Through E-Mail

Directorate General, C.R.P.F.
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(Ministry of Home Affairs)
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No. U.II.98/2024-2025-(Monkey Cap)-Prov-14 Dated, the 5 March'2026

To

The Director General,
AR, BSF, CISF, ITBP, NSG, SSB and BPR&D.

Subject: QRs/Specifications of "Monkey cap (Cap FSD) for CoBRA/CAPF".

In terms of MHA Order No. IV-11012/02/2009-Fin-I/Prov-I17 dated 02/01/2018, QRs/Specifications of **Monkey Cap (Cap FSD) for CoBRA/CAPF** has been approved by DG, CRPF (Nodal Force)

2. Hence, the approved QRs/Specifications and TDs of above items are enclosed herewith further needful action please

Encl: As above.

5/3/26
(Shahnawaz Khan)
DIG(Prov) Directorate

No. U.II.98/2024-2025-(Monkey Cap)-Prov-14 Dated, the 5 March'2026

Copy to the :-

1) **SO (IT)**, North Block for information and necessary action please on his e-mail ID soit@nic.in
2) The ACEO (GeM), Government of India, Ministry of Commerce and Industries, Government-E-Market Place, Jeevan Tara building, 5- Parliament street, New Delhi- 110001 with request to update the existing category as per the approved QRs/Specifications and TDs of above items on GeM Portal.
3) The DIG (IT), Directorate General CRPF with request to upload the approved QRs/Specifications of above items on CRPF website.
4) All Zones/Sectors (Including CoBRA, RAF and VS Wing/GC/Units HQr for information and necessary action please.

5/3/26
(Shahnawaz Khan)
DIG(Prov) Directorate

"Appendix-A"

Qualitative Requirements/ Trial Directives of Monkey Cap (Cap FSD) for CoBRA/CAPF

0.0 FOREWARD

0.1. This specification has been prepared by the CAPF sub group committee, Ministry of Home Affairs.

0.2. This specification shall be used to guide manufacturer, quality assurance and procurement of the item.

0.3 QRs of Monkey Cap (Cap FSD) can be used by other CAPFs or their wings, with respective cloth disruptive and logo.

1.0 MANUFACTURE DESIGN/MATERIALS USED

1.1 The cap shall be manufactured as described below: -

1.2 **Body** - The body of the cap shall be made of NYCO Cloth disruptive pattern for CoBRA, approved vide CRPF letter No. U.II-98(Spec)/2024-25-Prov-(CoBRA)-14 dated 16/07/2024 or as per user requirements.

1.3 Pre-curved visors shall be of the shape, dimension as illustrated in pictures (Figure A & B). It shall consist of a piece of High-Density Polyethylene (HDPE) sheet encased in a casing of body material as shown in the picture. It should have 3 lines of stiches on visor with a distance of 5 mm between the linings.

a. Colour of Visor	-	Green (preferably)/ as per user
b. Thickness of Visor	-	2.5 mm (Min.)
c. Weight of Visor	-	20 gm (max)

1.4 Flexible polyurethane foam sheet as headband cushioning should be there for comfortable utilization (min. 8mm).

1.5 Monkey Cap from back side should be in strap type and shall have opening/adjustable opening. Type & dimension – should match with colour of cap.

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1.6 Inner part of cap should be provided with green colour and made of soft polyester net mesh fabric for full skull part.

1.7 It should have air vent design for quick drying (as per design). There shall be four eyelets and distance between each eyelet – 5cm.

1.8 Top centre of Monkey cap will remain flat without any Tightening /Button arrangement.

1.9 Back side of Cap should be made with adjustable closure so that cap can be adjusted as per requirement.

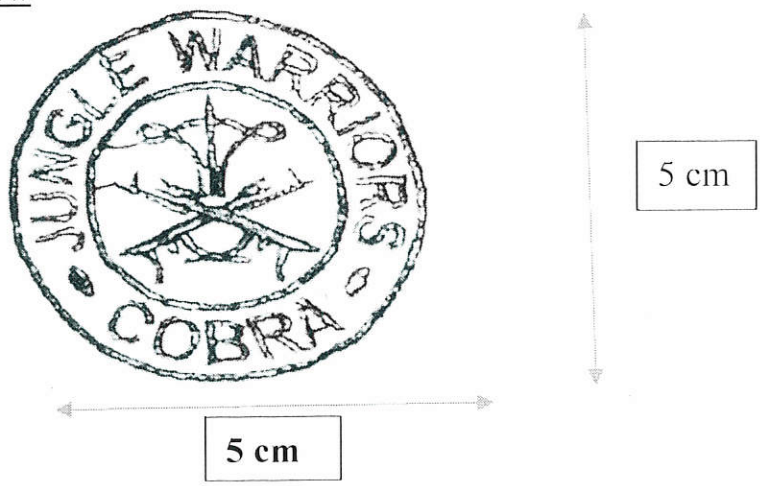
2.0 INSIGNIA:

