colour and finish

Each badge background shall be free from:

- ♦ defects, that affect the appearance or may affect their serviceability (or both)
- ♦ marks
- ♦ spots
- ♦ stains, incurred in the making-up

All badge background edges shall be:

- ♦ neatly sealed using a cure and press system
- ♦ free from fraying

All badge backgrounds shall be:

- ♦ completely durable at all times
- ♦ such that no separation shall occur between the compound and the fabric of the badge

¹ See Annex B.

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6. Design and make

The badge backgrounds shall:

- ♦ be made in three different shapes and dimensions as given in section 7 (as specified in the order or contract)
 - Chaplains, Candidate Officers and Senior Officers: See figure 1
 - Generals: See figure 2
 - Senior Chief Warrant Officers and Chief Warrant Officers: See figure 3
- ♦ be made in the colours as given in table 5 (as specified in the order or contract)
- ♦ be constructed from two layers of knitted outer fabric, laminated together with an adhesive compound filler to stabilise and support the badge background
- ♦ neatly sealed using a cure and press system
- ♦ domed to the front
- ♦ have a flat back
- ♦ of nominal thickness 2.5 mm (see figure 4)

7. Dimensions

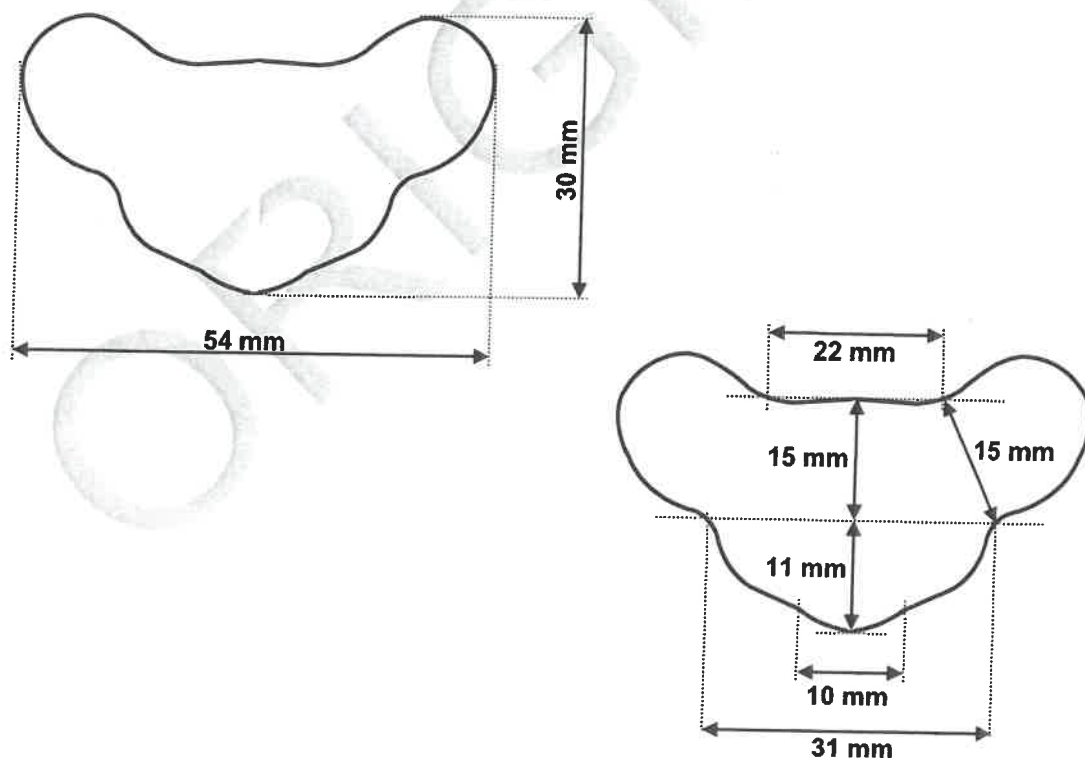


Figure 1 – Dimensions of background for Chaplains, Candidate Officers and Senior Officers

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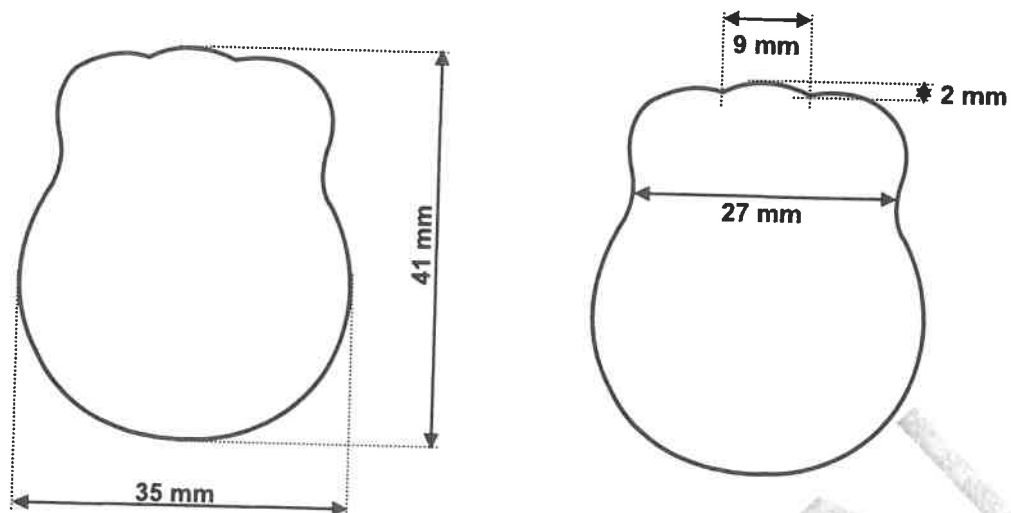


