

QRs/Specification of Tactical Shoes for VIP security

Description:

Type of Footwear	:	Tactical Shoe for VIP Security personnel
Design	:	"C" Combat Boot conforming to 15298 (Part-4): 2017 or latest standard.
Colour	:	Black or decided by Consignee.
Size	:	5-12 UK Size Fitting.

General Information:

1. The boot should be light weight made of water-repellent leather and textile of PU coated nylon fabric of 1000 Denier. The mass of one pair shoe should not exceed 1500 gram per pair.
2. The Boot shall be manufactured with cleated rubber out sole with anti-slip design and Phylon as a mid-sole using broad toe last. The rubber outsole should be extended to the tip of toe and Shall be stitched.
3. Outside Counter shall be protected by TPU patch stitched with upper. The colour of patch should be as per colour of upper.
4. Additionally, appropriate Zip is attached in Inside of Boot. The Boot shall be so designed that when Boots are worn the runner of the Zip shall be suitably secured with leather strip.
5. A jug loop should be provided of width 25.0 ± 1.0 mm made up of same upper leather.
6. Picture of Combat Boot (Tactical Shoe) for reference purpose only.

Specification: -

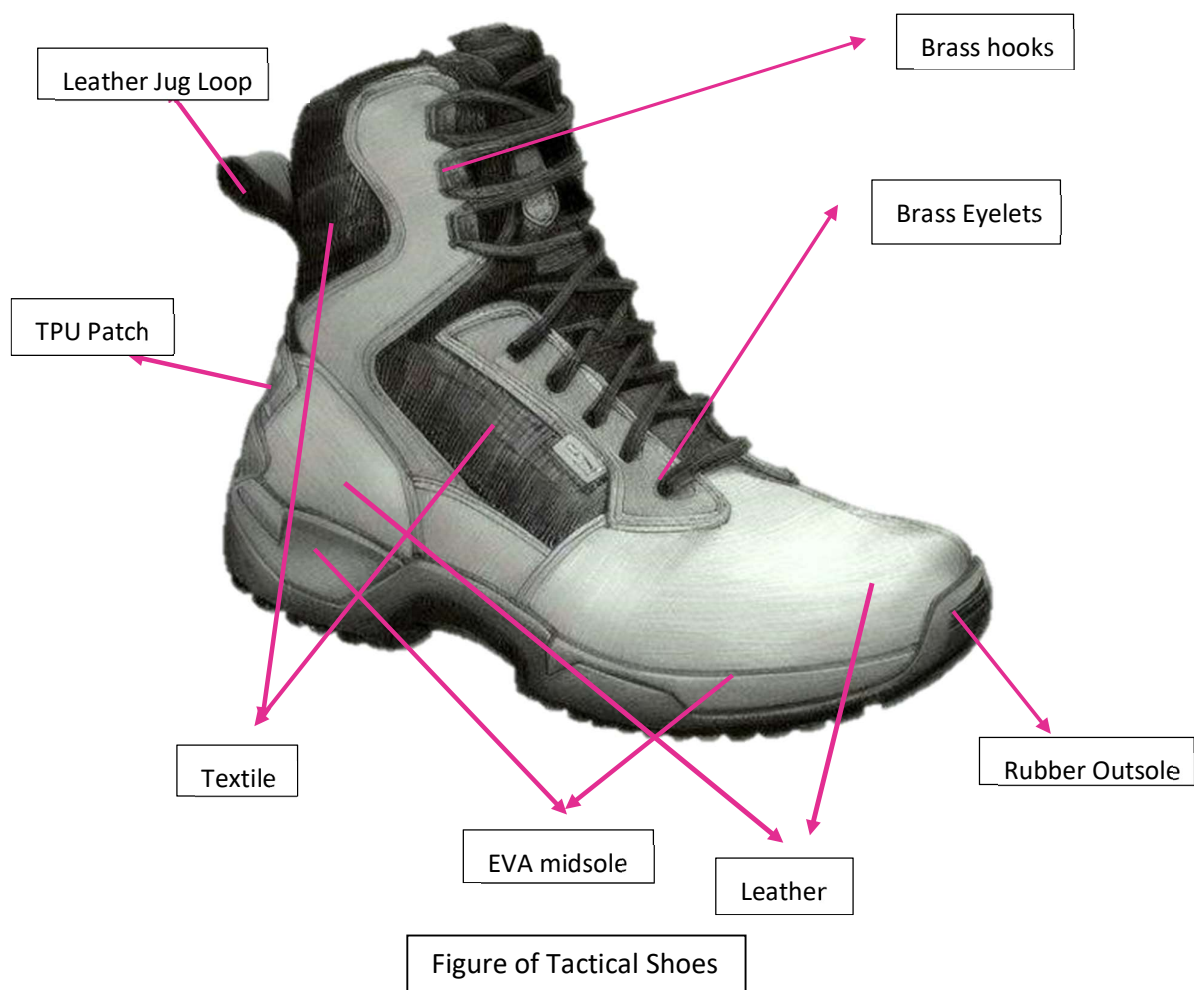
Sl. No.	Item	Description	Test requirement (As per IS-1598:2017, Part4)
1.	Type	Design C Combat Boot (Tactical Shoe)	
2.	Construction	Cemented Construction	
3.	Upper Leather	Plain corrected grain (CG) leather of thickness 1.8 mm $\pm$ 0.2 mm. Split leather should not be used in upper	1. Tear Strength should not be less than 120 N. 2. Tensile Strength should not be less than 15 N/mm². 3. Water Vapour Permeability should not be less than 0.8 mg/cm²-h and Water Vapour Coefficient should not be less than 15 mg/cm². 4. Leather Should be resistant to penetration and Absorption of water as per IS 15298 (Part-4) 2017.