2.1 CoBRA Insignia on front portion of Monkey Cap to be made using embroidery or insignia as per user requirements.

2.2 The embroidery should be in black colour or as per user requirements with polyester swing thread so that it mingles with the fabric print. This will ensure that insignia is not easily detachable/distinguished in jungle environment due to its outstanding colour.

2.3 Circular insignia of CoBRA or as per user requirements of 5 cm be placed in centre front of the cap.

Illustration as below



3.0 COLOUR:

3.1 It must have existing CoBRA digital camouflage print on it. Sample for colour combination may be seen from the uniform which CoBRA commandos wear and available at CoBRA Sector HQ. [The CoBRA digital camouflage print is required

so that the Monkey cap blends with the uniform and does not stand out in contrast, thereby making the soldier more visible] or as per user requirements.

3.2 The colour must be fast and the dyes used for dyeing and printing must be free from banned amines.

3.3 The colour should not fade due to long exposure to moisture and sunlight during operations.

4.0 MECHANICAL PROPERTIES:

The base fabric material must necessarily be pliable and free form tackiness stain, pinholes, surface irregularities, wrinkles, patches and all other coating defects. The coating should not have any objectionable odour.

5.0 SIZE OF MONKEY CAP (Cap FSD):

Cap Size	S	M	L	XL
Head Size **Circumference (inches)**	20"	21"	22"	23"

