



## **Technical Specification for STRAP, WRIST, BADGES OF RANK**

# Defence Clothing (DC)

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PREFACE

TABLE 1 – PRODUCT LIST

<b>Item Name</b>		STRAP, WRIST, BADGES OF RANK	
<b>Development File No.</b>			
<b>Product Support File No.</b>			
<b>NATO Stock No.</b>	<b>User</b>	<b>Description</b>	<b>Pattern No.</b>
8455-99-139-0960	Army	WRIST STRAP WHITE	27578
8455-99-974-0617	Army	WRIST STRAP LARGE	17555
8455-99-974-0618	Army	WRIST STRAP SMALL	15970

**Any colour shown in this document is for representation and must not be used for colour matching**

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**Technical data in this document refers to the edition current at the date of tender or contract unless otherwise stated**

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TABLE 2 – ISSUE RECORD

<b>Issue No.</b>	<b>Comments</b>	<b>Issue Date</b>
2	Rationalisation of measurements between issue 1, Master & Standard Patterns Metal ware changed from nickel-plated to conform with BS EN ISO 1456:2009 and SI 1668:2000 to bright Chromium plated to conform with BS EN ISO 1456:2009	04 August 2010
1	Reformatted from UK/ISC/C/2840 and converted to metric	19 March 2004

PART 1

1. THE PRODUCT

- a. Use of the Product. Plain leather wrist straps, worn by Warrant Officers on their right wrist, to display an authorised badge of rank. Figure 1 shows a Royal Marine WO1 wearing his badge of rank fixed to the strap

FIGURE 1



TABLE 3 – RELATED SPECIFICATIONS AND DOCUMENTS

<b>Specification/Document</b>	<b>Detail</b>
BS EN ISO 105 Part X12	Textiles. Tests for colour fastness Colour fastness to rubbing
BS EN ISO 1456	Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium
BS EN 1652	Copper and copper alloys. Plate, sheet, strip and circles for general purposes
BS 2780	Glossary of leather terms
BS 7318	Specification for industrial sewing threads made from linen (flax) or cotton
UK/SC/5699	Leather vegetable tanned various

## 2. PATTERNS

- a. Master Patterns. DC holds a Master Pattern for this product. Potential contractors may view the pattern on site by arrangement with the DC Commercial Department
- b. Standard Patterns. A Standard Pattern may be obtained from the DC Technical Information Office and may be used to provide the criteria for all materials, components and manufacturing features not fully defined in this specification

PART 2

3. PRODUCT DESIGN

a. Product Description

TABLE 4 – PRODUCT COMPONENTS

4.1 Leather	<ul style="list-style-type: none"> <li>• Leather – vegetable tanned bovine skin, or an approved alternative, natural back, finished to match the standard pattern</li> <li>• All leather is to comply with the requirements of UK/SC/5699 – Leather vegetable tanned various</li> <li>• All leather is to be free from flaws and other defects</li> <li>• The data sheets define the leathers used in each item together with the thicknesses. Thickness is defined in millimetres</li> <li>• The contractor is responsible for using such types or thicknesses of leather as will produce an item to match the standard patterns</li> <li>• Leather dye to comply with the colour fastness requirements test in Table 6a</li> <li>• Mixed shades of leather within the individual items are strictly not acceptable</li> <li>• Terms used are defined in BS 2780</li> </ul>
4.2 Embellishments and fittings	<ul style="list-style-type: none"> <li>• Are self coloured brass to be CW505L (CuZn30) as per BS EN1652</li> <li>• Nickel plated with Bright Chromium plated finish is to conform to BS EN ISO 1456</li> <li>• All metal embellishments and fittings are to be free of cracks, burrs and other visible defects</li> </ul>
4.3 Sewing thread	<ul style="list-style-type: none"> <li>• All hand sewing threads are to be 18s count linen, 3 cord to BS 7318 finished to match the standard pattern or an approved alternative (sewing threads for leather items may be treated with beeswax)</li> </ul>
4.4 Other components	<ul style="list-style-type: none"> <li>• Other components not specified above must be as in the Standard Patterns or an alternative approved by DC with similar performance characteristics</li> </ul>

