

## **‘EXPRESSION OF INTEREST’**

CRPF is in the process to revise the existing MHA approved QRs/Specification of “*Mosquito Net LLINs*” [MHA had approved the existing QRs/Specification of the item vide their letter No. 21011/02/2011-Prov-I-9651 dated 21/11/2014 for all CAPFs]. The draft revise QRs/Specification of this item is attached herewith.

The interested firms/parties dealing in subject matter are invited to submit their views/opinions on the draft revise QRs/ Specification of the item by **20/09/2017**.

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**Draft Revised QRs/Specification of Mosquito Net LLINs**

Vendors / Bidders are required to comply the technical parameters / specification as mentioned below and the bidders are not allowed to make any change in the minimum requirement as mentioned below. Such changes might disqualify your bid:-

<b>Sl. No.</b>	<b>Parameter</b>	<b>Specification</b>	<b>Test Method</b>
1	Requirement	LLINS offered shall be registered with Central Insecticide Board & Registration Committee (CIB & RC) of India under Insecticide Act-1968	-
2	Dimensions	The LLINs shall confirm to the following dimensions:- <b>Size</b> Length: 220±5 cms Width: 115±5 cms Height: 155±5 cms Weight : 600 gms/min. (exclusively of LLINs and excluding other fabric used for different purposes)	IS 1954  IS 1964 for weight
3	Additional Requirement	Yarn Count : Minimum 100 denier Mass in g/m <sup>2</sup> : <b>40 ±5%</b> . Bursting strength : HDPE } Polyester } 350 Kpa(min) Nylon } Mesh size : HDPE/ Polyester/Nylon- Each hole size shall not be larger than 2mm x2mm. ( minimum 156 holes per square inch or 25 holes per square cms.) Color : Khaki Wash resistance : Minimum 20 washes Shelf life : Minimum 3 years	<b>IS 7703 Part 1</b> IS 1964 <b>IS 1966 Part 1 or IS 1966 Part 2</b>  Appendix A of IS 1431  Visual  IS 15370:2005 method 5A followed by tumble dry delicate.  -
4	Manufacture and workmanship	(1) <b>Wall and Top:</b> The top shall be made from single piece of netting. The wall shall be made from one piece of netting and shall be closed with lapped seam and seam shall be at one of the corner. One edge of the netting of the wall shall be attached to the netting at the top by means of a plain seam.  (2) <b>Tying loops:</b> The LLINs shall be provided with cotton fabric stitched tying six loops having width of min. 38mm and mass per linear meter min. 16gm.	Visual

		<p>(3) <b>Reinforcement at top edge with Cotton fabric:</b> Cotton tape fabric used for reinforcing the top edge with side wall of netting shall have the width of min. 38mm and mass per linear meter min. 16gm.</p> <p>(4) All four corners of top of the net shall be diagonally (X) connected with Cotton fabric having width of min. 38mm and mass per linear meter min. 16gm.</p> <p>(5) <b>Stitching:</b> The net shall be made with lock stitch of even tension throughout loose ends securely fastened off. The numbers of stitches per decimeter shall be 30 to 38. The Stitching shall be made by using same fabric sewing thread of matching shade.</p> <p>(6) <b>Skirting at Bottom:</b> The Bottom edge of the walls shall be stitched with a strip of fabric (Polyester fabric material min. 100 GSM) of the same colour on the bottom inside edge sidewalls of Net. Finished width (Height) of the fabric should be 10±1 cm.</p>	
5	Treatment with Insecticides	<p>The LLINs shall be in the form of netting impregnated with anyone of the formulation as under:</p> <p><b>1. PERMETHRIN</b></p> <p>a. Active Insecticides test method- As per CIB &amp;RC registered method.</p> <p>b. Permethrin content: (Active ingredient content- 2% w/w)The Permethrin content shall be 20 gm/kg, the average content shall not differ from declared by more than±25%.</p> <p>c. Wash resistance index 1: The wash resistance index of Permethrin from netting shall be within the range of 97-100%.</p> <p><b>2. <u>ALPHA-CYPERMETHRIN</u></b></p> <p>a. Active Insecticide Test Method- As per CIB &amp;RC test method.</p> <p>b. Alpha-Cypermethrin content:</p> <p>c. (Active ingredient content 0.55% OR 0.67%)</p> <p>d. The Alpha-Cypermethrin content shall not differ from the content declared by ± 25%.</p> <p>e. Alpha-Cypermethrin retention index- 2: The retention index of Alpha-Cypermethrin from netting shall be within the range of 90-98%.</p>	