Illustration: as below-

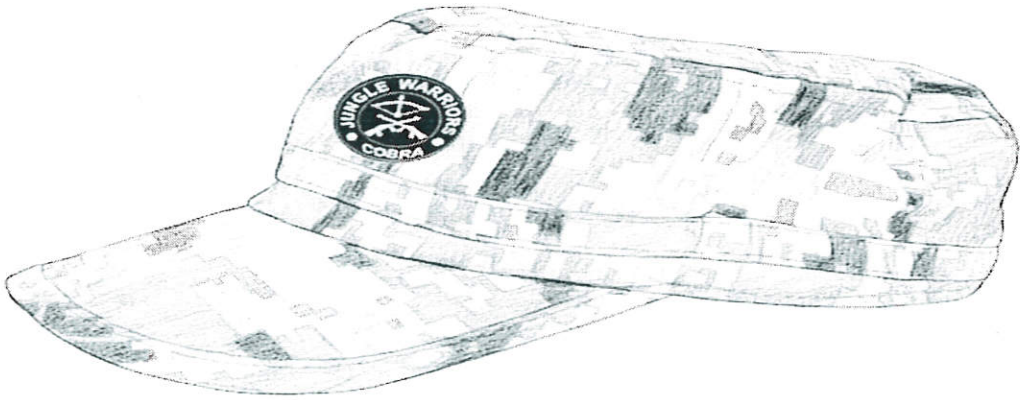


Figure-A

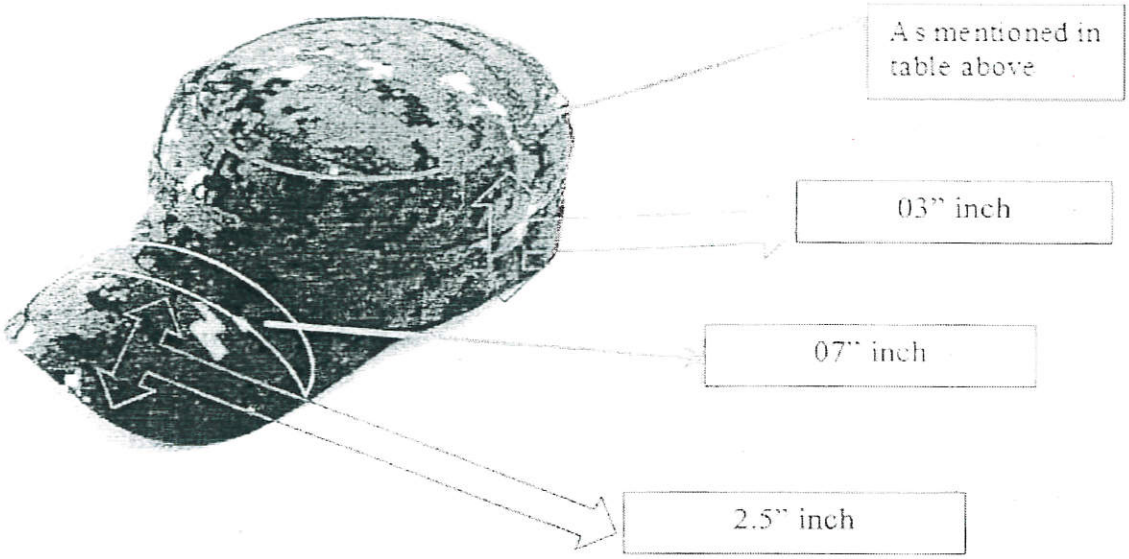


Figure-B

6.0 SAMPLE FOR TESTING:

The firm will submit samples for testing with their tender documents as per user requirement.

7.0 WORKMANSHIP AND FINISH:

7.1 The general workmanship and finish must be of high standards. The Monkey cap shall be free from stitching defects like uneven stitch, puckering gathering of threads, cuts & holes, streaky or patchy dying, stains and any other spots affecting the aesthetic appearance. Stitching must be 3-4 stiches in 1cm with Nylon sewing thread conforming to the verity on L2 of IS 4990 RA 2024(Latest) shall be used and shall match with colour of cap fabric.

7.2 The polyurethane flexible foam sheet shall be of green colour which is defined as depended cellular products produced by interaction of Polyhydroxy compounds, water and isocyanate. *The foam shall consist of cell of uniform characteristics, which shall be essentially open and inter connecting type. The thickness and density of PU flexible foam will be as given by user.*

7.3 The polyurethane foam sheet shall be uniform in thickness and shall be free from defects such as holes, stains and cuts etc. It shall be free from foreign matter, surface imperfections, cuts and other harmful chemicals which may cause skin irritation.

8.0. TRIAL DIRECTIVE:

8.1 The testing methods will be as per QRs/Specification made for CoBRA uniform cloth or as per user requirements.

Table-3: Requirements of "Monkey cap (Cap FSD) for CoBRA/CAPF" (Basic Fabric)

Sl. No.	Parameters	Requirements	Method of Testing
1	Composition ,% - Nylon 6 6/Nylon 6 - Cotton	 50±5 Remainder	AATCC Test method 20 and 20A
2	Dimensional Change (due to relaxation), percentage, Maximum	2.0	As per guidance of IS 2977:1989 (Latest)
3	Ends/dm (minimum)	400	IS 1963:1981 (Latest)
4	Picks/dm (minimum)	202	IS 1963:1981 (Latest)
5	Weight in g/m^2	220 ±10	IS 1964 : 1970 (Latest)
6	Tearing Strength, Newton (Minimum) - Warp-wise - Weft-wise	 35 35	IS 6489:1993 (Latest)
7	Colour Fastness to a). Light (on blue wool Standards) b). Washing - Change in shade - Staining on cotton c). Perspiration (Acid & Alkaline) - Change in shade - Staining on cotton d) Crocking - Dry - Wet	 5 or better 4 or better 4 or better 4 or better 4 or better 4 or better 4 or better	 IS 2454:1985 (Latest) IS 687:1979 (Latest) IS 971:1983 (Latest) IS 766:1988 (Latest)
8	pH Value of aqueous extract	6.0 – 8.0	IS 1390:1983 (Cold method) (Latest)

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9	Spray rating, (minimum)	80	As per guidance of IS 390: 1975 (Latest)
10	Colour specification	≤ 3.0	See Table 4A to 4D
11.	Water Repellent (Min.)	80	As per guidance of IS 390: 1975 (Latest)

8.2 <u>Bib fabric</u>- The bib fabric of the Monkey cap shall be durable material, used to cover and shape the visor (brim) for structure and style as given in figure A & B.

Sl no.	Parameters	Requirements	Testing
1	Component	Bib (Visor) Fabric	Visual
2	Material	Similar as cap	Visual
3	Fabric Weight (GSM)	220 ±10 GSM (depending on material)	IS 1964 : 1970 (Latest)
4	Construction	The cap visor shall contain a piece of High-Density Polyethylene (HDPE) to provide rigidity and maintain its shape, covered by the outer fabric.	Visual inspection & bending test
5	Color	Same as cap Body	Visual

8.3 **<u>Back Closure or closure type</u>** – The back of cap closure as per user.