4.	Tongue	Full Bellow type padded tongue of PU coated nylon fabric of 1000 Denier Material with 8 mm (min.) foam thickness.	Tear Strength should not be less than 18 N
5.	Collar	Padded Collar of PU coated nylon fabric of 1000 Denier material for Ankle support with 14 mm (min.) foam thickness	1. Tear Strength should not be less than 15 N. 2. Martindale Abrasion: Dry condition: 25600 cycles min. Wet Condition: 12800 cycles, min.
6.	Vamp Lining	Vamp to be made of non-woven material GSM: 240 min	1. Tear Strength should not be less than 15 N. 2. Martindale Abrasion: Dry condition: 25600 cycles min. Wet Condition: 12800 cycles, min.
7.	Quarter and Tongue Lining	Breathable Textile Functional Lining with PU foam of thickness 3 mm. GSM: 150 mm, Colour of lining should as per colour of upper.	1. Tear Strength should not be less than 15 N. 2. Martindale Abrasion: Dry condition: 25600 cycles min. Wet Condition: 12800 cycles, min.
8.	In- Socks	Min 3.0 mm thick at fore part and 8 mm at Heel moulded PU In-socks laminated with non-woven fabric.	1. Martindale Abrasion: Dry condition: 25600 cycles, min. Wet condition: 12800 cycles, min.
9.	Insole	Cellulose Insole board Sheet, Minimum Thickness of 1.75 mm	1. Insole Abrasion Resistance — 400 cycles, min. 2. Water Absorption (70 mg/cm ² , min.) and Desorption (80%, min.)
10.	Sole	Unit Sole Cleat Height: 2.5 mm Minimum Heel Height: 30 mm Minimum Front Height: 20 Minimum When measured from outside of finished Boot.	1. Sole Thickness 2. Tear Strength 3. Abrasion 4. Flexing 5. Interlayer bond strength
11.	Height of Upper	Height of Upper should be as per IS-15298 (Design -C).	