Figure 2 – Dimensions of background for Generals

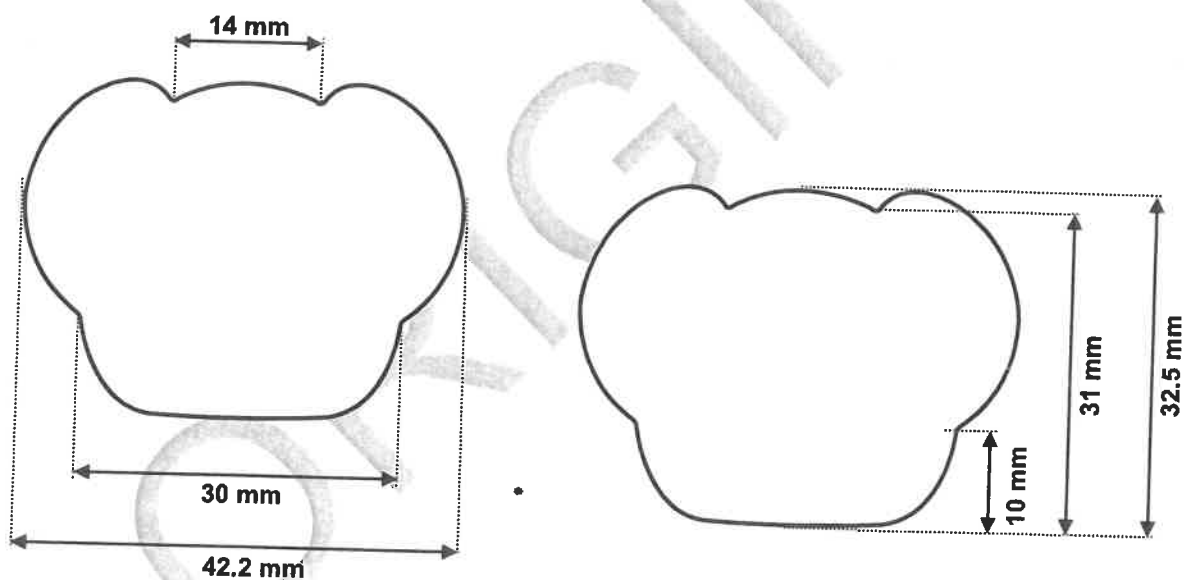


Figure 3 – Dimensions of background for Senior Chief Warrant Officers and Chief Warrant Officers

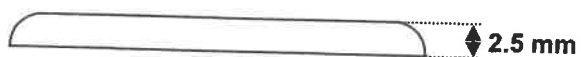


Figure 4 – Domed cross-section

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8. Packing and marking

8.1 Packing

The background badges shall be:

- ♦ delivered in a commercially dry condition
- ♦ so packed that they will not be damaged in transit or in storage
- ♦ packed as given in table 6

Table 6 – Packaging

1		2
PACKAGING MATERIAL ^a		CONTAINING ^b
A.	Small plastics envelope with a pull and press opening	1 badge background
B.	Bulk container for transit (dimensions in cm) of dimensions 46 x 31 x 31	Envelopes as specified in A
^a Of suitable size and shape.		
^b Of the same shape and colour.		

8.2 Marking

8.2.1 Small plastics envelopes

Small plastics envelopes to have a label clearly showing the following information:

- ♦ the manufacturer's name or trade mark or both
- ♦ the year of manufacture
- ♦ the National Stock Number (NSN)

8.2.2 Bulk containers

Each bulk container shall be labelled as given in paragraph 11.2 of SALM 108 "Corrugated board boxes for clothing".

8.3 Additional marking

When so required by the South African Air Force, cap badge backgrounds, envelopes or containers (or any combination of these) to bear information additional to that specified above.

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9. Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this specification. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of a standard, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards may be obtained from SABS Standard Sales Division*.

AATCC method 20, Fiber analysis: Qualitative. Available from World Wide Web
<http://www.aatcc.org/Technical Test Methods/scopes/tm20.cfm>

CKS 129, Colours for textiles.

SALM 108, Corrugated board boxes for clothing.

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

SANS 105-B02/ISO 105-B02, Textiles - Tests for colour fastness Part B02: Colour fastness to artificial light: Xenon arc fading lamp test.

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

SANS 105-D01, Textiles – Tests for colour fastness – Part D01: Colour fastness to dry-cleaning.

SANS 5385, Mass per unit area of conditioned knitted textiles.

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

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ANNEX A

(Normative)

Special conditions of tender

A-1 GENERAL

- A-1.1** Unless otherwise stated, the South Bureau of Standards, shall be the inspecting authority.
- A-1.2** Three pre-production sample backgrounds of each shape and colour ordered, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. Each one of these samples shall be accompanied by a trim chart containing a sample of each component material (as given in 4) and the relevant certificates. 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 backgrounds 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 backgrounds supplied to this specification may be in progress
- A-1.4** The contractor shall inspect the finished backgrounds for compliance with the specification before submitting them to the inspecting authority for final inspection.
- A-1.5** Before acceptance, the backgrounds 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 backgrounds, 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. National Stock Number, quantity, etc

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ANNEX B
(Normative)
CKS 129 Colours

Due to the fact that colours can change over a period of time, any colour standard which has been registered for a period of SEVEN YEARS or more shall be considered obsolete. These standards shall then be allocated an archived status (as opposed to current status) and re-registration shall be required.

NOTE: Before fabric is sent to SABS for colour registration purposes, the successful tenderer shall confirm with SABS whether the submission of fabric is required or not.

A. The following scenarios require a submission of three metres of fabric from the successful tenderer:

1. A colour standard is archived.
2. First time registration is required (CKS 129 colour number does not exist).
3. Colour swatch stock at the SABS is no longer available.

B. Requirements regarding the submission of fabric as identified in A:

1. The colour shall be as agreed upon between the South African Air Force and the successful tenderer.
2. The fabric shall be used to make new colour swatches which shall be the responsibility of the SABS.
3. The cost of the three metres of fabric shall be incorporated in the relevant tender submission.

