


‘EXPRESSION OF INTEREST’

CRPF is in the process of revising the QR (Qualitative Requirements) specifications for the **Hand Gloves and Cap Comforter** for all CAPF. The draft revised QRs/Specification of these items are attached herewith.

The interested firms/parties dealing in subject matter are invited to submit their views/opinions on the draft revised QRs/ Specification of the item by **23/08/2025**.

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1.0 SCOPE

1.1 This specification covers the requirement for "Cap comforter"

Black or any other shade against CAPF requirements.

1.2 This specification does not specify general appearance, feel etc. of the "Cap Comforter".

2.0: MATERIAL

The Cap Comforter are crafted from a **three-layer bonded polar fleece fabric with membrane/scrim** and consisting of 100% Polyester with internal (Polyurethane) membrane layer.

3.0: Manufacture

3.1 The shape, dimensions and design of the "Cap Comforter" are shown in Fig.1,2.

4.0 WORKMANSHIP

The " Cap Comforter " shall be free from manufacturing defects such as large mends, ladders, dropped stitches, noticeable oil or other stains, holes, cuts, sewing defects, chemical damages and dyeing defects such as uneven dyeing and streakiness or any other defect which may significantly mar the appearance or serviceability of the Cap Comforter.

5. Technical Specifications for Cap Comforter for -10°C Conditions

5.1 The shape, dimensions and design of the “**Cap Comforter**” shall be as shown in Fig 1 to 2. The “**Cap Comforter**” shall be manufactured with the details mentioned in the table 1 and 2

TABLE -1

Sr. No.	Test parameters	Test method	Requirement
1.	Identification and Material Composition		
	a) 3-layer bonded polar fleece fabric	Visual	Bonded fleece
	b) Top and bottom layer	Visual	Bonded fleece
	c) Middle layer	Visual	PU Membrane /scrim inside
2.	Polyester	IS: 667	100%
3.	Mass/m ² (g)	IS 1964-2001 RA 2022 (Method A)	350 g/m ² ±10%
4.	Anti-fungal	AATCC 30 (Part III)	No fungal growth; Effectiveness to be shown against at least 5 fungal strains
5.	Antimicrobial Efficacy a) Staphylococcus aureus: Reduction b) Klebsiella pneumoniae: Reduction	AATCC 100	≥ 90% ≥ 90%
6.	Breathability / RET factor	ISO 11092 – 2014	Maximum 4 m ² Pa/W
7.	Thermal Resistance, clo	ISO 11092	Minimum 0.5 (top & bottom layer combined)
8.	UPF Protection	AATCC 183	UPF 50 (99% blockage of UV-A and UV-B radiation) or more
9.	pH value of aqueous extract (cold method)	IS :1390: 1983 Cold method	6.0 to 8.5
10.	Pilling resistance	IS 10971 (Part 1) 2011 RA 2017	3.5 or better

11.	Dimensional Stability of fabric Lengthwise Shrinkage Width-wise Shrinkage	IS 2977-1989	$\leq 3\%$ $\leq 3\%$
12.	Bursting Strength	IS 1966 (Part-1) 2009 RA 2018 / ISO: 13938 – 1 (Hydraulic Method)	Minimum 400 Kpa
13.	Colour fastness to light	IS/ISO 105B02	4 or better
14.	Colour fastness to washing	IS /ISO 105-C10-2006	4 or better
15.	Colour fastness to rubbing	IS/ISO 105-X12: 2001 RA 2016	Dry & Wet: 4 or better
16.	Colour fastness to Perspiration	IS/ISO 105 E04: 2008 RA 2019	4 or better
17.	Sewing thread identification	IS 667	100% polyester
18.	Ply of sewing thread & Color of sewing thread	Visual	3 ply Matching to the cap
19.	CAPF emblem (as per user requirement)	Table 2	Printed/Embroidery as per the sample

Table-2

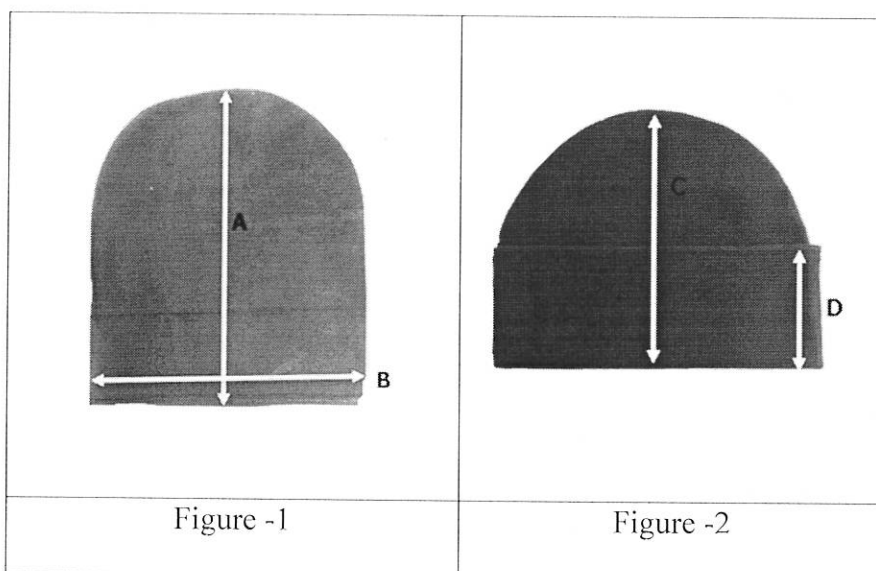
Sl no	Parameters	Requirements	Test methods
1	Logo Placement	Front Center on the flap (above forehead area)	Visual (by user as per his requirements)
2	Logo Type	Embroidered / Printed (based on requirement)	
3	Logo Size	As per user requirement	It should be free from defects
4	Logo Position	Centred Horizontally 0.75 inch (1.9 cm) from bottom hem	
5	Color of Logo	As per user requirement	
6	Logo	As per user requirements	
7	Successful bidder will obtain concern CAPF logo(as per user).		