Strapback - Adjustable fabric or nylon strap with metal or plastic buckle.

or

Velcro Closure - Hook-and-loop fabric strap for easy adjustment.

The adjustable buckle used in the back of a cap is a **metal slide buckle** made of **nickel-free zinc alloy** with a **matte black finish**, designed to fit a **20 mm wide fabric strap**. The buckle allows smooth size adjustment by letting the strap **slide through and fold back on itself**, securing in place through friction.

9.0 **The Specification of colour of Disruptive Pattern Uniform for CoBRA:-**

(Note:- The colour specification of cloth disruptive for Other CAPF will be according to colour of their authorised cloth disruptive digital pattern.)

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Table-4A: Specification of colour of Disruptive Pattern Uniform (DARK)- Dark Green

(AATCC Test method 173 : 2005 & AATCC Evaluation Procedure 7 : 2003)

Colour	:	**Dark Green**		
System	:	**CIE LCH**		
Illuminate Observer	:	**D 65**		
Standard Observer	:	**10 Degree**		
Tristimulus Values	:	X	Y	Z
		5.234	**5.964**	**4.813**
L C H	:	L	C	H
		29.321	**8.650**	**124.923**
CMC (l:c)	:	**2:1**		
Colour difference, ΔE_{cmc}	:	**≤ 3.0**		

Interpretation of Results :

i) If ΔE_{cmc} is less than or equal to 3, then sample is acceptable.
ii) If ΔE_{cmc} is greater than 3, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore, comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

Table 4B: Specification of colour of Disruptive Pattern Uniform (DARK)- Light Green

(AATCC Test method 173 : 2005 & AATCC Evaluation Procedure 7 : 2003)

Colour	:	**Light Green**		
System	:	**CIE LCH**		
Illuminant Observer	:	**D 65**		
Standard Observer	:	**10 Degree**		
Tristimulus Values	:	X	Y	Z
		13.838	14.418	11.139
L C H	:	L	C	H
		44.827	10.951	84.217
CMC (l:c)	:	**2:1**		
Colour difference, ΔE_{cmc}	:	**≤ 3.0**		

Interpretation of Results :

i. If ΔE_{cmc} is less than or equal to 3, then sample is acceptable.
ii. If ΔE_{cmc} is greater than 3, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore, comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

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Table-4C: Specification of colour of Disruptive Pattern Uniform (DARK)-Khaki

(AATCC Test method 173 : 2005 & AATCC Evaluation Procedure 7 : 2003)

Colour	:	**Khaki**
System	:	**CIE LCH**
Illuminant Observer	:	**D 65**
Standard Observer	:	**10 Degree**

Tristimulus Values :

X	Y	Z
10.410	**10.217**	**6.302**

L C H :

L	C	H
38.229	**16.771**	**70.096**

CMC (l:c)	:	**2:1**
Colour difference, ΔE_{cmc}	:	**≤ 3.0**

Interpretation of Results :

i. If ΔE_{cmc} is less than or equal to 3, then sample is acceptable.
ii. If ΔE_{cmc} is greater than 3, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore, comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

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Table-4D: Specification of colour of Disruptive Pattern Uniform (DARK)-Black

(AATCC Test method 173 : 2005 & AATCC Evaluation Procedure 7 : 2003)

Colour	:	**Black**		
System	:	**CIE LCH**		
Illuminant Observer	:	**D 65**		
Standard Observer	:	**10 Degree**		
Tristimulus Values	:	X	Y	Z
		2.294	**2.393**	**2.994**
L C H	:	L	C	H
		17.428	**3.064**	**280.297**
CMC (l:c)	:	**2:1**		
Colour difference, ΔE_{cmc}	:	**≤ 3.0**		

Interpretation of Results :

i. If ΔE_{cmc} is less than or equal to 3, then sample is acceptable.
ii. If ΔE_{cmc} is greater than 3, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore, comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

