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Provisional Specification
No. DMSRDE/T&G5/93/413 (b)

Cat/Part No - 8464 - 002863 (S/21)

Specification
for
CORD AVALANCHE

1. THIS SPECIFICATION CONSISTS OF FIVE PAGES.
 2. THIS SPECIFICATION IS INTENDED TO GUIDE PURCHASE INSPECTION AND MANUFACTURE OF CORD AVALANCHE AGAINST DEFENCE REQUIREMENT.
 3. THIS SPECIFICATION OR ANY OTHER INFORMATION ISSUED IN CONNECTION THEREWITH SHALL ONLY BE USED FOR SPECIFIC ORDER PLACED BY A COMPETENT AUTHORITY, IT IS NOT TO BE USED FOR ANY OTHER PURPOSE WHATSOEVER WITHOUT THE EXPRESS WRITTEN SANCTION OF THE APPROPRIATE AUTHORITY.
 4. ALL CLAUSES IN THIS SPECIFICATION SHALL BE COMPLIED WITH IN EVERY RESPECT, IRRESPECTIVE OF THE SOURCE OF SUPPLY OF THE MATERIAL.
 5. IN CASE OF ANY DISCREPANCY BETWEEN THIS SPECIFICATION AND SAMPLE LOANED FOR ANY PURPOSE, THIS SPECIFICATION ALONG WITH OTHER CONNECTED SPECIFICATIONS SHALL BE TAKEN AS CORRECT AT THE TIME OF FINALISATION OF A CONTRACT.
- WHEREVER A REFERENCE TO ANY OTHER SPECIFICATION OCCURS IN THIS SPECIFICATION, IT SHALL BE TAKEN AS A REFERENCE TO THE LATEST VERSION OF THAT SPECIFICATION EXISTING AT THE TIME OF FINALISATION OF A CONTRACT.

ISSUED BY

THE DIRECTOR
DEFENCE MATERIALS AND STORES
RESEARCH & DEVELOPMENT ESTABLISHMENT,
DMSRDE PO,
G T ROAD, KANPUR 208 013

Price : Rs. 500/-

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SCOPE

42 (4)

This specification covers the requirements of Cord Avalanche. The cord is intended to be used as an aid to trace the casualty in avalanche operation so that the rescue party could reach the location.

2. SEALED SAMPLE

2.1 The Cord shall conform in every respect to the terms of this specification. In workmanship, finish and in all other respects not defined in this specification, it shall conform to the sealed sample held in custody of controlling authority.

3. MATERIALS

3.1 The core ends of cord shall be made from continuous, 140 Tex (1260 d) nylon 6 or 66 multifilament yarn of adequate tenacity to give the desired strength and be given heat treatment. The sheath yarn shall be made from nylon (6 or 66) or polyester and shall be dyed with fluorescent dye. Count/ denier of the yarn can be varied suiting to the construction and finish of the cord.

4. MANUFACTURE, WORKMANSHIP AND FINISH

4.1 The cord shall be in braided construction with core. The core shall be in one continuous length and shall be well formed and free from knots, slubs or stains. All constituent yarns of cord shall have proper tension during manufacture so as to obtain uniform diameter with round cross section and appropriate flexibility.

4.2 There shall be 10 undyed core ends and 16 dyed spindle ends in sheath. Out of 16 spindles, 14 spindles shall be of fast bright yellow colour and 2 spindles of fast bright blue colour. In interlating of sheath, 2 spindles of blue colour shall be put adjacent to each other in group of spindles moving in the same direction in order to obtain required pattern of the braiding. The cord shall be smooth in feel and free from slackness of sheath and core looping-tendency.

4.3 The cord shall be tendered in 35 m of continuous length. A length of 3 m from any of the end shall be cut and tested for characteristics in clause 5 & 6 below in accordance with the sampling plan mentioned in para 9. In case lot is found acceptable, both the ends of the cord shall be heat sealed. The cords from which 3 m length has been cut for destructive testing shall be accepted in 32 m length and length of such cords shall be clearly mentioned by the supplier on the marking label attached indicating that 3 m length has been destroyed in testing.

4.4 In appearance, general workmanship, finish and in any other respects not defined in the specification, the cord shall match with the respective sealed sample held in the custody of controlling authority.

CONSTRUCTION PARTICULARS

5.1 The construction particulars of the cord shall be as under:

- i) Sheath
- a) Count - 1260 d x 1
 - b) No. of spindles - 16 (yellow-14), (blue-2)
- ii) Core
- a) Count - 1260 d x 2 (Twisted together)
 - b) No. of core ends - 10

5.2 The construction details of the cord may be varied to suit the manufacturing conditions provided the finish and requirements as given in clause 6 are successfully met.