TABLE 5 – PRODUCT CONSTRUCTION

5.1 Design and assembly	<ul style="list-style-type: none"><li>• The design, assembly, textures and shades of all items are to be strictly in accordance with that of the guiding standard pattern, except those caused through the effects of natural wear and tear and ageing</li></ul>
5.2 Seams and Stitching	<ul style="list-style-type: none"><li>• Seven stitches per 25mm and to be correctly tensioned</li><li>• All sewing is to be free from pucker</li><li>• All items are to be free from all ends of thread</li></ul>
5.3 Embellishments and fittings	<ul style="list-style-type: none"><li>• As detailed in the Data sheets</li></ul>
5.4 Measurements	<ul style="list-style-type: none"><li>• All measurements specified in the data sheets are in millimetres unless otherwise stated - See data sheets</li><li>• Table 7 denotes dimensional tolerances to be adhered to</li></ul>
5.5 Packaging	<ul style="list-style-type: none"><li>• See section 4</li></ul>

TABLE 6 – COLOUR FASTNESS REQUIREMENTS

Minimum ratings unless otherwise stated in the tender or contract

a. Colour fastness for textiles

METHOD OF TEST BS EN ISO 105 X12 RUBBING		
	Dry Rubbing	Wet Staining
Revolutions	128	64
Grain Surface	3	3
Felt Pad	3	2

4. PACKAGING AND LABELLING REQUIREMENTS

- a. Package and Labelling should be in accordance with the contract
- b. Items should always be packaged in a way to prevent damage during transit and storage.
- c. Individual NSNs should be packaged in a clear polyethylene bag with a self-adhesive press label affixed to the polyethylene bag clearly showing: item description, NSN, contract number and year of manufacture (see figure 2 for example layout)
- d. Multiple quantities of individually packaged NSNs may be shipped in the same box. Mixed NSN multiple packaging is not permitted.
- e. Multiple packaging label - Each outer package is to be clearly labelled with the Item Description, NSN, Contract Number, Quantity, Denomination and year of manufacture (see figure 2 for example layout)

Figure 2 – Label (example layout)

Item Description
NSN
Contract Number
Quantity (where applicable)
Denomination
Year of Manufacture



**TABLE 7 – DIMENSIONAL TOLERANCES**

The following tolerances apply unless otherwise specified within the data sheets

Where items are to be fitted together the plus and minus tolerances may need to be adjusted to allow for correct fitting

In millimetres (unless otherwise specified)				
From	To	+/- tolerance for leather	+/- tolerance for textiles	+/- tolerance for metal ware
0.001	9	5%	5%	2%
10	49	1	1	0.5
50	149	2	2	1
150	299	2	5	2
300	599	5	10	
600	899	5	15	
900	999	5	20	
1000	1499	5	25	
1500	2000	5	30	

PART 3

5. TECHNICAL DATA SHEETS

- a. The following section contains data sheets listing bill of materials, manufacturing information, dimensions and images for each belt, sling etc. NSN listed in table 1.
- b. Relevant Standard Patterns are to be used to govern shade, all shades depicted on data sheets are for guidance only.
- c. Any pattern suffixed with TG is a pattern To Guide for manufacture of a range of similar design.

5. TECHNICAL DATA SHEETS continued

<b>NSN</b>	<b>8455-99-139-0960</b>
<b>Pattern No.</b>	27578
<b>Description</b>	Strap Wrist Badge of Rank White
<b>DETAIL</b>	
<p><b>Strap outer</b></p> <p>Dimensions: 70 (width), 290 (total length), 16 (segment lengths), 36 (tip length). Labels: Badge holder, Strap.</p> <p><b>Strap inner</b></p> <p>Dimensions: 92 (width), 17 (side offsets), 16 (height). Labels: Strap.</p> <p><b>Buckle end outer</b></p> <p>Dimensions: 20 (height), 2.5 (top offset), 11 (width), 9.5 (keeper width), 9.5 (slider width), 16 (height). Labels: keeper, slider.</p> <p><b>Buckle end inner</b></p> <p>Dimensions: 16 (height).</p>	

