Blanket, Type 4, Synthetic, 1.5x2m, M Temp

Overview

Most agencies, including IOM, are now moving to synthetic blankets, rather than woollen. Synthetic blankets are made of virgin fibres such as polyester or acrylic. Some cotton may be included in the yarns.

The insulation capacity of a blanket depends of the thermal resistance (Rct) and of the air permeability of the material. The thermal resistance does not depend only on the weight or the raw material, but also on the fibre quality, the type of weaving or knitting, and fibre raising.

- Low Thermal type, with Rct=0.15 is appropriate for indoor use, on a bed, in a house with heating facilities.
- Medium thermal type, with Rct=0.25, is the minimum for hot or temperate climates outdoor use (even in hot countries, nights can be cold).
- High thermal type, with Rct=0.4, is appropriate for cold climates.

Scientific studies defined that indoors at 20°C a person at rest requires a total insulation of Rct=0.15. Outdoors with no wind the value at 10°C is Rct=0.4, at 0°C it is Rct=0.6, at -10°C it is Rct=0.8 and at -20°C it is Rct=0.95. Bearing in mind that a part of the insulation comes from the clothing, the rest will come from the blanket.

- The Rct value can only be tested in a textile laboratory.
- Low air permeability ensures protection from draughts, while inherent breathability allows evacuation of body perspiration.
- In previous publications, the Thermal Resistance was given as ToG (Thermal Resistance of Garment). It is important to note that ToG=1 is identical with Rct=0.1. The major difference is the laboratory equipment to control these values. The Rct test is more accurate than the ToG test.

Markings
- Logo printed in white or CMYK. C = 100%, M = 82%, Y = 10%, K = 2%.
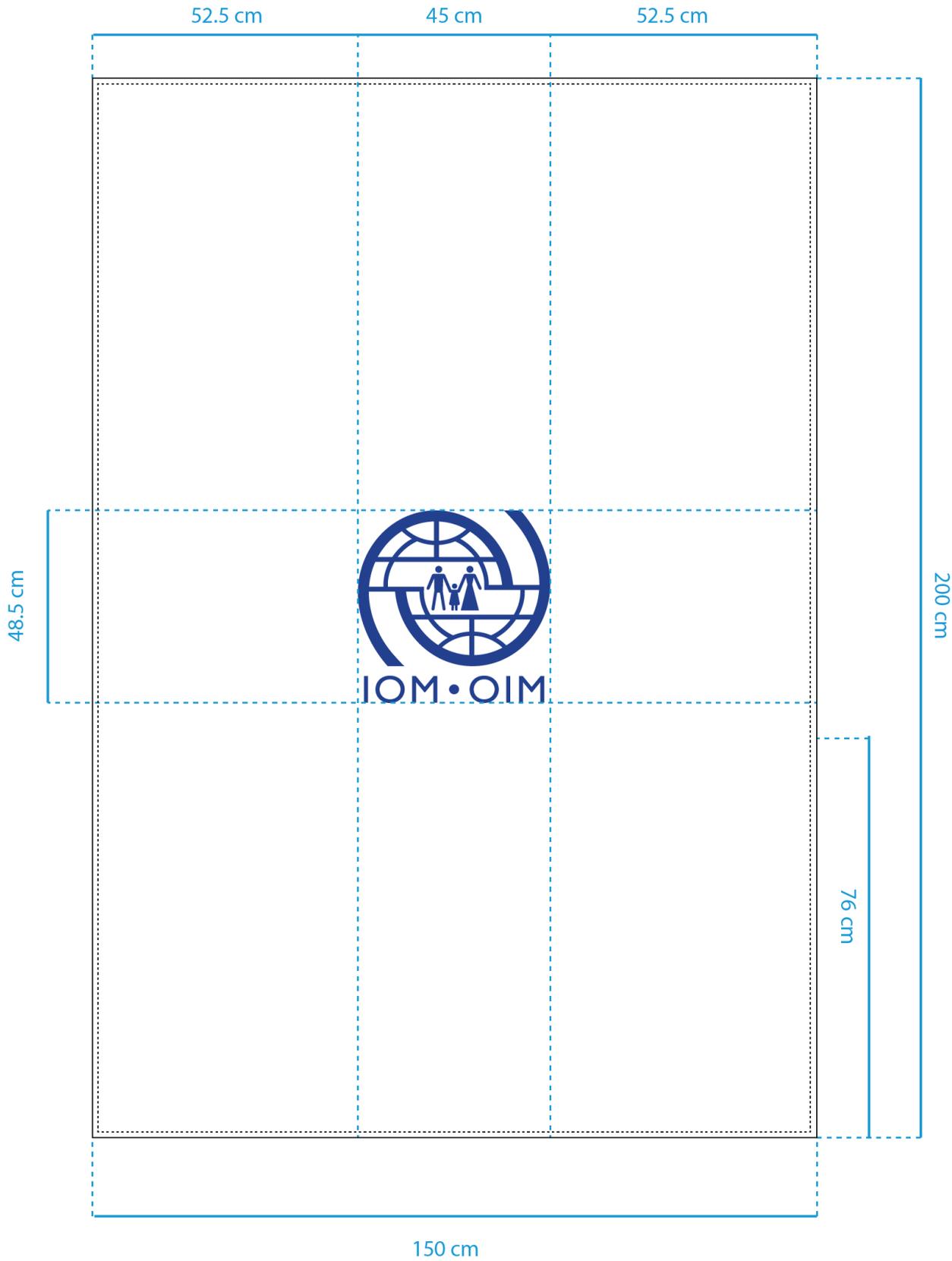
The specifications below are after IFRC/ICRC with the addition of IOM markings.