6. Size chart of cap comforter

TABLE -3

Dimension chart of the cap: All dimensions are in cms

Sr. No	Dimensions		Measurements (cms)				Tolerance (cm)
			Small	Medium	Large	Extra large	
1.	Total Length of the cap :	A	31.5	32	33	34	±2.0
2.	Width of the cap:	B	27	28.5	29	30	±0.5
3.	Length of the cap	C	22	24	26	27	±0.5
4.	Width of the flap :	D	9.5	9.5	9.5	9.5	±0.5



- The CAPF logo (as per user) is prominently positioned on the flap of the cap, serving as a distinctive focal point that enhances the overall aesthetic appeal of the headwear. This placement ensures high visibility while maintaining the functional integrity of the cap. The logo is typically embroidered or heat-transferred with precise craftsmanship to withstand the wear and tear associated with outdoor use.

Table-2

Table-2

Sl no	Parameters	Requirements	Test methods
1	Logo Placement	Front Center on the flap (above forehead area)	Visual (by user as per his requirements)
2	Logo Type	Embroidered / Printed (based on requirement)	
3	Logo Size	As per user requirement	It should be free from defects
4	Logo Position	Centred Horizontally 0.75 inch (1.9 cm) from bottom hem	
5	Color of Logo	As per user requirement	
6	Logo	As per user requirements	
7	Successful bidder will obtain concern CAPF logo(as per user).		

8. SAMPLING

8.1 The sampling procedure detailed in 8.2 and 8.3 shall give desired protection to the buyer and the seller, provided that the lot submitted for inspection is homogeneous. To achieve this, the manufacturer shall maintain a system of process control at all stages of manufacturing ensuring the “Cap Comforter” tendering by him for inspection to comply with the requirements of this standard in all respects.

8.2 The manufacturer should offer the stores serially numbered and arranged in such a way that the entire lot is accessible to the inspecting officer. The conforming of a lot to the requirement of this specification shall be determined on the basis of the tests carried out on the samples selected from it. The number of samples shall be selected at random in accordance with Table-4.

Table-4: Number of “Cap Comforter” to be selected from a lot and permissible number of non-conforming “Cap Comforter”

Sample Size, Permissible Number of Non-Conforming and Sample drawn for Testing

Lots Size in No's	Visual Inspection (As per GIL-1 AQL-4)		Physical Parameters (As per SIL-4 AQL-4)		Chemical Parameters (As per SIL-2 AQL-4)	
	Sample Size	Acceptance No (Permissible Number of Non-Conforming)	Sample Size	Acceptance No.	Sample Size	Acceptance No.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Up to 280	13	1	13	1	5	0
281-500	20	2	13	1	5	0
501-1200	32	3	20	2	5	0
1201-3200	50	5	32	3	8	1
3201-10000	80	7	32	3	8	1
10001-35000	125	10	50	5	8	1

Note: Sampling officer will select sampling unit randomly and select ultimate items from each sampling unit as per the above table.

- 8.4 Lot: For the purpose of conformance inspection and test sampling, a lot is defined as all the completed “Cap Comforter” of the same size and type, with same assemblies, produced in one facility, using the same production processes and materials, and being offered for delivery at one time to buyer against a dispatch note.
- 8.5 The Buyer reserves the right to carry out inspection of bigger lot sizes, even to the extent of 100% inspection, if considered necessary.
- 8.6 The sample size and the criterion for conformity for various characteristics shall be as follows:

Characteristics	Sample size	Criteria for conformity
Freedom from defects, manufacture and dimensions	All the “ Cap Comforter ” shall be inspected according to the column 2 of table 4	Non-conforming “Cap Comforter” not to exceed the corresponding number given in col. 3 of table 4
Nature of fibre, Construction, Dimensional change, Scouring loss, pH value, colour	All the “Cap Comforter” shall be inspected according to the column 4 of table 4	All the “Cap comforter” to satisfy the relevant requirements.
Colour fastness to light	One each for lot size upto 500 “ Cap comforter ” and two if lot size is 501 and above	All the “ Cap comforter ” to satisfy the relevant requirements.

9. **Marking:** - Inspect marked Hand gloves for clarity, adhesion, and durability. Avoid markings that bleed or peel. The proper marking on Cap comforter is crucial for regulatory compliance and user safety. If direct marking on the Cap comforter is not feasible, the information should be provided on the Taffeta printed label attached on inner side of every pair of Hand Gloves. The marking shall include: -

- a) Size of Cap comforter
- b) Instruction regarding maintenance
- c) Firm Name/ logo.
- d) Name of the Force
- e) Year of manufacturing
- f) Any other information required by buyer.

10. **Packaging and Packing:** - Cap comforter carefully inspected, paired, and individually packed in protective plastic bags to prevent contamination and damage. These are then grouped and systematically placed into sturdy corrugated cartons designed to hold specific quantities, ensuring efficient space use and protection during transit. The cartons are securely sealed, labeled with product details, batch numbers, and handling instructions, and finally palletized with stretch wrap for stable shipment. This packing and packaging process guarantee the gloves arrive clean, intact, and ready for distribution.