6. TESTS

6.1 The cord shall satisfy the following tests.

Characteristics	Requirements	Method of tests
i) Length (m)	35 ± 0.5	Clause A6 of IS: 6590
ii) Diameter (mm)	3.2 ± 0.1	Clause A4 of IS: 6590
iii) Linear density (mass/m) (g)	7 ± 0.2	Clause A3 of IS: 6590
iv) No. of plait per dm	90 ± 5	Appendix A of IS: 4227
v) Breaking strength (N) (15 cm between grips)	1700 - 2%	Clause A5 of IS: 6590
vi) Dye fastness (to washing)	Rating 4 or better	IS: 687
vii) Deg. of fluorescence	Shall be comparable to sealed sample when examined under uv lamp	
viii) Nature of Fibre		
a) Core	Polyamide	IS: 667
b) Sheath ends	Polyamide or Polyester	IS: 667

7. MARKING

7.1 Each cord if found acceptable on inspection shall be attached with a white cloth label marked with the supplier's name, initials or recognised trade mark; year of manufacture, nomenclature and catalogue number of the store using suitable ink duly approved by the Inspector with not less than 2 mm character.

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8. PRE INSPECTION

8.1 - Before tendering the stores to the Government Inspector, the supplier will carry out a thorough check/pre-inspection of each delivery to satisfy himself that the store fully conform to this specification. In case the pre-inspection is unsatisfactory, the store may be rejected outright by Inspector.

9. SAMPLING AND CRITERIA FOR CONFORMITY

- 9.1 The quantity of store offered against one despatch note shall constitute a lot.
- 9.2 The conformity of a lot to the requirements of the standard shall be determined on the basis of tests carried out on the sample selected from the lot.
- 9.3 The number of cords to be selected at-random for tests shall be in conformity with the table given below:-

Lot size	Visual inspection		Destructive tests	
	Sample size	Acceptance No.	Sample size	Acceptance No.
Upto 50	8	0	3	0
51 to 100	20	1	5	0
101 to 150	20	1	5	0
151 to 300	32	2	13	1
301 to 500	50	3	13	1
501 to 1000	80	5	13	1
1001 to 3000	125	7	13	1
3001 to 10000	200	10	20	2

10. CRITERIA OF CONFORMITY OF BULK SAMPLE

10.1 Samples when tested for physical and chemical tests as per relevant specifications shall conform to stipulated standard as per table under 9.3.

11. BULK INSPECTION

The lot when examined for visual inspection as per clause 9.3 shall conform to the requirements given therein.

12. PACKING

12.1 Each cord shall be neatly rolled on a bobbin of LDPE/HDPE of size 7 cm disc dia x 11 cm connecting tube of suitable dia. A layer of polyethylene film of 0.08 mm gauge (conforming to IS: 2508) shall be wrapped over rolled cord on bobbin. 100 nos of such cord shall be placed in a rectangular corrugated fibre board boxes, moisture resistance (triple wall) 7 ply type 'B' conforming to Prov. specification No. DMSRDE/SSP/95/429(b) of size 500 mm x 360 mm x 340 mm to make a complete pack. The box shall then be closed and sealed to the satisfaction of the inspecting officer.

- Before despatch, each complete box shall be legibly and indelibly marked with marking ink previously approved by the Inspector showing the following details.
- i) Nomenclature and Cat. No. of the store
 - ii) Quantity packed in the bale
 - iii) Lot and serial No. of the bale
 - iv) Month and year of packing
 - v) Name and trade mark of the manufacturer.
 - vi) Gross weight of the bale in Kg
 - vii) Name and address of the consignee
 - viii) Inspection Note No. and date.
 - ix) A/T/ Extract no. and date.

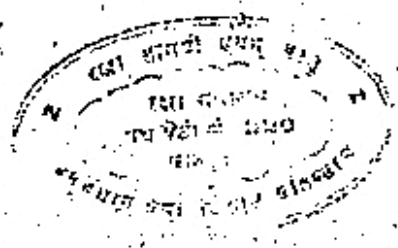
12.3 The box shall finally be strapped by using HDPE straps two each along length and width side having a distance between one third to one fourth from ends of the box.

13. WARRANTY CLAUSE

13.1 The store supplied against any order shall be deemed to bear a warranty of the supplier against defective materials, workmanship and performance for a period of one year from the date of receipt of the store at consignee's end. If during this period, the stores supplied are found by the consignee to be so defective, the same shall be replaced immediately with serviceable stores without any charges or cost.

Station :KANPUR

DATED : 13.05.03



(Signature)
(R.C. Sahu)

for DIRECTOR
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