Textile – Specification for mosquito nets: Part 1: Nets made from 100 % Polyester yarn
Foreword
This Draft Tanzania Standard specifies the requirements of two types of mosquito nets made out of 100 % polyester yarn.

Mosquito nets which are available in the market can be categorized according to their sizes. In determining the quality of this widely used customer item, more emphasis should be given not only to the netting fabric but also to stitching and other attachments. In that case shape, size and dimensions are very important. This Draft Tanzania Standard which outlines requirements for manufacture and workmanship of mosquito nets will guide the manufacturer and protect the buyer.

In the preparation of this Draft Tanzania Standard the valuable assistance derived from the following organizations are gratefully acknowledged.

WHO approved specifications, published by World Health Organization.
Company standards from local manufacturers.
1. **SCOPE**

This Draft Tanzania Standard prescribes the requirements of two types of mosquito nets namely rectangular mosquito nets and circular or conical shaped mosquito nets. These may be bleached or dyed as specified in the contract or order.

2. **NORMATIVE REFERENCES**

The following referenced documents are indispensable for the application of this Draft Tanzania Standard.

   TZS 21, Textiles – Determination of mass per unit length and per unit area of knitted or woven fabric
   TZS 26, Textiles – Determination of conductivity, pH, water soluble matter, chloride and sulphate in aqueous extracts
   TZS 40, Textiles – Determination of colour fastness – colour fastness to daylight
   TZS 44, Textiles – Determination of length and width of fabrics
   TZS 139, Textiles – Determination of linear density of yarn removed from fabric free from added matter
   TZS 137, Textiles – Determination of dimensional change of woven and knitted fabric and garments – machine method
   TZS 167, Textiles – Determination of colour fastness – colour fastness to washing – Test 3
   TZS 265, Test method for testing strength of yarn from packages

3. **REQUIREMENTS**

3.1 **Manufacture**

3.2 **Fabric**

3.2.1 **Netting**

The fabric used for the manufacture of mosquito nets shall conform to constructional and performance requirements prescribed in table 1.

3.2.2 **Top and other attachments**

The fabric used for the top of the mosquito nets and other parts such as bands, frills tying tapes etc. and which may be used to decorate, reinforce and strengthen the net shall be made from finished cotton or 65/35 polyester cotton/rayon fabric having a mass not less than 120 g/m². The colour of the fabric shall match with the colour of the netting.

3.3 **Defects**

The mosquito nets shall be free from defective holes having diameter more than the normal hole size of the netting), stitching defects, stains and observable defects.

3.4 **The colour**

The fabric shall be in white or any colour which is agreeable between the purchaser and supplier.

3.5 **Sizes and dimensions**

3.5.1 The mosquito net shall be of any of the following sizes:

   a) Small
   b) medium
c) large
d) extra large

3.5.2 The dimensions of the mosquito nets shall be as given in table 2 unless otherwise specified in the agreement reached between the purchaser and the supplier.

3.6 Colour fastness
The colour fastness of mosquito netting and attachments shall conform to the requirements given in Table 3.

3.7 pH value
The pH value of mosquito netting shall be between 6.0 and 8.5.

3.8 Dimensional change
The dimensional change of mosquito netting shall be not more than 5 %. The dimensional change of the fabric of the top attachment shall not be more than 2.5 %.

3.9 Workmanship
3.9.1 The mosquito net shall be rectangular or conical in shape unless otherwise agreed to between the supplier and the purchaser.

3.9.2 The body of the mosquito net shall be made of not less than four pieces assembled together to obtain the required shape of the mosquito net.

3.9.3 The top of the mosquito net which shall be in minimum of four equal pieces of fabric shall be stitched together so as to strengthen the top of the net. All assembling parts shall be reinforced with tapes of the same material.

3.9.4 The net shall be provided with suitable number of tying tapes (spreaders) of which the width is not less than 10 mm and fixed at the top at 8 places equally spaced to tie the net to the ring.

3.9.5 The top support ring shall be of any suitable material e.g. Copper coated rust proof, which has sufficient strength to withhold the net when it is hung at the required position.

