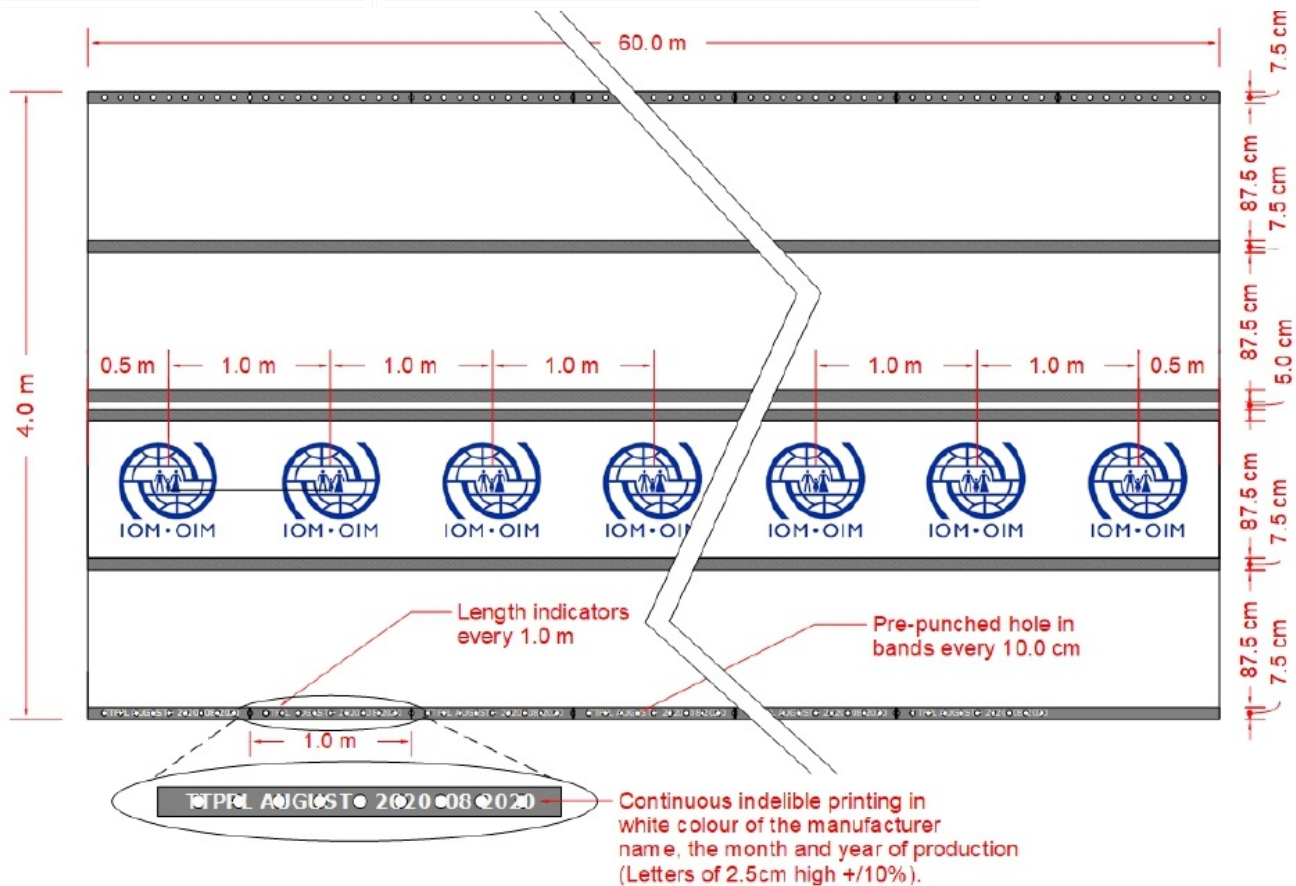


## Tarpaulin, rolls 4mx60m

### Overview

#### Specifications

Item code	3500000047
Unit weight	44.88 - 54.4 kg (per roll)



### 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 (per roll) - Summary of material requirements

##### Material for the plain sheet

Woven high-density polyethylene (HDPE) black fibres fabric laminated on both sides with white low density polyethylene (LDPE) coating.