		<p><b>3. DELTAMETHRIN</b></p> <p>a. Active Insecticide Test Method-As per CIB &amp; RC test method.</p> <p>b. Deltamethrin content: (Active ingredient content 55mg/sqmetre)The Deltamethrin content shall be declared and the average content shall not differ from declared by more than<math>\pm 25\%</math>.</p> <p>[Subject to above chemicals are approved by Central Insecticide Board &amp; registration committee(CIB&amp;RC). A certificate issued by CIB&amp;RC in this regard will be produced/provided by the vendor and concerned department may also carry out verification of the same at own level.]</p>	
6	Identification of Insecticides after 20 washes	<p>-Permethrin -Alpha-cypermethrin -Deltamethrin</p>	Requirements given in Sl. No. 5 of QRs shall be maintained.Washing shall be as per IS:15370-2005 by tumble dry delicate.
7	Marking	<p>The following information shall be indelibly marked on cloth label securely stitched at any top corner of the set.</p> <p>a) Size of the net, namely overall length (cm), overall width (cm), overall height (cm)</p> <p>b) Name of Yarn of netting.</p> <p>c) Mesh size</p> <p>d) Month and year of Manufacture</p> <p>e) Any other information mentioned in Contract/ PO/ Statutory provisions</p> <p>The above information along with number of pieces shall also be printed/ Stenciled on each bale.</p>	Visual
8	Packing	Packing material including Label and Leaflets claims should be as approval given by <b>CIB &amp; RC</b> .	
9	Colour fastness to light	4 or better	IS:2454
10	Colour fastness to washing	4 or better	<b>IS/ISO 105 C-10 C(3) 60<sup>0</sup> C</b>

**SAMPLING AND CRITERIA FOR CONFORMITY FOR LLIN**

**Lot-** The quantity of LLIN of the same type, mesh and material delivered to a buyer against one dispatch note shall constitute a lot.

For assessing the conformity of the lot to the requirements of this QR, the samples as given in col 2 or col 3 or col 4 of the Table 1 shall be drawn at random from the lot.

**Table 1 Sample Size**

<b>Number of LLIN in the lot (1)</b>	<b>Sample Size (No. of LLIN) (2)</b>	<b>Sub-Sample Size (3)</b>	<b>Sub-Sub-Sample Size (4)</b>	<b>Acceptance Number (5)</b>
Up to 90	5	3	3	0
91-150	8	3	3	0
151-280	13	5	3	1
281-500	20	5	3	1
501 and above	32	5	5	2

A LLIN shall be considered defective, if it does not meet any of the requirements specified in this QR. The lot shall be declared as conforming to the requirements of this QR, if the conditions given in Table 2 are complied.

**Table 2 Criteria for Conformity**

<b>SI No.</b>	<b>Characteristic</b>	<b>Sample Size</b>	<b>Criteria for conformity</b>
1	Dimensions, weight, yarn count, mass, mesh, colour, manufacture and workmanship, Marking, packing	According to col 2 of Table 1	Permissible number of defective LLIN shall not exceed the corresponding number given in col 5 of Table 1
2	Bursting strength, colour fastness to light, Colour fastness to washing	According to col 3 of Table 1	All the samples shall conform to the relevant requirements.
3	For all other requirements of LLIN specified in QR	According to col 4 of Table 1	All the samples shall conform to the relevant requirements.