

National Vector Borne Disease Control Programme
Directorate General of Health Services,
Ministry of Health & Family Welfare,
Govt. of India

10.07.2024

Technical Specifications for Long Lasting Insecticidal Nets

Long Lasting Insecticidal Nets (LLINs) must be registered in India with Central Insecticide Board & Registration Committee (CIB & RC) under Insecticide Act, 1968.

1. Dimensions

The LLINs shall confirm to the following dimensions: -

LLIN	Length	Width	Height
Size I	180±5cm	100±4cm	150±5cm
Size II	180±5cm	130±5cm	150±5cm
Size III	180±5cm	160±5cm	150±5cm
Size IV	180±5cm	190±5cm	150±5cm
Size V	180±5cm	210±5cm	150±5cm

2. Other Specifications for netting:

(2.1). Physical

- Netting weight (Gram per square meter): 40-60
- Denier : 100-150
- Bursting strength : Minimum 350 kPa
- Number of holes : Minimum 8 holes per sq. cm / 50 holes per sq. inch
- Colour : Pink/Yellow/Blue/Khaki/White/Green
- Fabric/Fiber : As declared in registration certificate granted by CIB & RC

(2.2). Biological efficacy

- Laboratory : As per Registration Certificate granted by CIB & RC.
- Field use : As per Registration Certificate granted by CIB & RC.

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(2.3). Dimensional Stability of netting to Washing: Not more than 5% shrinkage/ expansion in both directions.

(2.4). Flammability: Non-inflammable as per IS 11871-1986 (Reaffirmed year: 2018)/ EN 1102:2016 / CIPAC 16-CFR 1610.

(2.5). Storage Stability: The insecticide content in the LLINs should not be less than 95% of the active ingredient as per original product claim after storage at 54 ± 2 degree centigrade for two weeks for Alpha-cypermethrin/ Permethrin-based nets; and 40 ± 2 degree centigrade for eight weeks for Deltamethrin based nets.

(2.6). Active Ingredient content: As per Registration Certificate granted by CIB & RC.

3. Manufacture and Workmanship:

a. Wall and Top

The top shall be made from single piece of netting for all sizes of mosquito nets. Preferably, the walls shall be made from one piece of netting and shall be closed with lapped seam and the seam shall be at the corners only. In case the walls are made from two pieces (only), the seams shall only be at the diagonally opposite corners. One edge of the netting of the wall shall be attached to the netting at the top by means of a plain seam.

b. Tying loops

The nets shall be provided with same fabric stitched tying loops, four in size-I, six in size II & III and eight in size IV & V of LLINs. The loop shall be 15 mm wide and 15 cm long and shall be made of same fabric as of the wall and top.

a. Stitching

The nets shall be made with lock stitch of even tension throughout, and loose ends securely fastened off. The number of stitches per decimeter shall be 30 to 38. The stitching shall be made by using polyester multifilament sewing thread of matching shade.

4. Marking:

- a. Standard Mark: The LLINs shall bear the Standard Mark in permanent ink- "CIB & RC - Registered" and "NVBDCP Supply- Not for Sale" either machine printed or tagged on the top of two opposite sides of the net. In case of tags (2 numbers) the size of the tags should be 10X15 cm, placed on the top seam of the net. In case of machine print, the print shall be done in a continuing process/running all along the sides of the net, 10 cm below the top edge.

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b. **Marking on Cloth Label:** The following information shall be indelibly marked on cloth label securely stitched at any top corner of the net:

1. Manufacturer Name
2. CIB & RC Registration Number
3. NVBDCP Logo
4. Size of the net namely length (cm), width (cm), height (cm)
5. Name of fiber/fabric of netting
6. Active Ingredient Content
7. Batch number and month & year of Manufacturing
8. Fabric care symbols
9. Any other information mentioned in Contract/PO/Statutory provisions.

c. **Marking on Primary Packing:** The following information shall be printed on primary packing:

- i. Information at point "a"
- ii. Other information and instructions as per Registration Certificate granted by CIB & RC.
- iii. Any other information mentioned in Contract/PO/Statutory Provisions.

d. **Marking on Bale:** Information at point "a" along with number of pieces shall also be printed/stencilled on each bale. Manufacturer must abide by the norms of CIB & RC.

5. **Packing:**

- a. LLIN should be packed as per CIB & RC prescribed norms on packaging as mentioned in the registration certificate of the product.
- b. Each net shall be provided with one pictorial guidelines on single A4 size sheet highlighting DO's and DON'T's (two different languages on each side of A4 size sheet) for community awareness on usage of LLINs. The guidelines are to be kept inside of each individual LLIN packing.