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HISTORY SHEET				
VERSION	DATE	AMENDMENTS/HISTORY	CHECKED	
			NAME	INIT.
1		First release		
2	May 2002			
3	August 2008	Update format; Update references Add test methods Change construction and weight of knitted material as per SABS test report/manufacturer. Refer to CKS 129 colours that are to be re-registered. Replace one layer with a double layer of knitted material. Add reference to adhesive compound filler. Add reference to the height and that the badge is domed to the front. Add National Stock Numbers. Add Annex B		
4	April 2012	Add background for SCWA and CWA. Add note to Annex A Amend packaging		
5	March 2015	Correct NSN on violet badge Change 1x1 rib to interlock fabric (to align with other embossed specs)		

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PRIVATE SPECIFICATION

Prepared for the

SOUTH AFRICAN AIR FORCE



**Corrugated Board Boxes for Clothing
(Telescopic Type)**



SALM 108
Version 07.0/January 2023

1. Scope

This specification covers the requirements for the material, design, dimensions, and physical properties of corrugated board components (inner and outer) of telescopic type corrugated board boxes used for packing clothing and footwear for personnel of the South African Air Force.

2. Definitions and Abbreviations

For the purpose of this specification the following definitions shall apply:

where relevant: the definitions given in SANS 431 and SANS 456

acceptable: acceptable to the South African Air Force

FIFO: First in, First out

nominal: subject to the tolerances normal to good manufacturing practice

IFCC: International Fibreboard Case Code

inner component: a component that has sides, ends, and a bottom but no top

outer component: a component that has sides, ends and top but no bottom and that fits telescopically over the inner component

SANS: South African National Standard

3. Style

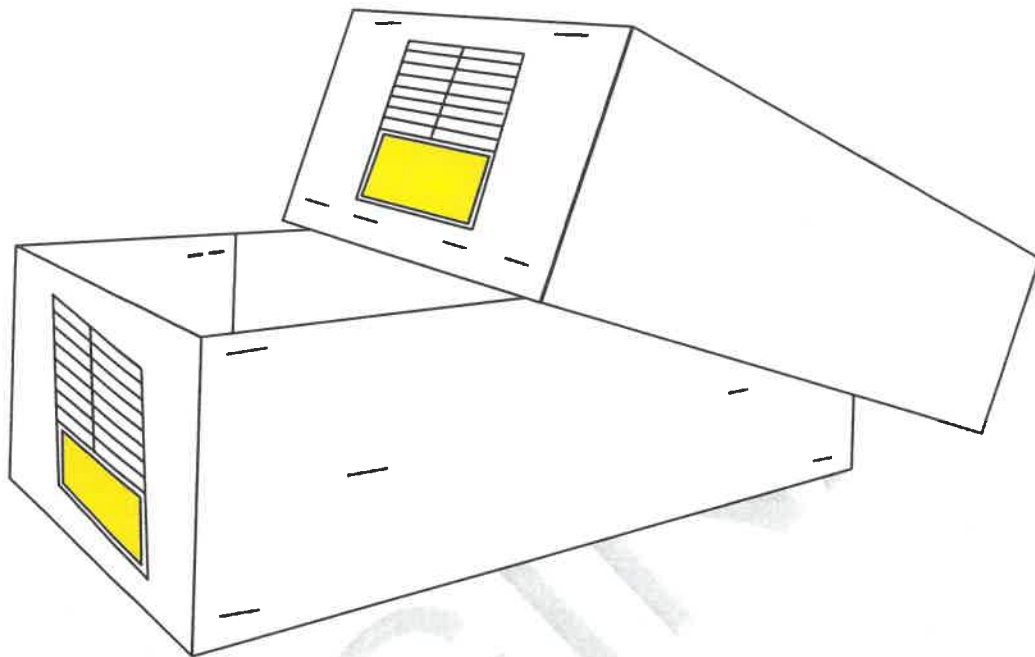
The style is as follows:

- ♦ IFCC style No. 0301
- ♦ telescopic type
- ♦ having an inner and an outer container

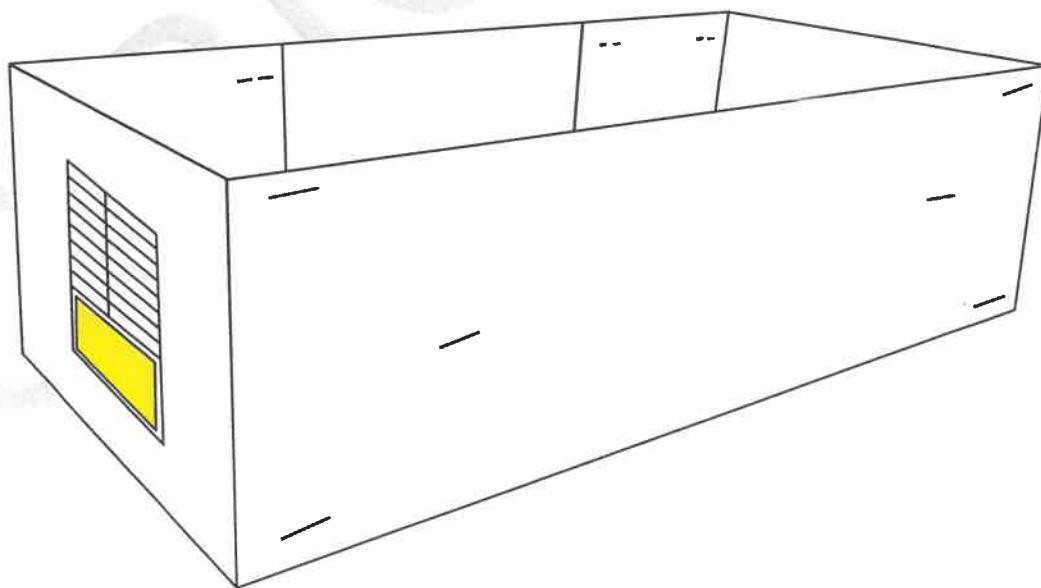
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4. Illustrations

Illustrations are not to scale and are for guidance only.

