



PN SPECIFICATION NO. 08/2024
PROMULGATION DATE: 21 MARCH 25

ACCESSORIES OF OVERCOAT **BLACK**

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PROMULGATION ORDER

1. This specification is hereby approved and promulgated for information, guidance and compliance by the relevant person.
2. The details contained in the specification are to be studied, interpreted and implemented with due regards to the interest of the Service.

SUGGESTIONS FOR AMENDMENT

1. The specification has been prepared to bring the test methods and procedures in line with up-to-date PN requirements and facilities held in Pakistan. CINS may request to amend any test requirement/ test procedure in light of the experience emanating from its inspection history, through the feedback form placed at Annex F. However, such an alteration will be effective when the amendment is promulgated by this Directorate, and will be effective on the contracts which materialize after the promulgation date of respective amendment.

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RECORD OF CHANGES /AMENDMENT

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**PN SPECIFICATION 08/2024
(ACCESSORIES OF OVERCOAT BLACK)**

0101. DESIGNATION

1. Accessories of Overcoat Black.

0102. USAGE

1. Accessories used in the manufacturing of Overcoat Black worn by PN Officers.

0103. INTRODUCTION

1. This specification is promulgated by Directorate of Indigenous Technical Development, Naval Headquarters Karachi to provide necessary guidance to the potential manufacturers/ suppliers of the items mentioned herein. This specification is to be used for testing and deciding upon acceptance, or otherwise, of the items mentioned. Any alteration or addition in this specification can be suggested to ITD Wing. However, it cannot be implemented without prior approval of NS (Dte).

2. This specification includes **06** Annexes and consists **24** pages, including the cover.

0104. SCOPE

1. This specification covers the requirements of manufacturing, inspection, storage & packaging details for Overcoat. This specification lays down the standards to which the store shown under designation above should conform to. It defines and lays down the quality, standards and details of materials, manufacturing, workmanship and finish. It also lays down the details of testing, inspection, rejection, marking, packing and delivery, etc. of Overcoat

2. The supplier/ manufacturer shall comply in every respect with the terms of this specification and ensure that the stores conform to it, in all respects.

0105. RELATED DOCUMENTS

1. The latest standards and documents that have been referred to in this specification are:

S. No	Int'l Standards	Description
a.	AATCC-20A	Fiber analysis Quantitative
b.	AATCC-79	Absorbency of Textiles
c.	AATCC-08	Color fastness to Rubbing
d.	AATCC 133	Color fastness to heat
e.	ASTM D 5034	Tearing strength of fabric
f.	BS EN ISO-12945-2	Determination of fabric propensity to surface fuzzing and to pilling
g.	BS EN ISO-12947-1	Determination of the abrasion resistance of fabrics by the Martindale method

h.	BS EN ISO 12127	Weight of fabric
j.	ISO-7211/1	Determination of Weave pattern
k.	ISO-7211/2	Determination of number of Threads per unit Length
l.	ISO-7211/5	Determination of linear density of yarn removed from fabric
m.	BS 1006/ AATCC 16	Color fastness to light
n.	ISO-105-C06	Color fastness to Domestic and Commercial laundering
p.	ISO-105-D01	Color fastness to Dry Cleaning
q.	ISO-105-E01	Color fastness to Water
r.	ISO-105-E02	Color fastness to Seawater test
s.	ISO-105-E04	Color fastness to Perspiration
t.	ISO-105-J03	Calculation of Color Difference
u.	ISO-3801	Determination of Mass per unit Length and Mass per unit Area
v.	ISO-13934-01	Textile - Tensile Strength (N) of fabric

0106 **DEFINITIONS & ABBREVIATIONS**

1. Definitions for the terms used in this specifications are given at Annex A.

0107 **TECHNICAL DETAILS**

1. The technical details of accessories of Overcoat Black is enclosed at Annex B.

0108 **MEASUREMENTS**

1. Overcoat Black should be tailor made to measure as per individual size. Each Overcoat Black is to be trialed before final stitching.

0109 **TECHNICAL DRAWINGS**

1. The technical drawing of Overcoat Black is enclosed at Annex B.

0110 **MANUFACTURING GUIDE LINE**

1. The quality of finished cloth is defined in PN Spec No. 05/2024 (Fabric of Overcoat).
 - a. All cloth within one contract shall be dyed in the same manner.
 - b. The cloth shall be scoured, heat set and dyed finished with Soil release finish. Percent add-on of the soil release finish shall be in accordance with the manufacturer instructions.
 - c. The face of the cloth shall be peached finished.

