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## Sheet, Tarpaulin 4mx6m, reinforcement bands

### Overview

Specifications	
Item code	1100000013
Unit weight	4.488kg - 5.44kg
Unit volume	0.00864m <sup>3</sup>

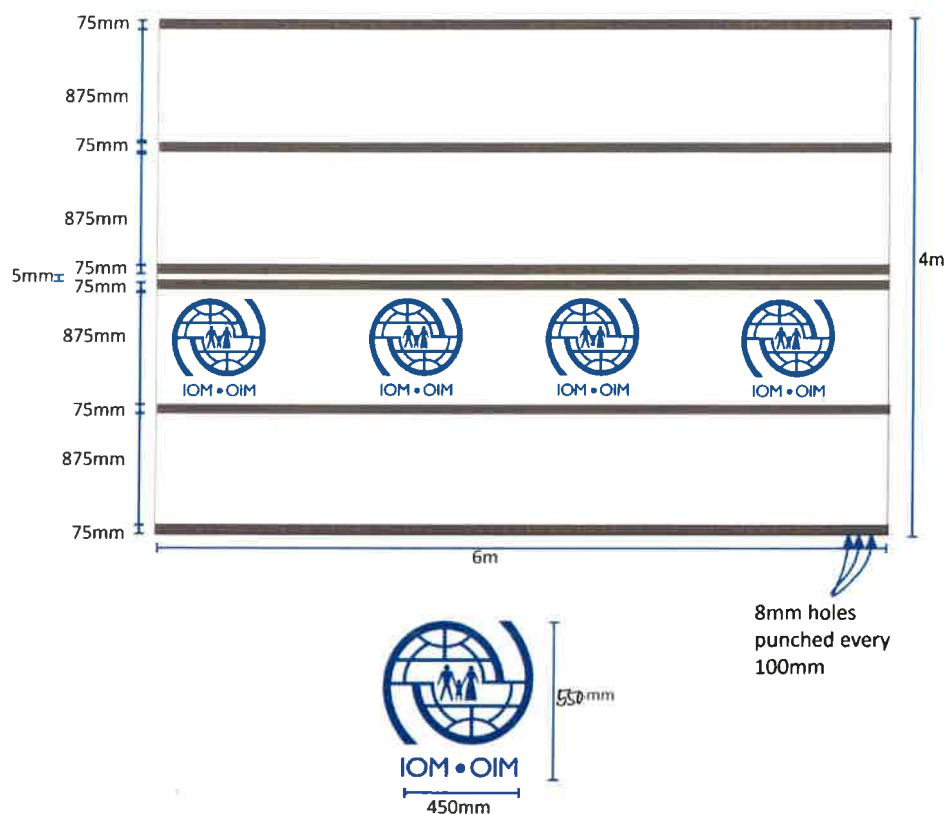
### Finishing

- Finish size: 4mx6m
- Reinforced bands along edges
- Pre-punched at 0.1m intervals. Further details below.

**Note:** In laboratory testing, this system has proven to be stronger than when eyelets are used.

## IOM logo size and placement

Colour: C100 M82 Y10 K2



## Description

### Notes

IOM has moved its standard specification to either rolls or 4mx6m sheets, with reinforcement bands and pre-punched holes, rather than eyelets. This specification is in line with ICRC/IFRC and is based on over fifteen years of laboratory testing and proven field experience.

For further information please visit [plastic-sheeting.org](http://plastic-sheeting.org) or contact [sheltersupport@iom.int](mailto:sheltersupport@iom.int). The current ICRC/IFRC standard specification detailed below is in line with the online catalogue: [procurement.ifrc.org/catalogue](http://procurement.ifrc.org/catalogue)

Plastic Sheeting Specifications: Summary of material requirements	
Material for the plain sheet	Woven high-density polyethylene (HDPE) black fibers fabric laminated on both sides with white low density polyethylene (LDPE) coating.