5. TECHNICAL DATA SHEETS continued

<b>CONTINUATION OF 8455-99-139-0960</b>	
<b>BILL OF MATERIALS</b>	
<b>Main materials</b>	<ul style="list-style-type: none"> <li>Leather, vegetable tanned bovine skin, substance 1.5 to 1.75mm, grain finished white as Standard Pattern</li> </ul>
<b>Metal-ware</b>	<ul style="list-style-type: none"> <li>Are self coloured brass to be CW505L (CuZn30) as per BS EN1652</li> <li>Nickel plated with Bright Chromium plated finish is to conform to BS EN ISO 1456</li> </ul>
<b>CONSTRUCTION INFORMATION</b>	
<b>Strap</b>	<ul style="list-style-type: none"> <li>The strap is cut from one piece of leather 16mm wide and finishing 290mm long</li> <li>One end is tapered and rounded as the standard pattern and is to have six 1.5mm diameter holes inserted centrally on the strap. The centre of the first hole is to be 36mm from the tapered end, the remaining holes are to be spaced 16mm apart from centre to centre</li> <li>The other end of the strap is to be turned back and hand stitched as per the standard pattern, to hold the buckle and a 9.5mm wide fixed strap-keeper loop, sufficient to hold two thicknesses of the strap. The buckle prong is to be inserted through a crew punch 3mm wide by 8mm long</li> <li>The buckle end of the strap is to have a 9.5mm wide sliding strap-keeper loop, sufficient to hold two thicknesses of the strap</li> </ul>
<b>Badge holder</b>	<ul style="list-style-type: none"> <li>The holder is to consist of two layers of leather shaped as the standard pattern. Each layer is to have two 17mm slots, inset 17mm from either side, through which the strap is threaded as shown on the standard pattern</li> </ul>
<b>Stitching</b>	<ul style="list-style-type: none"> <li>Stitching shall be by hand with 7 stitches per 25mm, there shall be no loose stitching, all ends securely fastened off by backstitching. Stitching shall not be proud of the leather</li> </ul>
<b>Labelling</b>	<ul style="list-style-type: none"> <li>See section 4</li> </ul>

5. TECHNICAL DATA SHEETS continued

<b>NSN</b>	<b>8455-99-974-0617</b>	
<b>Pattern No.</b>	17555	
<b>Description</b>	Strap Wrist Badge of Rank Large	
<b>DETAIL</b>		
<p style="text-align: center;"><u>Strap outer</u></p>		
<p style="text-align: center;"><u>Strap inner</u></p>		
<p style="text-align: center;"><u>Buckle end outer</u></p>		<p style="text-align: center;"><u>Buckle end inner</u></p>

5. TECHNICAL DATA SHEETS continued

<b>CONTINUATION OF 8455-99-974-0617</b>	
<b>BILL OF MATERIALS</b>	
<b>Main materials</b>	<ul style="list-style-type: none"> <li>Leather, vegetable tanned bovine skin, substance 1.5 to 1.75mm, grain finished brown (London) as Standard Pattern</li> </ul>
<b>Metal-ware</b>	<ul style="list-style-type: none"> <li>Are self coloured brass to be CW505L (CuZn30) as per BS EN1652</li> <li>Nickel plated with Bright Chromium plated finish is to conform to BS EN ISO 1456</li> </ul>
<b>CONSTRUCTION INFORMATION</b>	
<b>Strap</b>	<ul style="list-style-type: none"> <li>The strap is cut from one piece of leather 16mm wide and finishing 290mm long</li> <li>One end is tapered and rounded as the standard pattern and is to have six 1.5mm diameter holes inserted centrally on the strap. The centre of the first hole is to be 36mm from the tapered end, the remaining holes are to be spaced 16mm apart from centre to centre</li> <li>The other end of the strap is to be turned back and hand stitched as per the standard pattern, to hold the buckle and a 9.5mm wide fixed strap-keeper loop, sufficient to hold two thicknesses of the strap. The buckle prong is to be inserted through a crew punch 3mm wide by 8mm long</li> <li>The buckle end of the strap is to have a 9.5mm wide sliding strap-keeper loop, sufficient to hold two thicknesses of the strap</li> </ul>
<b>Badge holder</b>	<ul style="list-style-type: none"> <li>The holder is to consist of two layers of leather shaped as the standard pattern. Each layer is to have two 17mm slots, inset 17mm from either side, through which the strap is threaded as shown on the standard pattern</li> </ul>
<b>Stitching</b>	<ul style="list-style-type: none"> <li>Stitching shall be by hand with 7 stitches per 25mm, there shall be no loose stitching, all ends securely fastened off by backstitching. Stitching shall not be proud of the leather</li> </ul>
<b>Labelling</b>	<ul style="list-style-type: none"> <li>See section 4</li> </ul>