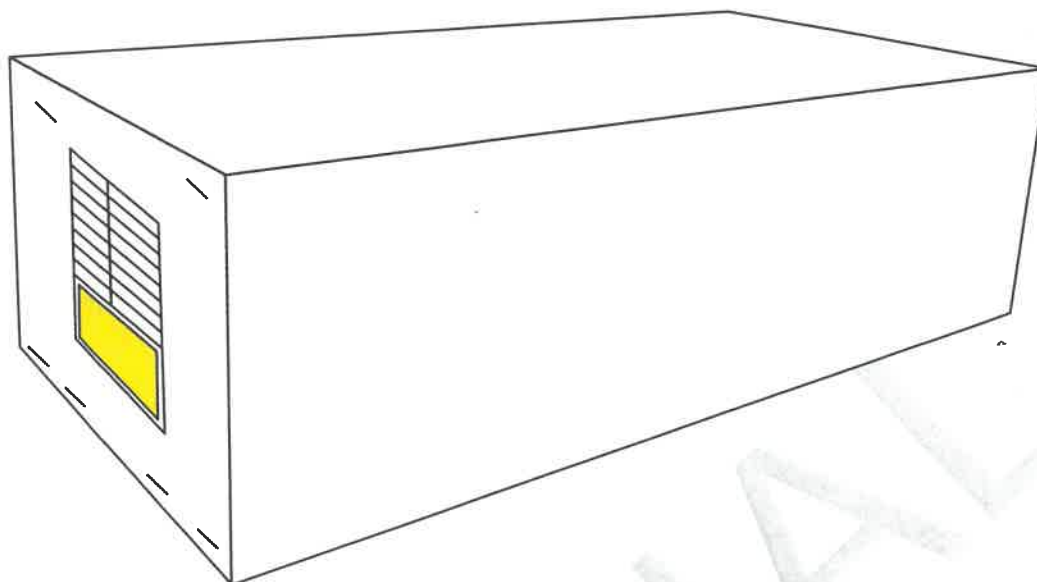


**Figure 1 – Base and lid components of telescopic cardboard box
(assembled and ready to serve as a container for storage of finished goods)**



**Figure 2 – Base component of telescopic cardboard box
(assembled and ready to serve as the base of a container for storage of finished goods)**

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**Figure 3 – Lid component of telescopic cardboard box
(assembled and ready to serve as the lid of a container for storage of finished goods)**

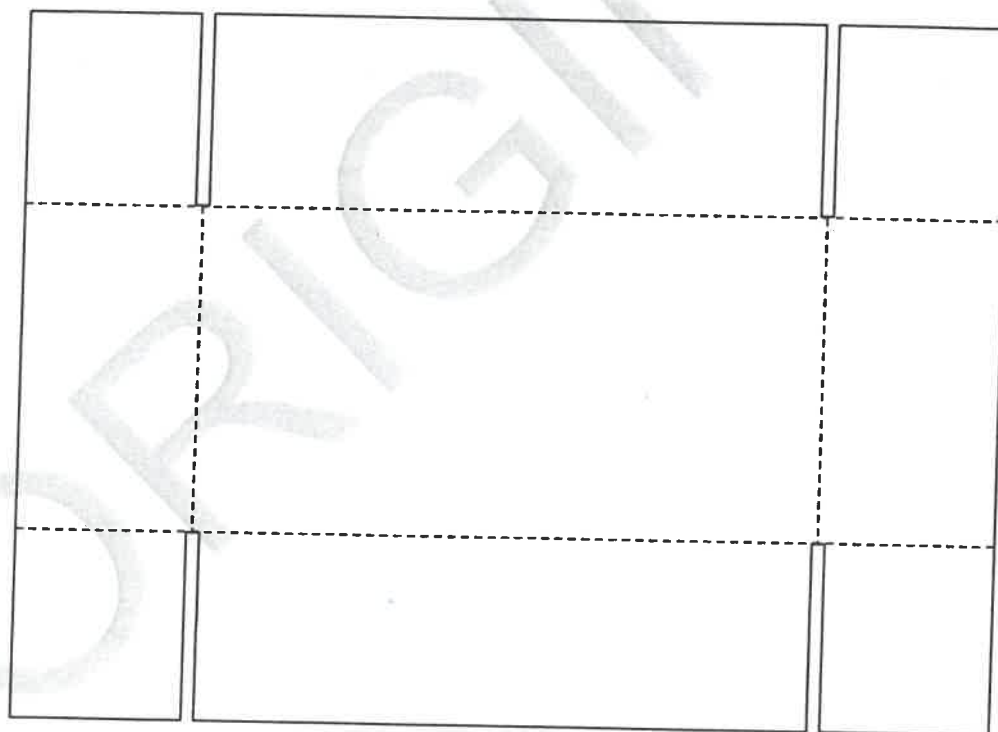


Figure 4(a) – Design of telescopic cardboard box when unassembled (Base component)

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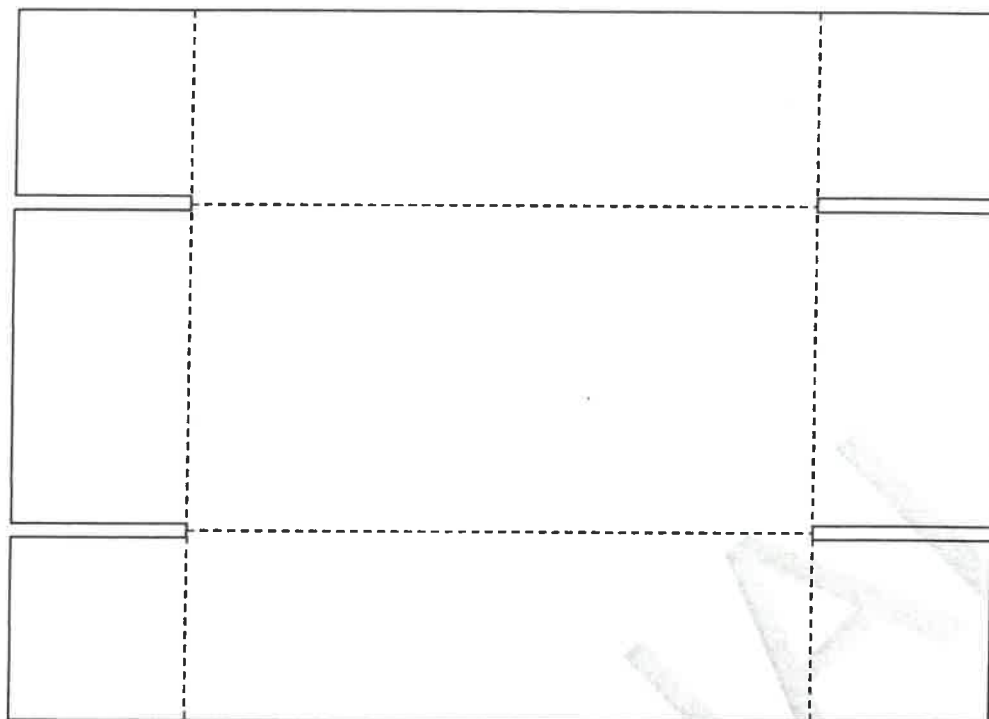


Figure 4(b) – Design of telescopic cardboard box when unassembled (Lid components)

5. Client Furnished Materials

No materials will be supplied by the South African Air Force.