- d. The starch & protein content including chloroform- soluble and water soluble material of the cloth shall not exceed 03% when tested i.a.w. AATCC - 97.
- e. The face of the cloth shall be identified by stamping on that side with the word "Face" at each end of the roll.
- f. Each bolt shall be marked or tagged for the No x pieces of fabric along with length of each pieces inside a single bolt.
- g. Matching. The color and appearance of the dyed and finished fabric shall match with the reference/ standard sample when viewed at Data Color Spectrophotometer, illuminant of D-65 or under filtered tungsten lamps
- h. Discoloration. The finished cloth shall have good fastness to light, dry cleaning, and sea water etc.

0111 **QUALITY OF WORKMANSHIP AND FINISH**

1. Workmanship and finish of the fabric shall be equal to the reference/ approved sample/ sealed pattern. It shall be the best of its class and to the entire satisfaction of the INS. The Overcoat Black Fabric shall conform the parameters defined at Annex B of this specification. All properties and qualities which may not be defined in this specification i.e. feel/ finish etc. should be as per reference/ sealed/ approved sample. Reference/ sealed/ approved sample is to be obtained from DCLS/ PNCSD and held with DCLS/ PNCSD/ CINS, for future reference/ inspection/ stock sample etc.

0112 **TESTING:**

1. The material shall be subjected to tests laid down in this specification at Annex B of this specification. The material may also be subjected to such tests which are deemed necessary by the Inspection Authority in order to determine their suitability. Inspecting authority reserves the right to get any B/R samples tested from any reputable/ Accredited Laboratory other than PN. Firm is liable to pay all the testing charges.

0113 **NUMBER OF SAMPLES REQUIRED FOR TESTING**

1. No of samples drawn from bulk quantity/ offered store for testing and initial inspection are as per instructions/ experience of Inspecting Officer or according to following table for the testing:

Lot Size	No. Samples
300 ≥800	03
801 ≥22000	05
22001 and over	07

0114 **TENDER SAMPLE ,ADVANCE SAMPLE OR PRE-PRODUCTION SAMPLE**

1. Tender sample is to be approved by TSR Committee.

2. For each tender 05 samples of Overcoat alongwith relevant accessories and Quality assessment/ test report of all the items shall be supplied by the manufacturer at the time of tendering. Quality Assurance Report (test report) from any accredited laboratory.
3. Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for testing and inspection as per Annexes B and C approved by CINS. The minimum quantity required for quality assurance is 03 Overcoat Black.
4. Whenever Tender, Advance or pre-production sample is not required, the suppliers/ manufacturer are advised in their own interest to submit to the Inspecting Officer or his representative an initial delivery of One % of the contract.
5. The approval of Advance or pre-production sample, authorizes the commencement of bulk production but does not relieve the suppliers/ manufactures from compliance with all the provisions of this specification.
6. Samples after rectification of all observations highlighted by Inspecting Officer/ end user shall be properly sealed and submit to INS. 01x sample returned to the firm for guidance; rest of the approved sample shall be retained by INS for future use in bulk Inspection (If deemed necessary).
7. The Pre-production sample shall be manufactured by the manufacturer with the same facilities which will be used for manufacturing of the bulk items.
8. Firm shall provide advance sample along with quality verification reports from an accredited laboratory, whenever asked/ required by Inspecting authority to ensure compliance of quality assurance parameters during production/ final internal inspection.
9. Firm shall provide following accessories at time of TSR, advance sample, preproduction sample alongwith quality report as per Annex B:

a.	Base Cloth	02 meter
b.	Lining Cloth	02 meter
c.	Buckuram/ fussing	01 meter
d.	Sewing / Overlocking Thread	01 Tube(Each Type)
e.	Metallic/ Plastic Buttons	10 x No. (each size)

0115 **INSPECTION**

1. Bulk representative sample. B/R random sampling will be carried out as per rules in vogue.
2. Bulk Inspection. Bulk inspection will be carried out after satisfactory completion of Visual Examination and Testing of B/R Sample.
3. Inspection of Overcoat Black. 100% of the offered store shall be inspected or as per predefine Stage inspection/ Third party inspection for Overcoat Black may be carried out (if desired) by Inspection Authority.

