

CERTIFIED COPY

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1202 Specification No. GADE/19 (a)

SCOPE

1. This specification covers the requirements of the following /for Parachute types of Cotton Fabric/ in particular and for other miscellaneous uses in Aerial Delivery Equipment.

Nix Fabric Cotton Secured for Parachutes

type I 52 ² (1.5 Co) and type II 68 ^{g/cm} (2.02)

GENERAL

2. Both types of fabrics used in the fabrication of parachute 2.4 metres (11 ft) for Flores Reconnaissance and other equipments connected with aircraft, are required to be of a high standard and in strict conformity with the particulars laid down in this specification.

MATERIAL

3. Both types of fabrics shall be manufactured from superior quality of combed cotton yarns.

MANUFACTURE /WORKMANSHIP AND FINISH

4. Single fold yarn should be used in the manufacture of both types of the fabric. The yarns shall be free from all spinning defects and shall be evenly spun and well twisted.

5. Both the fabrics shall be of plain weave. The selvages shall be firm and uniform. Fabrics when visually examined shall be free from manufacturing defects and shall strictly conform to the particulars laid down in Clause 7.

6. The fabrics shall be scoured, and free from scouring defects. They shall be free from substances liable to cause subsequent tendering of the cloth.

DIMENSIONS AND OTHER DETAILS

7. Both the fabrics shall conform to the following particulars :

C174C letter No.

G/8003/C-2/TC-3A DL-20/1/76

Type	Length in metre (yds)	Width in cm (inch)	Mass g/m^2		No. of Threads per cm (Inch)		Breaklead $15cm \times 20cm$		Weave
			Weight per Sq metre in Gm (Wt/Sq yd in ozs)	Weight per Sq metre in Gm (Wt/Sq yd in ozs)	Ends Warp	Picks Weft	bet grip in Kg (lbs)	N (Min) (Nests)	
I	40	91.5 ± 1.3 -0	52 ± 4	40 ± 1	40 ± 1	21 206	21 206	Plain	
	(44)	(36 ± 1) -0	(1.5 ± 0.1)	(104 ± 2)	(104 ± 2)	(40)	(40)		
	or as ordered								
II	40	91.5 ± 1.3	68 ± 6	52 min	52 min	33 324	33 324	Plain	
	(44)	(36 ± 1) -0	(2.0 ± 0.25)	(134) min	(134) min	(72)	(72)		
	or as ordered								

Note - Approximate counts of 6.2 Tex (~~20^s~~) and 6.5 Tex (~~20^s~~) in both warp and weft may be used in the manufacture of the fabrics type I and Type II respectively.

1kg force = 9.80665 N (Newton)

TESTS

8. Reference may be made to the following ISI Standards for the method of testing of the above particulars :-

- (a) Dimensions (Length & Width) as per IS : 1954-1961
- (b) Threads/unit length as per IS : 1963-1961
- (c) ~~Weight/Sq metre~~ as per IS : 1964-1961
- (d) Breaking Strength ~~Load~~ as per IS : 1969-1961

Mass per sq. metre

SCOURING LOSS

9. Neither of both the types of the fabric shall show a scouring loss of more than 2% when determined by the method specified in Indian Standard No IS:1383-1960.

pH VALUE

10. The pH value of the aqueous extract of both types of fabric when determined in accordance by the hot method shown in IS : 1390-1961 shall not be less than 6 nor more than 8.5.

AIR POROSITY

11. The mechanical resistance to air flow of the fabric when determined on the RAE high pressure porosity instrument in accordance with the instruction contained in RAE publication No. Aero 11192/98, shall not be less than $1280 \pm 122 \text{ Cm}^3/\text{Cm}^2/\text{Sec}$ ($42 \pm 4 \text{ cu ft/Sq ft/Sec}$) in case of Type (I) fabric and $488 \pm 46 \text{ Cm}^3/\text{Cm}^2/\text{Sec}$ ($13 \pm 1 \frac{1}{2} \text{ cu ft/Sq ft/Sec}$) in case of Type (II) fabric.

MARKING

12. Each piece shall be legibly and indelibly marked with the nomenclature and Cat. No. of the store, trade mark, date and year of manufacture and length of the piece.

PACKAGING

13. Each piece of 40 metre (~~41 Yds~~) length shall be arranged in bundles and secured by jute twine to form a unit pack. Sixty number of such unit packs shall than be suitably arranged and wrapped with polythene ~~150 gauge~~ (one inner layer of kraft paper wrapping followed by one layer of paper packing water proof can be used in emergent condition when polythene film ~~150 gauge~~ is not readily available) and finally with one layer/cloth 'C' heavy or equivalent Hessian cloth to form a bale of gross ~~weight~~ of approximately 250 Kg (550 lbs). The bales shall be suitably stitched with double 3 ply jute twine with not less than ~~12~~ stitches per ~~10 cms~~ (taking care not to pierce ~~the~~ the inner wrapping during stitching. Sufficient hessian cloth shall be pulled out at each corner to form 'ears' of about 13 cm (~~5"~~) in length.

film 0.04mm *0.04mm*
for mass
6 *den*

14. Packing material used shall be of best trade quality previously approved by the Inspecting Officer.

15. For DOS packing the store shall be packed as per details given in para ~~14~~ to form compact bale of gross ~~weight~~ of 37 Kg (82 lbs).

13 *mass*

16. If ordered for delivery to a local Inspection Depot the fabrics shall be delivered in firms returnable packs and after inspection acceptable supplies shall be packed by the Inspection Depot Authorities as given in para 13.

17. Before despatch, each bale shall be legibly and indelibly marked showing the following details :

- (a) Nomenclature & Cat. No. of the store.
- (b) Quantity packed in each bale
- (c) Serial No. of bale 1/40, 2/40, 3/40.....40/40
- (d) Month and year of packing
- (e) Name and trade mark of the manufacturer
- (f) Gross ~~weight~~ of the bale in Kg *mass*
- (g) Name and address of the consignee
- (h) Inspection Note No. and date.

PRE-INSPECTION

18. Before tendering the store to the Govt Inspector the supplier will carry out a thorough pre-inspection of each delivery to satisfy himself that the stores fully conform to this specification.

INSPECTION

- 19. (a) If, on examination material from any portion of a consignment is found not to be fully in accordance with this specification, the whole consignment is liable to be rejected.
- (b) If, on examination, of 20% of any delivery, 20% of those examined are found not to conform to this specification in any respect, the whole consignment may be rejected.
- (c) All pieces not fully in accordance with this specification shall be rejected.

AGRA CANTT
KANPUR.
DATED 28.1.76.

CHIEF INSPECTOR
CHIEF INSPECTORATE OF AERIAL DELIVERY EQUIPMENT
Tools & clothing

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28.1.76

Checked by
Tsingh
10/4/67

Note:-

Specifications in the IS series are held and issued by the Director, Indian Standard Institution, Manak Bhavan 9 Bahadur Shah Zafar Marg NEW DELHI or his regional office at BOMBAY, CALCUTTA, MADRAS DELHI and KANPUR.

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