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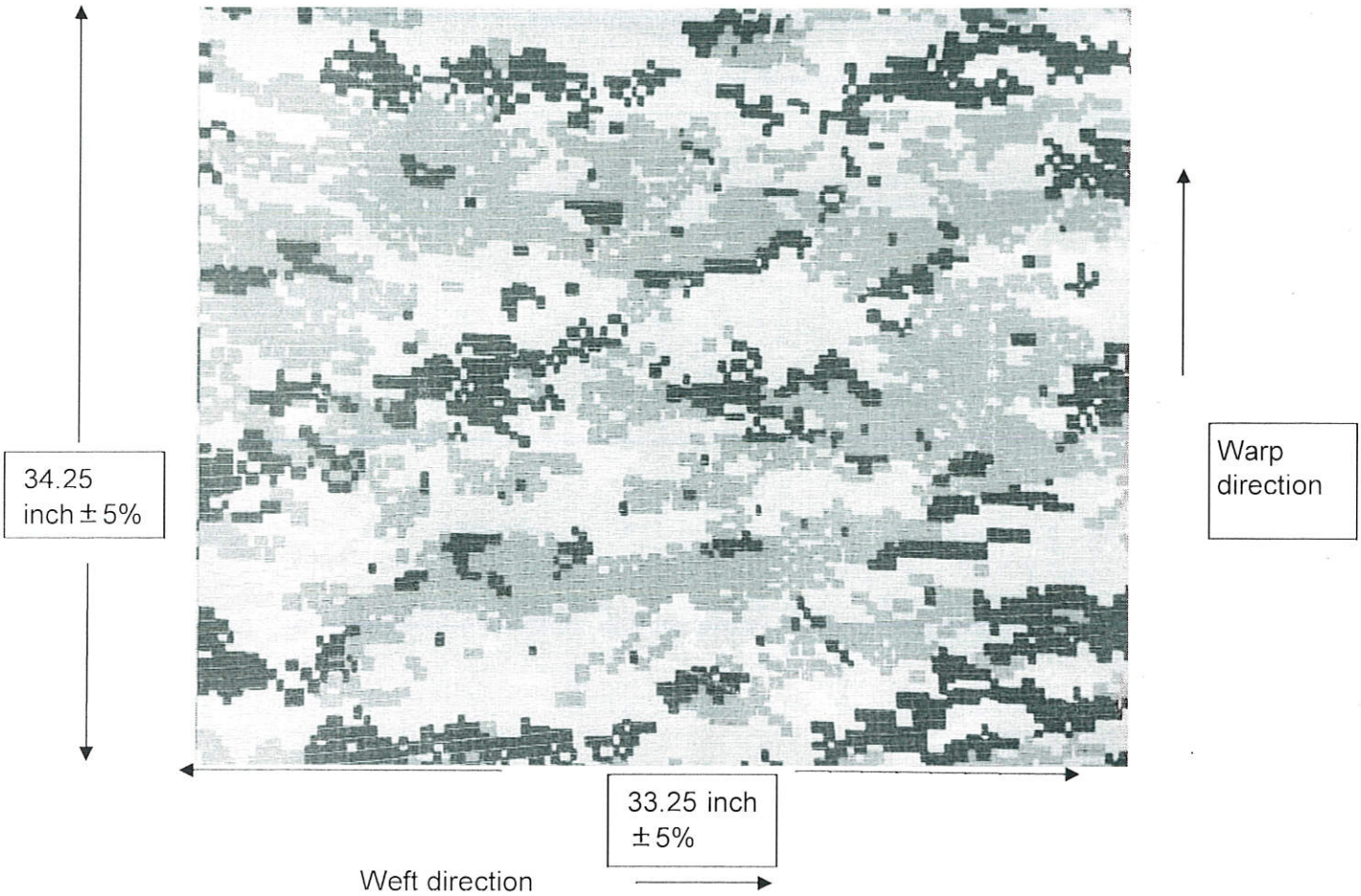

Scale:

Warpwise: 1cm=approx. 2.36 inch
Weftwise: 1 cm-approx 2.30 inch

Fig.1 : Disruptive Print –One repeat of the design
(For true colours refer sealed fabric sample)