4. Inspection/ Acceptance and Rejection of Stores. Inspection/ acceptance is to be carried out to the entire satisfaction of Chief Inspector of Naval Stores and also as per instruction/ procedure laid down in official unit order instruction.
5. Common defects in garment and Guide lines inspection of Overcoat Black are enclosed as Annex D & E respectively for consultation/ guideline. However, these guide lines may be considered by Inspecting officer in addition to Unit Instruction Order or as per order of Inspecting Authority.
6. The Overcoat Black shall be examined for the correctness of material, shape, design, dimension, size, workmanship and finish.
7. CINS reserves the right to reject the whole supply in case, upon examination, material or packing of any sample or portion of the consignment is found NOT CONFORMING the parameters laid down in this specification or the quality of product does not seems up to the mark.
8. If on examination of 5% of any delivery, 20% of those examined from bulk supply are found NOT CONFORMING to this specification in respect of the pattern, dimensions, workmanship and finish, the whole consignment may be rejected without any compromise.
9. All stores and packing NOT fully in accordance with this specification shall be rejected.
10. Responsibility for Compliance. The inspection set forth in this specification shall become a part of the supplier's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to PN for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements. However, this does not authorize submission of known defective material, either indicated or actual, nor does it commit PN to acceptance of defective stores (material).
11. Responsibility of contractor. The contractor is responsible for the performance of all inspection requirements (inspection/ examination and test) as specified here in. except as otherwise specified in the contract or purchase order. The contractor may use his own or any other facilities suitable for performance of the inspection requirements.
12. Replacement by the Contractor. The supplier/ manufacture is responsible for replacement of the consignment or any part there of whenever it is found to be not conforming to this specification or does not curtain its quality till the useful life of an item. The supplies so tendered in replacement, shall be subjected to testing/ inspection and acceptance by the Inspecting Officer.
13. Responsibility for Safety. The supplier/ manufacturer is wholly responsible for the safety of supplies during inspection, storage at firm's premises, proper Packing, dispatch and delivery up to consignee.

14. The CINS is the authority in all matters pertaining to Inspection.
15. Stamping of Accepted/ Rejected Stores by the Inspector. Following instructions are to be followed:
 - a. Stamping of Accepted Stores. Each acceptable fabric shall be stamped with Inspector's Individual Acceptance Mark or as per Instructing of Inspecting Authority. The stamping shall be legible.
 - b. Stamping of Rejected Stores. The rejected fabric/ Garment shall be marked with Inspector's Rejection Mark at the back/ visible place of fabric to avoid re-submission by the supplier.

0116. **SPECIAL INSTRUCTIONS**

1. Care Instructions. Care instructions in English and Urdu shall be attached with each Fabric/ Garment as indicated in the drawing and have minimum requirement as follows:
 - a. Ironing Procedure.
 - b. Drying procedure.
 - c. Dry cleaning procedure
 - d. Any Prohibition i.e. do not use bleach/ chlorinated water.

0117. **PACKING DETAILS**

1. The store when ordered to be delivered 'PACKED' shall be packed as per following instructions:
 - a. Each Stitched Overcoat Black shall be properly hanged on a suitable wooden hanger.
 - b. The Stitched Overcoat Black shall be hanged in a neat, dry and clean condition in polyethylene bag of thickness of 0.06mm (± 0.01 mm) and suitable size.
 - c. 05 x stitched Overcoat shall be further packed, separately in a thick Carton Boxboard/ Corrugated Carton/ Flouting.
 - d. Each Carton shall be securely and properly packed.
 - e. Carton consist of following parameters:
 - (1) Carton of 05 ply is used for packing.
 - (2) Weight of outer ply is 180 ± 5 gm.
 - (3) Inner paper ply weight /m² 180 ± 5 gm.
 - (4) Corrugated paper weight/m² 120 ± 5 gm.
 - (5) Paper pasted with corrugated sheet 120 ± 5 gm.
 - (6) Each Carton shall consist of same size.