12.	Lace	Round Nylon lace of Min 160 cm in length	1. Breaking strength: 400 N minimum 2. Tag strength: 140 N minimum When tested as per IS 15844, Part -1 : 2023
13.	Eyelet/ Hook	5 sets of Eyelet and 3 set of Hook on each quarter facing.	
14.	Toe puff/ Counter	Heat activated Thermoplastic Sheet of Minimum thickness of 1.4 mm.	
15.	Thread	Upper should be stitched with Nylon thread. Double stitching shall be done and the colour of thread shall be match with colour of upper test requirement as per IS 15298 (Part 4): 2017 (latest amendments)	
16.	Other Tests for Complete Footwear		1. Bond Strength (Upper to Outsole) 2. Slip Resistance (SRA) 3. Water Resistance 4. Energy Absorption
17.	Certification	Manufacturer should submit test certificate from Central Leather Research Institute (CLRI), Chennai or Footwear Design and Development Institute (FDDI), Noida	
18.	Warranty	One year form the date of acceptance of lot. Vendor will replace safety shoes if any defect is noticed in the footwear during one year. Vendor shall give confirmation on letter head along with tender documents for the same.	

19.	Marking	Month/Year of manufacturing shall be marked on sole and ISI marked as per IS:15298 (Part-4):2017 on tongue.	
20.	Packing	One shoe box with 10 pair of shoes in the corrugated carton with lamination to protect water ingress.	
21.	Size	Size 5 to 12	
22.	Inspection, Testing and performance parameters:		
a.	Inspection Requirement (as per IS-17012) to ensure quality:		
	Inspection of Finished Product: Visual Defects, Finish and Dimensions.	All finished Boot Pairs shall be examined visually for surface defects, finish and dimensions. Only those shoes pairs. Which are satisfactory in all respects, shall be considered acceptable. Vendor shall submit test certificate in support of the supplied in support of the supplied shoes meeting the test requirements as per IS-15298 (Part 4) :2017 (latest amendments)	
b.	Lab Test		
	Lab test to Ensure the quality	Samples from each lot will be picked up as per IS-17012 and will be tested at FDDI, Noida. The Payment of the lot will be released only after getting the satisfactory report from FDDI, Noida.	
c.	Inspection before dispatch of lot	Vendor shall arrange to carry out inspection with FDDI at their location before dispatch.	

23.	Performance Guarantee	The Boot shall be guaranteed against any manufacturing defect for period of 12 months form the dated of acceptance of lot. In case of any shoe found with manufacturing defects, shall be replaced by the vendor without any extra cost to consignee within one month of defect reporting date	
-----	-----------------------	--	--



PART – V
SPECIFICATION OF TIE FOR VIP SECURITY (VS)
UNITS OF CRPF

1. SCOPE

- i The specification prescribes the requirement of “TIE” for VS Units of CRPF herein referred as “TIE”.
- ii In addition to specification of fabric this QR gives a brief description of design/pattern of “TIE”.

2. REFERENCES

The standards listed in “Annexure-A” contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in “Annexure-A”.

3. PROCESSING AND MANUFACTURE

3.1 ABOUT FABRIC

- i The fabric shall have uniform blend of 100% of Polyester. The fabric shall be ‘Heat set’ and fully shrunk. The blend composition of the cloth shall conform to the requirements given in “Table-I”.
- ii The fabric used for making Tie for VS Units of CRPF shall be in conformity to all the attributes specifically mentioned in “Table-I”.

3.2 COLOUR - Navy Blue with stripes and a VS Wing Logo.

3.3 STANDARD PATTERN AND DESIGN

- a) The Tie shall be manufactured in the shape and design as illustrated in the figure (i) below –



Figure-(i)

- b) Besides having stripes and a VS Logo as well as the aforesaid details, following pattern/design shall also be ensured-
- Colour of Tie- Navy Blue with Multi-Coloured stripes containing Sky Blue, White and Red.
 - Width of Stripes- 1.5 Cm
 - Distance between the Stripes- 1-3/4 Inch
- Length and width of Tie- 64 inch in length and 3.5 inch width near blade.
- Marking on Tie- CRPF (VS) on left side of the blade