### Plastic Sheeting specifications (per roll) - Summary of material requirements

<b>Material for the reinforced attachment points (sheets)</b>	6 bands of 7.5cm width made of woven black HDPE fibres fabric and coated with grey LDPE on the outside. 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). Position of the 6 bands and pre-punched holes as per drawing below.
<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>	The tarpaulin tensile strength under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB 313 nm peak) must be: <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>	The reinforcement bands tensile strength under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB313 nm peak) must be: <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>	Only one welding allowed, in the middle of the sheet, length wise. The tarpaulin tensile strength cross ways at the place of the welding under ISO 1421-1 must be: Minimum 50% of the original value of the actual product, AND not less than 400N.
<b>Width</b>	4 m ± 1% net width
<b>Length</b>	60m minimum net length
<b>Weight, plain sheet only, excluding the bands weight</b>	190g/m <sup>2</sup> ± 20g under ISO3801 (equivalent to 170g/m <sup>2</sup> minimum to 210g/m <sup>2</sup> maximum)
<b>Weight, complete sheet including bands weight</b>	Plain sheet specific weight plus 10% additional weight for the reinforcement bands under ISO 3801. Total weight from 187g/m <sup>2</sup> minimum and 231g/m <sup>2</sup> maximum. Specific weight of the bands from 150g/m <sup>2</sup> minimum and 200g/m <sup>2</sup> maximum.
<b>Flame retardant</b>	Minimum class D, s2, d2. Minimum time to reach large wing external edge: 4minutes (LFS)
<b>Colour</b>	White, sun reflective on both sides of the sheet. Grey coating on the outside of the bands. Inner black fibres to ensure opacity. White Coating colour definition: <ul style="list-style-type: none"> <li>• L.a.b Coordinates under ISO 105J01 - Minimum L: 82</li> <li>• "a" value between -1.7 and +1.5</li> <li>• "b" value between -4.5 and 0</li> </ul>

### Plastic Sheeting specifications (per roll) - Summary of material requirements


<b>Opacity</b>	Opacity measured as minimum reflection and maximum transmission, in the range of visible light and near infrareds. Measured under ISO 13468-1. Values should be measured respectively from 350 to 750nm, and from 750 to 2500nm wavelength. The final result is the average of the averages in each range. Minimum total reflection: 35% Maximum total reflexion: 50% Maximum total transmission : 5%.
<b>Printing</b>	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.
<b>Packaging</b>	1 piece per roll. Rolls are packed in an extra piece of sheeting, ideally the same material as the plastic sheeting itself. It must be possible to offload the pallets with a forklift and by hand.
<b>Printing of IOM Logo</b>	A line of sixty (60) IOM logos must be printed on one side of the sheet, across the sixty meter side, placed one meter from the bottom edge of the six-meter side. IOM logo printing details, see the Logo placement guideline where size of logo is 60 cm wide and 60 cm height. The color should Logo printed in PANTONE BLUE or CMYK. C = 100%, M = 82%, Y = 10%, K = 2%
<b>Packaging Information</b>	<i>Marking on the package must include the following details:</i> 1. Indicate IOM Logo 2. Item name and material code, IOM Plastic Rolls 3500000047. 3. PO number and Quantity 4. Batch number and Manufacturing date 5. Packing units: To be marked with consecutive numbers (i.e 1/20, 2/20...) 6. Indicate Gross Weight and Dimension No logo of the supplier allowed. Marking must be readable and strong enough to resist to several handlings. Country of origin upon request.

All IOM Non-Food Items (NFIs) have been designed, manufactured, and packaged for distribution ensuring minimal impacts on the environment. Through rigorous Quality Assurance processes along with risk and life cycle assessments, NFIs are evaluated holistically throughout their entire life cycle on their impact on the environment and for improved durability to enable reaching beyond their intended service life. Hence, reducing the need for frequent replacements. IOM NFIs can be recycled and further re-purposed or upcycled to suit multiple uses such as converting to different usage like handbags, car covers, recycled wastewater collection etc.

All unnecessary sub-packaging made of single-use plastics are avoided. When sub-packaging is exceedingly necessary, IOM prefers 100% compostable bio-plastic packaging made from biomass or unbleached, natural-coloured, recycled paper or using paper with FSC forest management certification.