0118. IDENTIFICATION LABEL

1. Each Overcoat Black shall bear following minimum information attached with Overcoat Black:

- a. Item name/ item description with NSN/ Pattern No.
- b. Material Composition.
- c. Contract number and Date.
- d. Year of manufacture.
- e. Contractor's name, initials, or trade mark.
- f. Batch no
- g. Identification of face

0119. PACKING LIST

1. Firm is bound to provide a packing list of store offered for inspection along with the challan and each packed box giving full, which include complete details about the store i.e. Pattern No., Description of Store, size, quantity, Contract No, & date, challan No & date, I/Note No. or Voucher No. with date, Consignee, Firm's Name, Date of packing, Packer's Signature and Stowage/ Stacking Instruction.

0120. MARKING OF STORES

1. In addition to any special marking required by contract or order, the marking of packages shall be stenciled with quick drying Black ink/ Paint in accordance with Specification No. NS/MISC/002/80 with clearly defined characters as described below:

- a. On Front and Top:
 - (1) Consignee Address.
 - (2) Contract No and date.
 - (3) Description of Stores Packed and NSN/ Patt no.
 - (4) Stowage / Stacking Instruction.
 - (5) Quantity of the Item/ Overcoat Black Fabric packed.
 - (6) Weight of the Carton
- b. On Back:
 - (1) Manufacturers name / Firm's name.
 - (2) Voucher No. or Inspection Note No. and date.
 - (3) The No. of individual Package and the total No of Packages in the consignment joined by the word 'of 'e.g. 2 of 300.
 - (4) Weight of the package.
 - (5) Month and year of packing.

0119. DELIVERY

1. The consignment of store will be delivered in accordance with the terms of contract.

2. The store shall be delivered in Brand new, clean and dry condition.

3. The contractor/ manufacturer is fully responsible for the safety of the supplies during inspection, storage at firms and consignee premises proper packing, dispatch and delivery up to consignee.

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AZHAR HUSSAIN SHAH TI (M)
Captain Pakistan Navy
DID

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DEFINITIONS & ABBREVIATIONS

1. DEFINITIONS

a. Following definitions are used in this specification and will be adopted for use:

- (1) **Inspector**. The term inspector shall include the "Inspection Authority", Inspecting Officers and their representatives, duly authorized for the purpose of discharging inspection duties involved.
- (2) **Inspection Authority**. Chief Inspector of Naval Stores (CINS). His verdict in respect of Sealed Inspection matters is to be taken as final.
- (3) **Inspecting Officers**. An Officers nominated by the CINS for carrying out inspection of stores supplied by the supplier, against a specified contract or order, in accordance with the particulars stipulated therein.
- (4) **Acceptance Quality Level (AQL)**. It represent allowable limit/ tolerance of defects or non-conformities in an offered store/ lot/ batch. It represent in percentage, also known as Allowable Quality Limits.
- (5) **Minor Defects**. They are small insignificant issues that don't affect the function or form of the item. Highest tolerance of AQL has been set for minor defects.
- (6) **Major Defects**. They would likely result in product return but don't poses safety risk. AQL tolerance depend upon the description/ quality of finished product.

2. ABBREVIATIONS

a. Following abbreviations are used in this specification and will be adopted for use:

- (1) **CINS**: Chief Inspector of Naval Stores.
- (2) **DID**: Directorate of Inventory Deletion.
- (3) **DCLS**: Directorate of Clothing Stores.
- (4) **PNCS**: Pakistan Navy Clothing Store Depot.
- (5) **PNCTA**: Pakistan Navy Central Testing Authority.