Note: Blankets must not be soaked in salt by manufacturer.

Specifications	
Item code	3500000030
Packed volume per bale	0.2m3 approx.

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, the NFIs are evaluated holistically throughout its entire life cycle on its impact on the environment and for improved durability to enable reaching beyond its 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.

Relevance to IOM's Emergency Operations

52.5 cm   45 cm   52.5 cm

48.5 cm

200 cm

76 cm

150 cm

IOM·OIM

Center application

Description

Synthetic fleece blanket - Mediumthermal resistance - 1.5 x 2m	
Test conditions	Specification under the normal textile test conditioning ISO139, 65% moisture and 20°C for 24h.
Samples for testing purpose	Samples of blankets must be from compressed bales. All criteria to be passed on the same sample. (Samples of compressed bales to be prepared with only 5 blankets folded once more than in normal bales, at 40% compression ratio, and to remain compressed for one week minimum before testing).
Make	Knitted or woven, dry raised both sides
Content	ISO 1833 on dry weight: 100% virgin polyester and/or acrylic fibres or polyester/cotton
Colours	Other than black, red, or white, dark uniform colour.
Size	150 x 200cm +3%/-1%. To be taken on flat stabilised sample,without folds.
Weight	400g/m2 minimum - maximum 700g/m² weight determined by total weight/total surface
Thickness ISO 5084	6.5mm minimum (1KPa on 2000mm²)
Tensile strength	ISO13934-1 250N warp and weft minimum
Tensile strength loss after washing	ISO13934-1 and ISO 6330 Maximum 5% warp and weft after 3consecutive machine washing at 30°C and one flat drying.
Shrinkage: maximum	ISO 6330 Maximum 5% warp and weft after 3 consecutive machine washing at 30°C and one flat drying.
Weight loss after washing	Maximum 5% after 3 consecutive machine washing at 30°C and one flat drying.
Thermal resistance ISO 11092	Rct= 0.25m².K/W minimum, rounded to the nearest 0.01, passed on samples picked from compressed bales. Mechanical conditioning: after opening of the bale, the blanket shall be dry tumbled in a dryer (500l minimum capacity) without any other load for 15 minutes at a temperature of less than 30°C. Then, the blanket shall be conditioned for at least 24 hours by flat lying at ambient conditions (20°C and 65% Relative Humidity).
Resistance to air flow	ISO9237 under 100Pa pressure drop Maximum 1000 L/m²/s
Finish	Whipped seam at 10mm from the edge with 10 to 13 stitches/10cm or stitched ribbon or hemmed on 4 sides. Corners can be round up to 10cm radius, or square.
Organoleptic test	No bad smell, not irritating to the skin, no dust.4<pH<9. Free from harmful VOC (Volatile Organic Components). Fit for human use.
Fire resistance	ISO12952-1&2 Resistance to cigarette - No ignition ISO12952-3&4 Resistance to flame - No ignition