5. TECHNICAL DATA SHEETS continued

<b>NSN</b>	<b>8455-99-974-0618</b>
<b>Pattern No.</b>	15970
<b>Description</b>	Strap Wrist Badge of Rank Small
<b>DETAIL</b>	
<p><b>Strap outer</b></p> <p>Labels: Badge holder, Strap, grooves, Holes</p> <p>Dimensions: 57 (height of badge holder), 24 (width of holes), 290 (total length), 16 (width of strap segments), 36 (width of strap tip)</p> <p><b>Strap inner</b></p> <p>Dimensions: 76 (width of badge holder), 12 (width of strap at ends), 16 (width of strap)</p>	
<p><b>Buckle end outer</b></p> <p>Labels: keeper, slider</p> <p>Dimensions: 20 (height of buckle), 2.5 (width of buckle), 11 (width of buckle), 9.5 (width of keeper), 9.5 (width of slider), 16 (width of strap)</p> <p><b>Buckle end inner</b></p>	

5. TECHNICAL DATA SHEETS continued

<b>CONTINUATION OF 8455-99-974-0618</b>	
<b>BILL OF MATERIALS</b>	
<b>Main materials</b>	<ul style="list-style-type: none"> <li>Leather, vegetable tanned bovine skin, substance 1.5 to 1.75mm, grain finished brown (London) as Standard Pattern</li> </ul>
<b>Metal-ware</b>	<ul style="list-style-type: none"> <li>Are self coloured brass to be CW505L (CuZn30) as per BS EN1652</li> <li>Nickel plated with Bright Chromium plated finish is to conform to BS EN ISO 1456</li> </ul>
<b>CONSTRUCTION INFORMATION</b>	
<b>Strap</b>	<ul style="list-style-type: none"> <li>The strap is cut from one piece of leather 16mm wide and finishing 290mm long</li> <li>One end is tapered as the standard pattern and is to have six 1.5mm diameter holes inserted centrally on the strap. The centre of the first hole is to be 36mm from the tapered end, the remaining holes are to be spaced 16mm apart from centre to centre</li> <li>The other end of the strap is to be turned back and hand stitched as per the standard pattern, to hold the buckle and a 9.5mm wide fixed strap-keeper loop, sufficient to hold two thicknesses of the strap. The buckle prong is to be inserted through a crew punch 3mm wide by 8mm long</li> <li>The buckle end of the strap is to have a 9.5mm wide sliding strap-keeper loop, sufficient to hold two thicknesses of the strap</li> <li>The strap and keeper loops are to have tooling grooves as per the standard pattern</li> </ul>
<b>Badge holder</b>	<ul style="list-style-type: none"> <li>The holder is to consist of a single layer of leather shaped as the standard pattern. The holder is to have two 17mm slots, inset 12mm from either side, through which the strap is threaded as shown on the standard pattern</li> <li>The holder is to have two 5mm diameter punched holes for the badge attachment, as shown on the standard pattern</li> </ul>
<b>Stitching</b>	<ul style="list-style-type: none"> <li>Stitching shall be by hand with 7 stitches per 25mm, there shall be no loose stitching, all ends securely fastened off by backstitching. Stitching shall not be proud of the leather</li> </ul>
<b>Labelling</b>	<ul style="list-style-type: none"> <li>See section 4</li> </ul>