3.9.6 A suspension ring made out of any suitable material and fixed to the upper centre of the top or any other suitable measures shall be provided to hang the net during its usage.

Table 1 – Requirements for polyester (multi-filament) mosquito netting (rectangular or conical shaped)

<table>
<thead>
<tr>
<th>S/NO.</th>
<th>Characteristic</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Material</td>
<td>100 % Polyester (multifilament) textured yarn</td>
</tr>
<tr>
<td>2</td>
<td>Linear density (den) (min)</td>
<td>75 denier or 100 denier</td>
</tr>
<tr>
<td>3</td>
<td>Mesh size (holes) (min)</td>
<td>156 per sq. in (25 per cm²)</td>
</tr>
<tr>
<td>4</td>
<td>Mass per unit area. G/m², min.</td>
<td>30 gm/m² for 75 deniers, 40 gm/m² for 100 denier</td>
</tr>
<tr>
<td>5</td>
<td>Bursting strength, Kpa (min)</td>
<td>220 Kpa for 75 denier, 250 Kpa for 100 denier</td>
</tr>
</tbody>
</table>
Table 2 – Sizes and dimensions of mosquito nets:
Rectangular

<table>
<thead>
<tr>
<th>Description</th>
<th>Width</th>
<th>Length</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double</td>
<td>130 cm</td>
<td>180 cm</td>
<td>150 cm</td>
</tr>
<tr>
<td>Family</td>
<td>180 cm</td>
<td>180 cm</td>
<td>150 cm</td>
</tr>
<tr>
<td>Large Family</td>
<td>190 cm</td>
<td>180 cm</td>
<td>150 cm</td>
</tr>
</tbody>
</table>

a) Conical

<table>
<thead>
<tr>
<th>Description</th>
<th>Circumference</th>
<th>Height</th>
<th>Roof(diameter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>185 cm</td>
<td>740 cm</td>
<td>56 cm</td>
</tr>
<tr>
<td>Medium</td>
<td>210 cm</td>
<td>900 cm</td>
<td>56 cm</td>
</tr>
<tr>
<td>Large</td>
<td>240 cm</td>
<td>1825 cm</td>
<td>65 cm</td>
</tr>
</tbody>
</table>

Note – The sizes and dimensions mentioned above are for guidance purposes only. They should not be considered as prime requirement of this specification.

Table 3 – Requirements for colour fastness

<table>
<thead>
<tr>
<th>S/no.</th>
<th>Colour fastness to:</th>
<th>Minimum Rating</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>a) daylight</td>
<td>4</td>
<td>TZS 40:1979</td>
</tr>
<tr>
<td>2.</td>
<td>b) washing</td>
<td>4</td>
<td>TZS 167:1979</td>
</tr>
</tbody>
</table>

4. PACKING AND MARKING

4.1 Packing

Each mosquito net shall be packed in a polythene bag

4.2 Marking

The following information shall be marked or labelled legibly and indelibly on each individual package:
   a) Name of the product
   b) Size of the net
   c) Name and address of the manufacturer
   d) Brand name if any
   e) Batch identification mark.
   f) Country of origin.

5. SAMPLING

5.1 Lot

In any consignment all the pieces of mosquito netting belonging to one batch of manufacture or supply shall constitute a lot.
5.2 Scale of sampling

5.2.1 Samples shall be tested from each lot for ascertaining its conformity to the requirements of this specification.

5.2.2 The number of pieces to be selected from a lot shall be in accordance with Table 4.

Table 4 – Scale of sampling

<table>
<thead>
<tr>
<th>No. of pieces in the lot</th>
<th>No. of pieces to be selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 8</td>
<td>2</td>
</tr>
<tr>
<td>9 to 15</td>
<td>3</td>
</tr>
<tr>
<td>16 to 25</td>
<td>4</td>
</tr>
<tr>
<td>26 to 50</td>
<td>5</td>
</tr>
<tr>
<td>51 and above</td>
<td>7</td>
</tr>
</tbody>
</table>
ANNEX A
Dimensions and manufacturing details of nets.

Figure 1: Rectangular mosquito net
Fig 2 Conical mosquito net.