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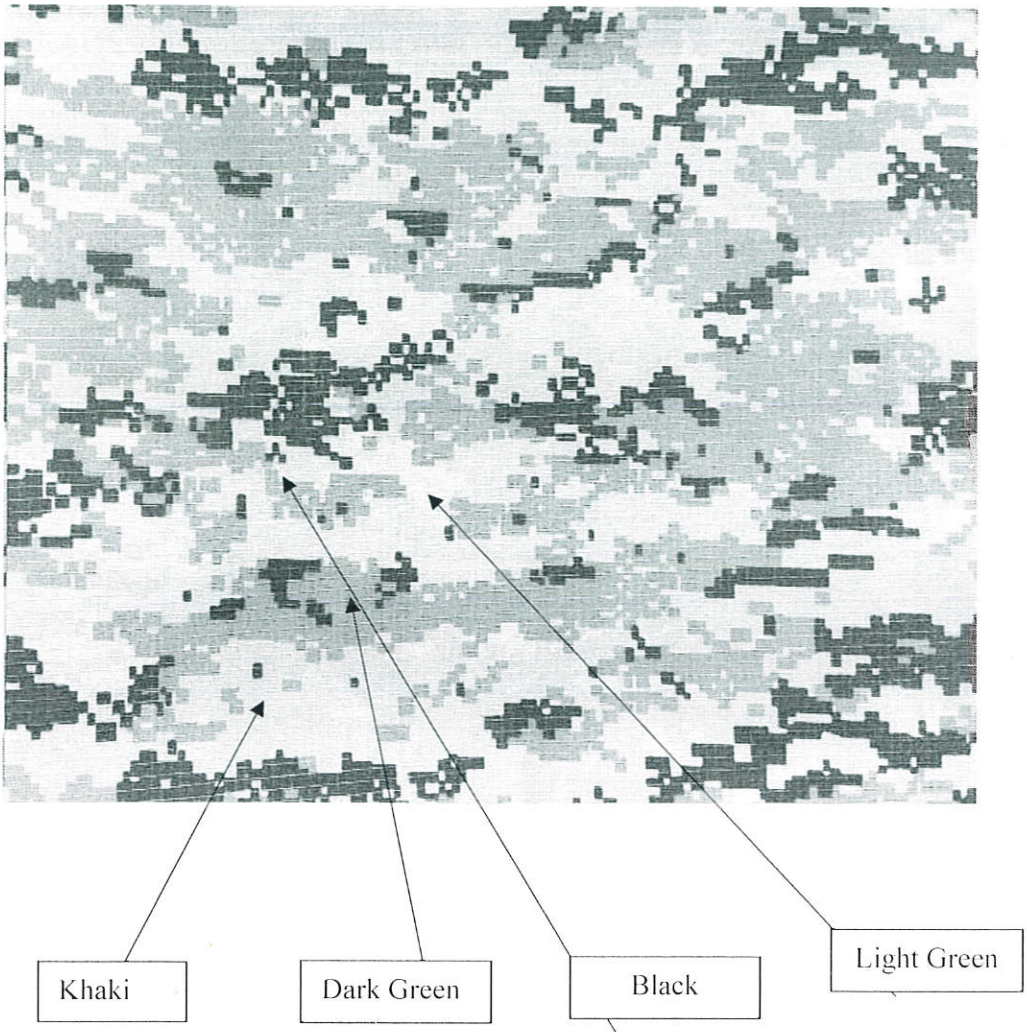

Fig. 3: Disruptive Print- Dark Colour (For colour identification only)
(For true colours refer sealed fabric sample)

10.0 REFERENCES

Sl. No.	SPEC. /TEST METHOD No.	DESCRIPTION
(a)	AATCC 20 : 2007	Fibre analysis: Qualitative
(b)	AATCC 20A: 2008	Fibre analysis: Quantitative
(c)	IS 971: 1983, RA 2004	Method for determination of colour fastness of textile material to perspiration
(d)	IS 1390: 1983, RA 2004	Methods of testing of pH value of aqueous extract
(e)	IS 2454: 1985, RA 2006	Methods for determining of colour fastness of textile materials to artificial light (xenon lamp)
(f)	IS 2500 (Part 2): 1965, RA 2006	Sampling inspection tables
(g)	IS 687: 1979, RA 2004	Method for determination of colour fastness of textile material to washing
(h)	IS 4905: 1968, RA 2006	Method of random Sampling
(i)	IS 766: 1988 RA 2004	Method for determination of colour fastness of textile material to Rubbing (dry & wet)
(j)	IS 690:1988, RA 2004	Method for determination of colour fastness of textile material to sea water
(k)	IS : 2977:1989, RA 2005	Method for determination of dimensional changes on soaking in water
(l)	IS 6359:1971, RA 2004	Method for Conditioning of Textiles
(m)	IS: 3416:1988, RA 2008	Method of quantitative analysis of binary mixture of polyester fibre with cotton
(n)	AATCC Test method 173 : 2005	CMC: Calculation of small colour differences for acceptability
(o)	AATCC Evaluation Procedure 7 : 2003	Instrumental assessment of the change in colour of a test specimen

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