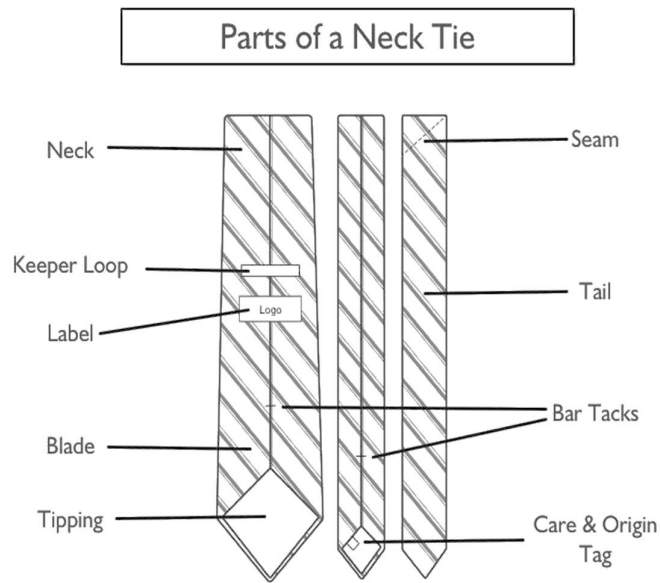


Figure – (ii)

- **BLADE / NECK / TAIL** - The Blade, Neck and Tail (as illustrated in figure – (ii)) of the Tie shall have smooth finishing of the fabric mentioned in Table – I.
- **KEEPER LOOP** - The Keeper Loop of the Tie shall be attached to the back of the blade appropriately as shown in figure – (ii).
- **TIPPING** - Tipping is the fabric that is sewn onto the backside of the tip and tail of the Tie. The fabric used for tipping shall be the same as used for manufacturing the Tie. (refer figure – (ii)).
- **SHELL** - The Shell also known as the “envelope”, because it is the outermost material of the necktie. The Shell shall maintain the overall shape of the tie itself. The fabric of the shell shall be cut “on the bias” (45 degrees to its warp and weft threads).
- **CARE AND ORIGIN TAG** - The care and origin tag of the Tie shall contain details and information about the Tie which shall include materials used and specific care instructions.
- **SEAM** - The Seam of the Tie shall be such that it should not be visible when a knot is made.
- **BAR TACKS** - The bar tacks of the Tie must have heavy stitch at the back of the tie that helps in holding the two folded sides together. It must be able to maintain the tie’s shape.

3.4 SIZE

As per buyer requirements mentioned in contract documents.

4. WORKMANSHIP AND FINISH

The “Tie” shall be free from workmanship defects or any other defect which may significantly affect the appearance or serviceability of “Tie”.

5. DEFECT

A failure or fault such that the product does not satisfy specified physical or chemical requirement, or performance characteristics. It also includes any irregularity in material, workmanship, or damage due to careless and inadequate packing.

6. QUALITY ASSURANCE

- 6.1 On examination of random samples taken from any portion of the consignment or during surveillance inspection shall conform to the requirement when tested in accordance with the method mentioned against each in the specification.
- 6.2 The store should be of the latest manufacture, conforming to the current production standard and having 100% defined life at the time of delivery.

7. SAMPLING AND CRITERIA FOR CONFORMITY

- 7.1 The number of pieces to be selected at random from a lot for inspection to ensure randomness of selection, procedure given in IS: 4905 shall be followed.
- 7.2 The number of samples of Tie delivered to a buyer against a dispatch shall constitute a lot. The conformity of a lot to the requirements of this specification shall be determined on the basis of the tests carried out on the samples selected from the lot.
- 7.3 The criterion for conformity shall have the characteristics of (i) Visual inspection for freedom from major flaws (ii) Weight, length and width (iii) Blend composition, shrinkage, breaking strength, tearing strength, colour fastness, pH etc. (iv) Finishing and all specimens shall satisfy the relevant requirement.

8. MARKING

Marking shall include –

- (a) Name of the textile material.
- (b) Blend composition.
- (c) Variety of silk.
- (d) Batch number and date of manufacture for traceability.
- (e) Indication of the source of manufacture.
- (f) Care labelling symbols as per IS 14452 depending upon end use.
- (g) Any other information as required under law.

9. PACKAGING & PACKING

The Tie shall be packed as required by the buyer.