6. Physical and Performance Requirements

The corrugated board boxes shall comply with the following physical characteristics.

6.1 Paper

- ♦ paper shall be manufactured from processed cellulose fibre and shall be reasonably free from defects as listed in section 7
- ♦ the relevant surfaces of the paper shall be such as to accept the adhesives commonly used in the manufacture of corrugated board

6.1.1 Fluting and liners

- ♦ to comply with the requirements of SANS 431 "Liners and fluting for corrugated board" for the relevant types (grammage) as specified in table 1
- ♦ grammage of the fluting and liners of the inner and outer component parts to comply with the requirements as given in table 1
 - the nominal grammage values given in table 1 are subject to a tolerance of $\pm 5\%$

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Table 1 – Grammage of fluting and liners

1	2	3
Property	Requirement	Test Method ^a
Grammage, g/m ² , min.	935 ^b	ISO 536
Damp-ply adhesion (B and C flute), N/m.	400 ^c	See 10.2
Water absorption of facing g/m ² after 30 min. max (outer and inner) .	120 ^b	See 10.3
Thickness, mm, min.	6,0 ^c	See 10.4
Bursting strength, kPa, min.	1700 ^c	ISO 2758

^a Condition all specimens and test pieces in accordance with ISO 187, using the conditioning atmosphere 23/50. See also 10.1.

^b The average of two determinations (one specimen from each of two components) to be reported .

^c The average of six determinations (two specimens from each of three components) to be reported.

6.1.2 Corrugated board

- ♦ to be wet-strength double wall simplex corrugated board of C and B fluting construction
- ♦ to comply with the requirements as given in table 2
- ♦ the direction of the corrugations in the sides of the inner and outer components shall be parallel to the direction of the stacking load (refers to closed and assembled boxes)

Table 2 - Physical Properties of Corrugated Board

1	2	3	4	5	6
Component	Nominal grammage, g/m ²				Test Method
	Liners			Fluting B and C	
	Inner	Centre	Outer		
Inner	230	160	230	125	ISO 536 ^a
Outer	230	160	230	125	

^a Condition all specimens and test pieces in accordance with ISO 187, using the conditioning atmosphere 23/50.Determine the average actual grammage, but use 20 test pieces.

6.2 Adhesives

- ♦ the adhesives used in making corrugated board and in the construction of the box shall not have any deleterious effect on the intended contents of the container

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6.3 Dimensions and design

- ♦ IFCC style No. 0301 as given in Annex B of SANS 456:2009 "Corrugated board containers"
- ♦ dimensions to comply with the requirements as given in section 8

6.4 Creasing

- ♦ the creasing of the board shall be such that when a box is tested in accordance with paragraph 10. 5, there is no splitting of any liner
- ♦ the creasing of the board shall be such that when a component is assembled, there shall be no splitting of any liner
- ♦ there shall be no overlap of the flaps when each component is assembled

6.5 Staples

- ♦ staples shall be of a steel wire
- ♦ the wire shall have a coating (such as zinc, tin, copper, or enamel) that is not readily removable by the stapling process
- ♦ the staples shall have a nominal crown length of 30 mm, and each leg shall be long enough to be clinched on the inside of the board for a length of at least 7 mm

6.6 Storage requirements

- ♦ dry storage for a period not exceeding 15 months under the following conditions:
 - Temperature range: - 10° to 50°
 - Humidity: Maximum 50% relative humidity; Minimum 25 % relative humidity
- ♦ the components shall, before delivery, be stored in such a manner that they are reasonably protected from adverse atmospheric conditions and from fungal and insect attack

6.7 Transport requirements

- ♦ suitable for rail, road and air transport

6.8 Durability requirements

- ♦ single journey use

6.9 Strapping

- ♦ acceptable polypropylene strapping of nominal width 10 – 12 mm
- ♦ manufactured in accordance with high grade commercial practice

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7. Workmanship

The box component parts to be:

- ♦ cut and made with first-class workmanship throughout
- ♦ of uniform and acceptable make and finish

To be free from:

- ♦ defects, such as listed below or any other imperfection that affect their serviceability
 - fibre bundles, holes, splinters, specs and breaks