## Key Considerations

Acceptable Quality Limits (AQL)

 <b>AQL for IOM Tarpaulin Rolls</b>		IOMQC-AQLS00V8 Ver8.2 08.11.2022			
International Organization for Migration (IOM) The UN Migration Agency					
Nonconformities classification: Critical: <b>C</b> ; Major: <b>M</b> ; Minor: <b>m</b>					
Items	Characteristics	Nonconformities classification	QC type	AQL	QC Inspection at IOM warehouses and lab testing
Bales	Bales/rolls diameter	<b>m</b>	Measurement	6.5	230mm +/-10% (Minimum 207mm; Maximum 253mm)
	Bales/rolls length	<b>m</b>	Measurement	6.5	2,150mm +/-10% (Minimum 1935mm; Maximum 2,365mm)
	Marking on the bales/rolls	<b>m</b>	Ok/Nok	6.5	Marking expected: IOM Logo + Item name and material code, IOM Plastic Rolls 4x60m 3500000047 + PO number and Quantity + Batch number and Manufacturing date + Packing units: (i.e 1/20, 2/20...)+ Indicate gross weight and dimensions. No logo of the supplier allowed. Marking must be readable and strong enough to resist to several handlings. Country of origin upon request.
	Bales/rolls sealing	<b>m</b>	Ok/Nok	6.5	The bales/rolls must be well sealed with large adhesive tape (50 mm mini).
	Bales/rolls quality	<b>m</b>	Ok/Nok	6.5	The bale/roll must be wrapped with a piece of similar material as the one of the tarpaulins. The wrapping must be properly and closely tight to the bale/roll content, making a well rewinded bale/roll.
	Content	<b>m</b>	Ok/Nok	6.5	There must be 1 tarpaulin per bale/roll.
Tarpaulins	Material for the plain sheet	<b>C</b>	Ok/Nok	0	Woven high-density polyethylene (HDPE) black fibers fabric laminated on both sides with white low density polyethylene (LDPE) coating.
	Material for the reinforcement bands	<b>C</b>	Ok/Nok	0	Woven black HDPE fibers fabric and coated with grey LDPE on the outside.
	Reinforced attachment points	<b>M</b>	Ok/Nok	4.0	6 bands of 75mm +/-3%. Pre-punched 8mm diameter holes on the 2 side bands at 0.1m +/-10 % intervals, positioned in the centre of the bands (only the reinforcement bands are pre-punched, not the tarpaulin itself). Position of the 6 bands and pre-punched holes as per drawing below. Side bands can be positioned at maximum 10mm from the edge. Interval tolerance between bands: +/-10mm
	Tear strength in plain sheet at state of origin	<b>Specific</b>	Measurement	4.0	Minimum 100N under ISO 4674-1B 2003, with a test piece of 200x200mm as described in ISO 4674 annex B , in plain sheet.
	Tensile strength in plain sheet at state of origin	<b>Specific</b>	Measurement	4.0	Minimum 500N and 15% to 25% elongation in warp and weft in plain sheet under ISO 1421-1.
	UV resistance of the plain sheet, measured as remaining tensile strength after UV exposure	<b>Specific</b>	Measurement	4.0	The tarpaulin tensile strength under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB 313 nm peak) must be: Minimum 80% of the original value of the actual product, AND not less than 475N. To be tested in the plain sheet.
	Tensile strength in the reinforcement bands at state of origin	<b>Specific</b>	Measurement	4.0	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.
	UV resistance of the reinforcement bands measured as remaining tensile strength after UV exposure	<b>Specific</b>	Measurement	4.0	The reinforcement bands tensile strength under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB 313 nm peak) must be: Minimum 80% of the original value of the actual product, AND not less than 665N. To be tested inside the reinforcement bands as described above.
	Welding number and strength at state of origin	<b>Specific</b>	Measurement	4.0	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: Minimum 50% of the original value of the actual product, AND not less than 400N.
	Width	<b>Specific</b>	Measurement	6.5	4000 mm ± 1% net width (Minimum 3960mm. Maximum 4040mm). If edges are not straight, measurement is done on the shortest side.
	Length	<b>Specific</b>	Measurement	6.5	Minimum 60000mm. If edges are not straight, measurement is done on the shortest side.
	Weight, plain sheet only, excluding the bands weight	<b>M</b>	Measurement	4.0	190g/m² ± 20g under ISO 3801 (equivalent to 170g/m² minimum to 210g/m² maximum).
	Weight, complete sheet including bands weight	<b>M</b>	Measurement	4.0	Plain sheet specific weight plus 10% additional weight for the reinforcement bands under ISO 3801. Total weight from 187g/m² minimum and 231g/m² maximum.
Flame retardant EN13823+A1	<b>C</b>	Ok/Nok	0.0	Minimum class D, s2, d2. Minimum time to reach large wing external edge: 4minutes (LFS)	

## References and Tools

- [Tarpaulin Rolls 4x60m AQL](#)

## Other Entries in this Topic

- [Emergency Relief Items Catalogue](#)

## Contacts

For further information, contact [sheltersupport@iom.int](mailto:sheltersupport@iom.int).

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