Table I : Requirements for Tie

Sl. No.	Test Parameters	Test Method	Unit	Requirements	
1.	Thread Density , Minimum	IS 1963 : 1981 (RA 2018)	-	700 430	
	- Ends/dm - Picks/dm				
2.	Mass , Maximum	IS 1964 : 2001 (RA 2022) Method A	g/m ²	130	
3.	Blend Composition (Outer Fabric)	IS 667:1981 (RA 2022) & IS 3416:1988 (RA 2022) Based on dry mass	%	Polyester 100%	
4.	Colour fastness to Light , Minimum	IS/ISO 105-B02:2014 Exposure Cycle A1 (RA 2022) (Superseding IS 2454:1985)	Rating	5 (On Blue wool)	
5.	Colour fastness to Washing , Minimum	IS/ISO 105 C10: 2006 A (1) (RA 2021)			
	- Change in Colour			4	
	- Staining on Wool			4	
	- Staining on Acrylic			4	
	- Staining on Polyester			4	
	- Staining on Nylon			4	
	- Staining on Cotton			4	
6.	Staining on Acetate	IS/ISO 105 E04: 2013 (Superseding IS 971:1983)	Grade	Acidic	Alkaline
	- Change in Colour			4	4
	- Staining on Wool			4	4
	- Staining on Acrylic			4	4
	- Staining on Polyester			4	4
	- Staining on Nylon			4	4
	- Staining on Cotton			4	4
	- Staining on Acetate			4	4
7.	Count of Yarn (for guidance)	IS 3442 : 2023	Ne		
	-Warp -Weft			100 100	

8.	Crease Recovery Angle, Minimum (warp + weft)	IS 4681 : 1981 (RA 2018)	Degree	250
9.	Composition Backing material	IS 667:1981 (RA 2022)	%	100% Polyester
10.	Mass of Backing material	As per guidance of IS 1964 : 2001 (RA 2022) Method A	g/m ²	80±3
11.	Composition of Interlining Material	IS 667:1981 (RA 2022)	%	100% Polyester
12.	Mass of Interlining material	As per guidance of IS 1964 : 2001 (RA 2022) Method A	g/m ²	400±10

Table 2: Specification of colour of Tie
(Guideline of AATCC Test Method 173 : 2015 & AATCC Evaluation
Procedure-7:2015)

Colour	:	Blue						
System	:	CIE LCH						
Illuminant Observer	:	D-65						
Standard Observer	:	10 Degree						
Tristimulus Values	:	<table border="1"> <tr> <th>X</th><th>Y</th><th>Z</th></tr> <tr> <td>3.093</td><td>3.107</td><td>5.273</td></tr> </table>	X	Y	Z	3.093	3.107	5.273
X	Y	Z						
3.093	3.107	5.273						
LCH	:	<table border="1"> <tr> <th>L</th><th>C</th><th>H</th></tr> <tr> <td>20.468</td><td>10.699</td><td>284.045</td></tr> </table>	L	C	H	20.468	10.699	284.045
L	C	H						
20.468	10.699	284.045						
CMC (l:c)	:	2:1						
Colour Difference, ΔE_{cmc}	:	≤ 1.2						

Interpretation of Results :

- i) If ΔE_{cmc} is less than or equal to 1.2, then the sample is acceptable.
- ii) If ΔE_{cmc} is greater than 1.2, the 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 the 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.

ANNEXURE-A
LIST OF REFERRED STANDARDS

Sl. No	Standard Number	Title
01	IS 1963 : 1981 (RA 2018)	Methods for Determination of Threads per Unit Length in Woven.
02	IS 1964 : 2001 (RA 2022) Method A	Methods for Determination of Mass per Unit Length and Mass per Unit Area of Fabrics.
03	IS 667:1981 (RA 2022)	Methods for Identification of Textile Fibres.
04	IS 3416:1988 (RA 2022)	Method for quantitative chemical analysis of mixtures of polyester fibres with cotton or regenerated cellulose.
05	IS/ISO 105 C10: 2006	Textiles - tests for colour fastness, Part C10 colour fastness to washing with soap or soap and soda.
06	IS/ISO 105 E04: 2013	Textiles — Tests for Colour Fastness Part E04 Colour Fastness to perspiration.
07	IS 3442: 2023	Textiles Method for determination of crimp and linear density of yarn removed from fabric.
08	IS 4681 : 1981 (RA 2018)	Method for determination of recovery from creasing of textile fabrics by measuring the angle of recovery.