PN SPECIFICATION NO 08/2024
ANNEX B TO
PN SPECIFICATION NO 08/2024
PROMULGATION DATE 21 March 25

TECHNICAL DETAIL OF OVERCOAT BLACK

S.NO	ITEMS	STANDARDS	REQUIREMENTS	
1.	Base Fabric PN Specifications 06/2024 (Fabric of Overcoat Black).			
2.	Lining Fabric			
a.	Blend Composition (1) Polyester	AATCC-20A	Polyester	
b.	Threads per 25 mm (1) Warp (2) Weft	ISO-7211/2	62 ± 3 40 ± 3	
c.	Linear density (1) Warp (2) Weft	ISO-7211/5	230 ± 5 Denier 330 ± 5 Denier	
d.	Weave Pattern	ISO-7211/1	1X3 Twill	
e.	Weight per sq meter	ISO-3801	140± 10 gm	
f.	Nature of Dye	Chemical Analysis	Disperse dye	
g.	Shade	ISO 105 J03	Black (matched with Base fabric)	
3.	Lining Fabric Performance Testing			
a.	Shrinkage (1) Warp (2) Weft	BS EN ISO-6330 (4N) BS EN 25077	± 2% ± 2%	
b.	BS (10.2X 16.8 cm BG) (1) Warp (2) Weft	ISO-13934-01	≥ 1000N	
c.	Colour fastness to water (1) Change in Shade (2) Staining	ISO-105-E01	GS: 4 or better GS: 4 or better	
d.	Perspiration Test (Acidic & Alkaline) (1) Change in shade (2) Staining	ISO-105-E04	Acidic 4 or better 4 or better	Alkaline 4 or better 4 or better
4.	Care Label Material Specification			
a.	Material	AATCC-20A	Silk	
b.	Shade	Visual analysis	White	
5.	Buttons (For Shoulder Straps)			
a.	Material	Identification of Plastic (Flame Test)	Polyvinyl	

	b. Colour	Visual analysis	Black, match with base fabric
	c. Size (Dia) (1) Shoulder strap	Physical analysis	15 mm
6.	<u>Buttons Performance Testing</u>		
	a. Color fastness to Water	ISO-105-E01	GS: 4 or better
	b. Impact test (67mm)	ASTM D 5171	No cracks, chips or breakage
	c. Color fastness to heat (hot pressing)	AATCC 133	GS: 4 and no chipping, cracking, discoloration or staining
7.	<u>Lining Of Pocket</u>		
	a. Material	AATCC-20A	Polyester
	b. Wt/ sq mtr	ISO-3801	250 ± 5gm
	c. Color	Visual Analysis	Black
	d. No of Course/ 25.4 mm	ISO-7211/2	43
	e. No of Wales/ 25.4 mm	ISO-7211/2	51
	f. Shrinkage % age (1) Length (2) Width	BE EN ISO-6330 (4N) BS EN 25077	±2 % ±2 %
8.	<u>Sewing Thread (For Stitching/ Over Locking)</u>		
	a. Construction	Visual Analysis	02 cord each single
	b. Material	AATCC-20A	Polyester
	c. Linear density	ISO-7211/5	2/18 Tex
	d. Shade	Visual Analysis	Black
	e. Balance of Twist	Visual Analysis	02
	f. Direction of Twist	Visual Analysis	Z
	g. Nature of Dye	Chemical Analysis	Disperse dye
9.	<u>Sewing Thread Performance Testing</u>		
	a. B.S (24' BG)	ISO-13934-01	1.2 kg (at 18" B.G)
	b. Washing Test No.-3 (1) Change in Shade (2) Staining on Cotton	ISO-105-C10 (C3)	GS: 4 or better GS: 4 or better
	c. Light Fastness	BS 1006	GS: 4 or better
10.	<u>Twill Tape</u>		
	a. Material	AATCC-20A	Cotton
	b. Shade	Visual Analysis	Black
	c. Size (Width)	Physical Analysis	25 mm
	d. Threads per Inch	ISO-7211/2	76
	e. Breaking Strength (Full width x 7" B.G)	ISO-13934-01	69.4 kg
11.	<u>Buckram/ Fussing (Shoulder Strap)</u>		
	a. Material	AATCC 20 A	Cotton
	b. Wt/ Sq mtr	ISO 3801	162 g/m ²

	c. Shade	Visual	White / matched with base fabric
	d. Threads / 2.5cm (1) Warp (2) Weft	ISO 7211/2	66 53
12.	<u>Buckram/ Fussing Performance Testing</u>		
	a. Appearance after 05/10 cycles at 60/40 °C of laundering	BS EN ISO 6330 Visual/ Manual	No pucker Adhere bond, bubble , cracking,
13	<u>Metallic Button</u>		
	a. Material	Chemical analysis	Gold plated (Brass) with Anchor
	b. Dia (large & medium)	Physical Analysis	2.2 cm & 1.9 cm
	c. Thickness (large & medium)		08mm & 06mm
14.	<u>Foaming/ Padding Material</u>		
	Material	AATCC 20 A	Polyester
	Weight of fabric (gm/m ²)	ISO 3801	175±10 GSM
	Thickness	ISO 5084	2.60mm (Single)