6. **Sampling of LLINs**

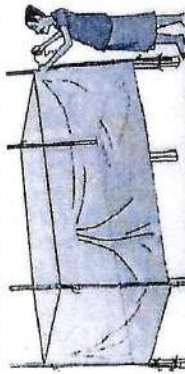
- Sampling of LLINs for testing as per ISO 2859-1 as amended from time to time with inspection level -1.
- Acceptable Quality Level (AQL) shall be, for major defect as per 2.5 and minor defect 4.0.

Note: These specifications are wide and generic and not specific to any particular manufacturer or vendor or supplier.

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- Yasin
- 3/5
- Manoj
- Manoj
- Kuldeep
- 30/7/24
- M. Lal
- 30/7/24
- Admeskaray

Do's/ क्या करें?

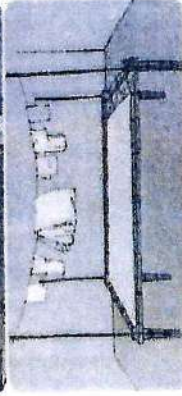


While sleeping inside or outside the house, always use a long lasting insecticide-treated net.

घर के अन्दर अथवा बाहर सोते समय हमेशा कीटनाशक उपचारित (दवा वाली) मच्छरदानी का इस्तेमाल करें।



Keep the four strings of the net properly tied and tuck its bottom edge under the mattress or mat. मच्छरदानी के चारों कीनों की रस्सी को अच्छी तरह से बांध कर रखें और इसके निचले हिस्से को गद्दे या चटाई के नीचे दबा दें।



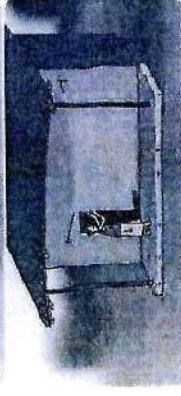
After use, fold properly and keep in a clean place.

इस्तेमाल के बाद कीटनाशक उपचारित मच्छरदानी को ठीक से तह लगाकर साफ स्थान पर रखें।



When the net gets dirty, gently scrub and wash with clean water.

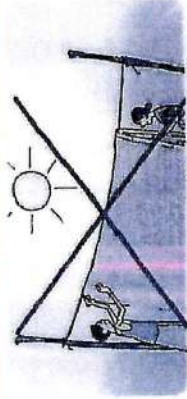
गंदा होने पर कीटनाशक उपचारित मच्छरदानी को सादे और साफ पानी में हल्का रगड़ कर धोयें।



After a gentle wash, dry the net in shade. (Most efficacious up to 20 washes)

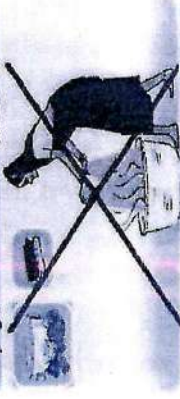
हल्का धोने के बाद इसे छाँव में सुखायें। (20 धुलाई तक सर्वाधिक प्रभावकारी)

Don'ts/ क्या न करें?



When drying, do not expose long lasting insecticide-treated net to sunlight.

कीटनाशक उपचारित मच्छरदानी को धूप में न सुखाएं।



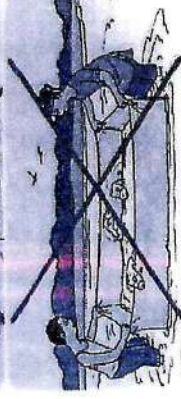
Do not use hot water or brush while washing the net.

कीटनाशक उपचारित मच्छरदानी को धूप में न सुखाएं।



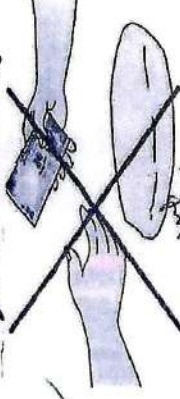
To wash, do not beat the net against a rock. Do not wring after washing.

इसे धोने के लिए पत्थर पर न पटकें। धोने के बाद न निचोड़ें।



Do not use the net for fishing.

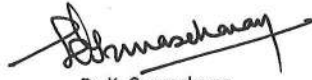
कीटनाशक उपचारित मच्छरदानी का उपयोग मछली पकड़ने के लिए न करें।




Do not sell or gift the net.


कीटनाशक उपचारित मच्छरदानी को न बेचें और न उपहार में दें।

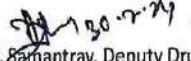
Technical Specifications of LLINs amended on 10.07.2024

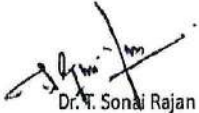

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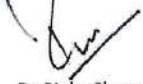

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- Joint Secretary (VBD)/ Deputy Secretary (VBD) and Dr. Kalpana Baruah, Sr. consultant, NCVBDC were members of Technical Specification Committee but could not attend the meeting.