ORIGINAL

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8. Dimensions

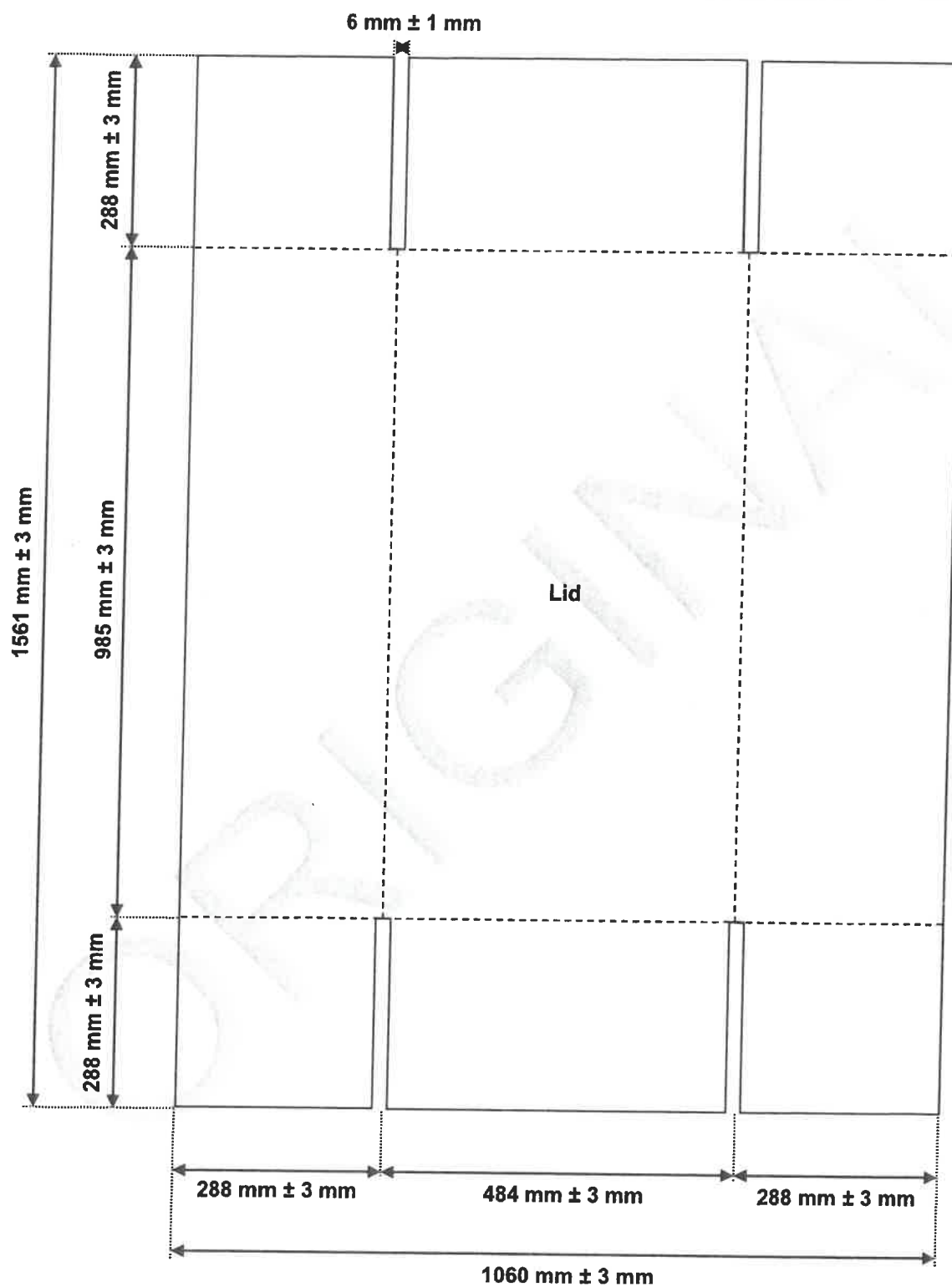


Figure 5 – Dimensions of the lid component of the telescopic board box (flat measurements)

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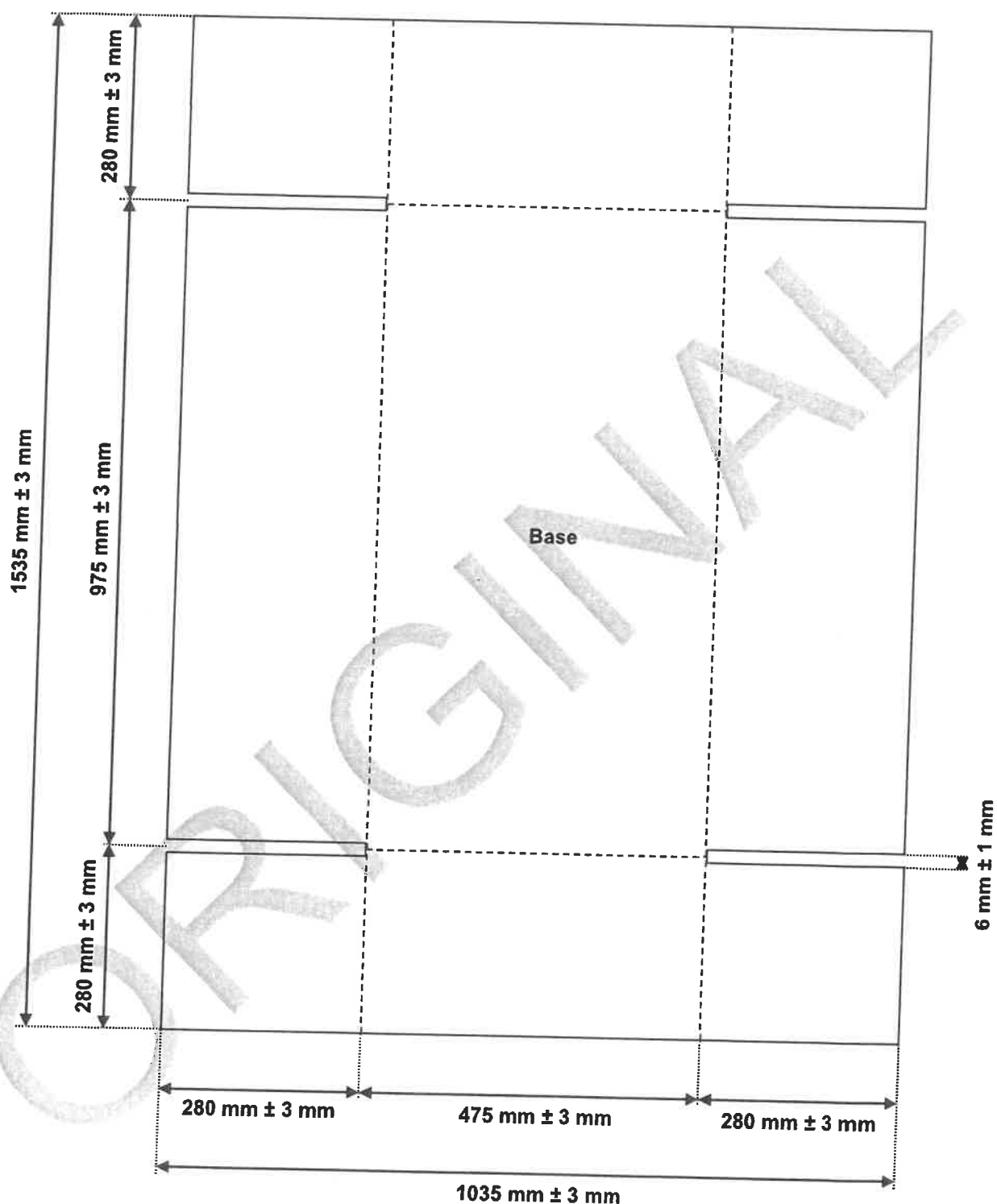