<b>Material for the reinforced attachment points (sheets)</b>	<p>6 bands of 7.5cm width made of woven black HDPE fibers fabric and coated with grey LDPE on the outside.</p> <p>Pre-punched 8mm holes on the 2 side bands at 0.1m +/-10% intervals, positioned in the center of the bands (only the reinforcement bands are pre-punched, not the tarpaulin itself).</p> <p>Position of the 6 bands and pre-punched holes as per drawing below. Side bands can be positioned at maximum 10mm from the edge. Dimension tolerance on the distance between two bands: +/-10mm</p>
<b>Tear strength in plain sheet at state of origin</b>	Minimum 100N under ISO 4674-1B 2003, with a test piece of 200x200mm as described in ISO 4674 annex B, in plain sheet
<b>Tensile strength in plain sheet at state of origin</b>	Minimum 500N and 15% to 35% elongation in warp and weft in plain sheet under ISO 1421-1.
<b>UV resistance of the plain sheet, measured as remaining tensile strength after UV exposure</b>	<p>The tarpaulin tensile strength under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB 313 nm peak) must be:</p> <ul style="list-style-type: none"> <li>- Minimum 80% of the original value of the actual product, AND not less than 475N;</li> <li>- Tested in the plain sheet.</li> </ul>
<b>Tensile strength in the reinforcement bands at state of origin</b>	Minimum 700N inside the reinforcement bands as per ISO 1421-1, pulling lengthwise in a pre-punched hole of 8mm with a hook of 8mm wire diameter. To test in 2 holes in each side bands.
<b>UV resistance of the reinforcement bands measured as remaining tensile strength after UV exposure</b>	<p>The reinforcement bands tensile strength under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB 313 nm peak) must be:</p> <ul style="list-style-type: none"> <li>- Minimum 80% of the original value of the actual product, AND not less than 665N;</li> <li>- To be tested inside the reinforcement bands as described above.</li> </ul>
<b>Welding number and strength at state of origin</b>	<p>Only one welding allowed, in the middle of the sheet, length wise. The tarpaulin tensile strength crossways at the place of the welding under ISO 1421-1 must be:</p> <ul style="list-style-type: none"> <li>- Minimum 50% of the original value of the actual product, AND not less than 400N.</li> </ul> <p>Size, weight, colour, fire resistance.</p>
<b>Width</b>	4 m ± 1% net width
<b>Length</b>	6m minimum net length
<b>Weight, plain sheet only, excluding the bands weight</b>	190g/m <sup>2</sup> ± 20g under ISO 3801 (equivalent to 170g/m <sup>2</sup> minimum to 210g/m <sup>2</sup> maximum)
<b>Weight, complete sheet including bands weight.</b>	<p>Plain sheet specific weight plus 10% additional weight for the reinforcement bands under ISO 3801.</p> <p>Total weight from 187g/m<sup>2</sup> minimum and 231g/m<sup>2</sup> maximum.</p> <p>Specific weight of the bands from 150g/m<sup>2</sup> minimum and 200g/m<sup>2</sup> maximum.</p>
<b>Flame retardant</b>	Not mandatory for the time being.

<b>Colour</b>	<p>White, sun reflective on both sides of the sheet. Grey coating on the outside of the bands. Inner black fibres to ensure opacity.</p> <p>White Coating colour definition:</p> <ul style="list-style-type: none"> <li>- L.a.b Coordinates under ISO 105J01</li> <li>- Minimum L: 82</li> <li>- "a" value between -1.7 and +1.5</li> <li>- "b" value between -4.5 and 0</li> </ul>
<b>Opacity</b>	<p>Minimum reflection and absorption percentage, measured under ISO 13468-1, in the range of visible light and near infrareds (respectively from 350 to 750nm, and from 750 to 2500nm wavelength).</p> <p>Minimum total reflection: 35%</p> <p>Maximum total reflexion: 50%</p> <p>Maximum total transmission : 5%</p>
<b>Printing</b>	<p>Continuous indelible printing in white colour of the manufacturer name, the month and year of production (Letters of 2.5cm high +/-10%). Length indicator marks every meter.</p>
<b>Bale Dimensions</b>	<p>Length: 600mm</p> <p>Width: 400mm</p> <p>Height: 180mm (+/-20%)</p> <p>There must be 5 tarpaulins per bale.</p>
<b>Bale Marking</b>	<p>As per indicated in contract.</p>
<b>Bale protection</b>	<p>The bale must be wrapped with a piece of similar material as the one of the tarpaulins.</p> <p>The wrapping must be properly folded, closely tight to the bale content, making a well-shaped cubic bale.</p> <p>Inside the bales the tarpaulins are not individually wrapped.</p>
<b>Bale strapping</b>	<p>The bale must be strapped with 2 heat-sealed plastic straps for the length and 2 for the cross.</p>
<b>Printing of IOM Logo</b>	<p>A line of six (6) IOM logos must be printed on one side of the sheet, across the six meter side, placed one meter from the bottom edge of the six-meter side. For IOM logo printing details, see the Logo placement guideline where size of logo is 45 cm wide and 55 cm height.</p> <p>The logo should be printed in PANTONE BLUE or CMYK. C = 100%, M = 82%, Y = 10%, K = 2%.</p>
<b>Packing Information</b>	<p>Marking on the package must indicate the following details:</p> <ol style="list-style-type: none"> <li>1. Indicate IOM Logo</li> <li>2. Item name and material code, IOM Plastic Sheets 1100000013.</li> <li>3. PO number and Quantity,</li> <li>4. Batch number and Manufacturing date</li> <li>5. Packing units: To be marked with consecutive numbers (i.e 1/20, 2/20...)</li> <li>6. Indicate Gross Weight and Dimension</li> </ol> <p>Do NOT include logo of the vendor. Marking must remain readable and well fixed on the box after minimum 10 handlings</p>

<b>Packaging Detail</b>	The items to be packed in Wooden EURO pallet (EUR 1) and fumigated as per ISPM 15 standard. Items must be shrink-wrapped, securely strapped and sealed. The packaged goods must not exceed the length and width of the pallet and clearly marked with IOM standard markings (packing details above) in both front and back.
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## Key Considerations