Figure 6 – Dimensions of the base component of the telescopic board box (flat measurements)

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10.2 Test method for damp-ply adhesion

- ♦ test in accordance with paragraph 6.13 of SANS 456:2009 "Corrugated board containers"

10.3 Test method for water absorption of outer facing of board

- ♦ determine the average water absorption of the top side of a liner in accordance with ISO 535, "Paper and board -- Determination of water absorption – Cobb method", but use 6 test pieces, a testing time of 30 minutes and water at a temperature of $23^{\circ}\text{C} \pm 1^{\circ}\text{C}$
- ♦ omit the rejection of test pieces that have been saturated with water
- ♦ in cases where the test result exceeds 150 g/m^2 , report the result at $150 + \text{g/m}^2$

10.4 Test method for determining thickness (calliper) of corrugated board

- ♦ test in accordance with paragraph 6.8 of SANS 456:2009 "Corrugated board containers"

10.5 Accuracy and degree of creasing of corrugated board

- ♦ test in accordance with paragraph 6.14 of SANS 456:2009 "Corrugated board containers"

11. Packing, Labelling and Documentation of Goods

NOTE: This section covers the packaging, labelling and documentation of manufactured goods that are to be packed into containers as specified in this specification.

11.1 Packing

- ♦ items to be packed in containers made in accordance with this specification
- ♦ stapling and strapping to comply with the requirements as given in section 9
- ♦ containers to be sealed with 50 mm broad tape
- ♦ quantities as given in Annex A to serve as a guideline

11.2 Labelling

Each bulk container shall have a label securely attached to the outside of one of the short sides of the lid (upper component) and one label securely attached to one of the short sides of the base (lower component). The labels shall be visible when the containers are stacked and shall provide the following information in legible and indelible block letters:

- ♦ to be at least A5 paper size and markings to be in the following sequence (see fig 7):

- the order number
- the National Stock Number (NSN)
- the item description
- the size designation
- the quantity
- the colour (only if product is supplied in more than one colour)
- the gross mass of the packed container
- the year of manufacture
- FIFO colour coded system as given in figure 8 (printed block)

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9. Assembly/Securing of boxes

Unless inconsistent with the text, all measurements are nominal.

9.1 Stapling

- ♦ each joint shall be stapled (see 6.5) with a minimum of three staples if the crown length is 30 mm (min).
 - in instances where the crown lengths of the staples are less than 25 mm, a minimum of five staples shall be required to secure the joints
- ♦ staples shall not commence more than 25 mm away from each end of a joint, and shall be adequately clinched

9.2 Strapping of boxes

- ♦ once packed, each corrugated box (base and lid unit) shall be secured with at least three lengths of strapping, i.e. two in the width and one in the length
- ♦ secured by means of metal clasps or a fusing technique (as relevant) in such a way that it shall not come undone by itself (to withstand transportation, stacking, handling and storage)
- ♦ tensioning to be such that after it is permanently secured, the strapping shall not cause any damage to the contents of the container

10. Test methods

10.1 General

10.1.1 Test specimens

- ♦ unless otherwise stated, take test specimens from areas of the board that are uncreased and undamaged and, where possible, from different units in the sample

10.1.2 Conditioning

- ♦ unless otherwise stated, condition, inspect, and test all specimens in a controlled atmosphere that, has a relative humidity of $50 \% \pm 2 \%$ and a temperature of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$
- ♦ during conditioning, position each specimen so that all surfaces are freely exposed to the conditioning atmosphere
- ♦ ensure that the air of the conditioning and testing laboratories is so circulated that the humidity and temperature are uniform throughout the laboratory
- ♦ allow sufficient conditioning time for the moisture content of the specimens to attain equilibrium with the conditioning atmosphere

NOTE - In cases of doubt determine the mass of each specimen at hourly intervals until the results of the last two determinations do not differ by more than 0,25 % of the final mass. For preference, approach equilibrium from the dryer condition.

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- ♦ minimum letter height of 18 pt. ARIAL
- ♦ left column: all CAPITAL LETTERS
- ♦ right column: Capitalize first letter of each word

11.3 Documentation

One container per consignment marked "DOCUMENTS" is to accompany each consignment with the following:

- ♦ the packaging slip/delivery note
- ♦ the inspection certificate (where applicable)
- ♦ the copy of the invoice containing the following information:
 - order number
 - financial authority number
 - full description of consignment, i.e. National Stock Numbers, quantities, etc.

11.4 Additional marking

When so required by the South African Air Force, containers to bear information additional to that specified above.

12. Packing and Delivery of Containers

NOTE: This section covers the delivery requirements of the containers when delivered to the clothing and/or footwear supplier.

12.1 General

- ♦ the relevant requirements of SANS 456 to apply

12.2 Packing

The component parts of the box to be:

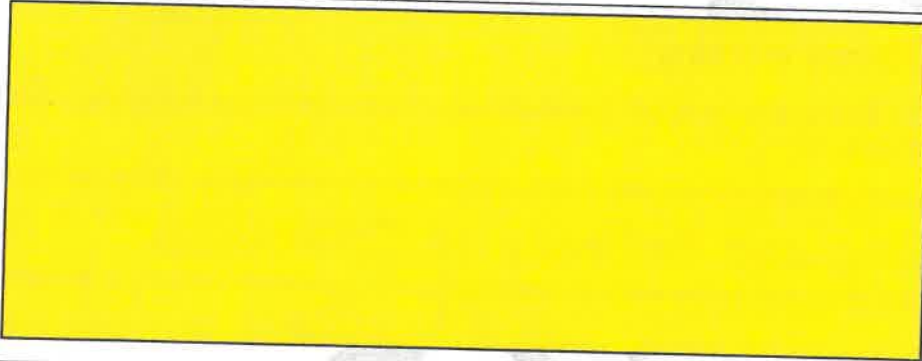
- ♦ packed flat in bundles of 25
- ♦ delivered in a commercially dry condition
- ♦ so packed that they will not be damaged in transit or in storage

12.3 Marking

- ♦ each component part to bear the date of manufacture (month and year); e.g. 08/2008

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Figure 7 – Example of bulk container labelling

ORDER NR	2D142199
NSN	18-180-1234
DESCRIPTION	Shoes, Service Dress
SIZE	9W
QUANTITY	100
COLOUR*	Black
GROSS MASS	22.6 Kg
YEAR	2023
	
<i>*Include only if product is supplied in more than one colour.</i>	

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Figure 8 – FIFO Colour identification

1	2	
YEAR	COLOUR CODE OF SPECIFIC YEAR	
2023	Yellow	
2024	Red	
2025	Green	
2026	Royal Blue	
2027	Black	
2028	Purple	
2029	Grey	
2030	Light Blue/Sky Blue	
2031	Pink	
2032	Orange	
2033	Brown	
2034 to 2044	Colour sequence to be repeated from the top	

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13. Applicable Documents

The following documents contain provisions which, through reference in this text, constitute provisions of this specification. All documents are subject to revision and, since any reference to a document is deemed to be a reference to the latest edition of that document, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the documents indicated below. Information on currently valid national, international and CKS documents may be obtained from the South African Bureau of Standards*.

IFCC, *International fibreboard case code.*

ISO 187, *Paper and board – Conditioning of samples.*

ISO 535, *Paper and board -- Determination of water absorption – Cobb method.*

ISO 536, *Paper and board -- Determination of grammage.*

ISO 2758, *Paper - Determination of bursting strength.*

SANS 431, *Liners and fluting for corrugated board.*

SANS 456:2009, *Corrugated board containers.*

* SABS: Tel. +27 (0) 12 4287911

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(16)

ANNEX A**(Informative)****Guideline packing quantities**

Series No.	Item		Qty per carton
1	1.	Towels bath blue	40
	2.	Towels hand blue	60
	3.	Face cloth blue	150

Series No.	Item		Qty per carton
2	1.	Caps Garrison	200
	2.	Cap service	18
	3.	Drawers multi colour	400
	4.	Hat service blue/grey	200
	5.	Jackets F/D, x/small, small	50
	6.	Jackets F/D, med, large, x/large	45
	7.	Jackets SD Blue Grey	30
	8.	Shirt L/S	60
	9.	Shirt S/S	100
	10.	Shirt F/D L/S	80
	11.	Shirt F/D S/S	100
	12.	Shirt mess dress	50
	13.	Short Gym Blue	200
	14.	T-shirt blue/grey	100
	15.	Trousers F/D blue/grey	60
	16.	Trousers Blue Grey	70
	17.	Vest white	150

Series No.	Item		Qty per carton
3	1.	Aprons foodhandlers bib blue/grey	200
	2.	Apron foodhandlers bib type white	200
	3.	Bags duffel blue/grey canvas	40
	4.	Belts individual web 57mm	200
	5.	Cap foodhandlers white	200
	6.	Coats cold weather 3/4 duffel	15
	7.	Coats foodhandlers white	50
	8.	Coveralls two-piece	30
	9.	Gloves black	100 prs
	10.	Raincoats nylon blue/grey	50
	11.	Shirts foodhandlers	60
	12.	Sleeping bag nylon outers	7
	13.	Tracksuits	30
	14.	Trousers foodhandlers, blue check	80

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Series No.	Item		Qty per carton
4	1.	Belts waist (all sizes)	400
	2.	Boots combat black size 5-9	15
	3.	Boots combat black size 10-12	12
	4.	Boots combat black size 13-15	10
	5.	Boots fireman size 6-12	10
	6.	Boots gum size 5-10	10
	7.	Boots safety black size 5-10	12
	8.	Boots safety black size 11-14	10
	9.	Shoes canvas blue/grey size 5-11	20
	10.	Shoes canvas blue/grey size 12-14	12
	11.	Shoes gunfloor black size 5-11	15
	12.	Shoes gunfloor black size 12-13	12
	13.	Shoes gym leather size 5-14	20
	14.	Shoes mens black evening wear size 6-10	15
	15.	Shoes mens black evening wear sizes 11-13	12
	16.	Shoes safety black size 5-10	12
	17.	Shoes safety black size 11-14	10
	18.	Shoes service black size 5-11	15
	19.	Shoes service black size 12-14	12
	20.	Socks mens cushion sole	200
	21.	Socks mens Black	200
	22.	Socks mens size 9-12	200
	23.	Ties, men	1 000
	24.	Pantihose	900
	25.	Uniform men's S/D	20
	26.	Uniform men's E/W	20
	27.	Skirts ladies	60
	28.	Slacks ladies	60
	29.	TRS men's	60
	30.	Jackets, ladies E/W	20
	31.	Skirts, ladies E/W	50
	32.	Waistcoat, ladies	100
	33.	Jersey, unisex	60

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For office use only		
HISTORY SHEET		
DOC ISSUE	DATE	AMENDMENTS/HISTORY
1	September 1984	First release
2	January 1996	
3	June 2008	Updated format, references and layout of specification. Add annex B. Refer to two separate labels on the short sides of the containers: Label A & Label B
4	April 2011	Amended height of box
5	July 2014	Amend label requirements of bulk container. Add specific size of wording.
05.2	March 2018	Add illustrations Dimensions to reflect flat measurements of box Add information and layout of specification Add Normative references
05.3	April 2018	Delete Annex A Amend dimensions Change numbering to ensure paragraph 11.2 refers to the same information as in version 5
06.0	August 2018	6 th Release
06.1	December 2022	Delete 2 of the 4 labels on the short ends of container. One label on ONE short end (front) of the lid and one label on ONE short end (front) of the base of the same container. Add colours to year of manufacture (figure 8)
07.0	January 2023	7 th Release

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