Printing of IOM Logo	IOM logo should be printed or heat embossed on the blanket. The logo should be placed in the center of the blanket (refer to the logo blanket image above). The size of the logo on the center of the blanket should be 45 cm wide and 48.5 cm high. Logo should be in either white or CMYK. C= 100%, M= 82%, Y= 10%, K=2%.
Marking on the blanket	Every blanket should include a tag, stitched in the hem. The tag should include the manufacturer's name, a unique reference batch number and the date of manufacturing. No company logo should be included with the manufacturer's marking.
Packing Information	Compressed in bales - Each bale has 20 pieces; 1 x bale Dimension (m): 80 x 52 x 47 cm / 0.2 m3 approx Weight (kg): 15 to 24 kgs Bales to be wrapped in a water-tight micro perforated plastic film and covered with a polypropylene or jute woven bag. - Compressed and strapped with 5 straps (2 lengthwise, 3 crosswise). - Height of the bales to be compressed by maximum 40% from free state to final compressed and strapped state. (ex: if the bale is 1m high at free state, it should be compressed to a height of 0.6m at final and strapped state). *Marking on the package must include the following details*: 1. Indicate IOM's horizontal Logo 2. Item name and material code, IOM High Thermal Blanket -3500000030 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 dimensions. Do NOT include logo of the vendor. Marking must remain readable and well fixed on the box after minimum 10 handlings.
Packaging	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 of the case.

Key Considerations

	AQL **Definitions, penalties and Quality Control rules.**	IOMQC-AQLS001 VER 2.0 01.03.2018

Nonconformities classification: Critical: **C**; Major: **M**; Minor: **m**

Definitions:

Critical nonconformity : Any discrepancy which might harm an user or makes it impossible to use the product properly is considered to be critical. Lots with Critical discrepancy are subject to refusal.

Major nonconformity : Any discrepancy which makes the use of the product less efficient than expected is considered to be major. Lots with Major discrepancies can be accepted.

Minor nonconformity : Any discrepancy which does not have an influence on the performance of the product is considered to be minor. Lots with Minor discrepancies can be accepted.

Non-Conformities classification and related penalties:

Critical: (AQL 0)

Nonconforming characteristic (number of nonconforming items ≥ Rejection number. ISO-2859-1) implies a penalty of 10% of the value of the total PO and is subject to lot refusal.

Major: (AQL 4.0)

Nonconforming characteristic (number of nonconforming items ≥ Rejection number. ISO-2859-1) implies first time a penalty of 0.5% of the value of the total PO, second time 1 %, and + 0.5% at every occurance for the duration of the contract per each nonconforming characteristic. >10% of nonconforming items is subject to lot refusal

Minor: (AQL 6.5)

Nonconforming characteristic (number of nonconforming items ≥ Rejection number. ISO-2859-1) implies 2 times without penalties, third time a penalty of 0.5% of the value of the total PO, fourth time 1 %, and + 0.5% at every occurance for the duration of the contract per each nonconforming characteristic. >10% of nonconforming items is subject to lot refusal.

Quality Control and Acceptance Quality Level

 - The AQLs herein are after IFRC/ICRC with additional parameters on IOM markings and required packaging.

 - The Method of testing is drawn from ISO-2859-1 International Standards (table1: Sample size code letters, and table 2-A: Single sampling plans for normal inspection). The samples will be taken randomly by the buyer from the delivered items and then inspected.

 - The buyer can decide either to inspect the lot at IOM QC laboratory or to use an inspection company for analysis, or both. Transport to laboratory and analysis cost for lab testing are at expense of IOM.

 - The seller can contest the results of the Quality Control done at IOM warehouses by requesting a lab testing. In this case transport to laboratory and analysis cost for lab testing are at expense of the seller.

 - **Nonconformity**: non-fulfilment of a specified characteristic requirement.

 - **Nonconforming item**: item with one or more nonconformities.

 - **Lot**: definite amount of some product, material or service, collected together.

 - **Sample**: set of one or more items taken from a lot and intended to provide information on the lot.

Penalty rules for specific nonconformities:

Blankets	**Thermal resistance for Low Thermal blankets** (AQL 4.0) Discrepancy between requirement and the average result of nonconforming blankets: 0.15m².K/W >result≥0.14m².K/W: 2% of the value of the PO 0.14m².K/W >result≥0.10m².K/W: 5% of the value of the PO 0.10m².K/W >result: 10% of the value of the PO and subject to lot refusal **Thermal resistance for Medium Thermal blankets** (AQL 4.0) Discrepancy between requirement and the average result of nonconforming blankets: 0.25m².K/W >result≥0.23m².K/W: 2% of the value of the PO 0.23m².K/W >result≥0.18m².K/W: 5% of the value of the PO 0.18m².K/W >result: 10% of the value of the PO and subject to lot refusal **Thermal resistance for High Thermal blankets** (AQL 4.0) Discrepancy between requirement and the average result of nonconforming blankets: 0.40m².K/W >result≥0.36m².K/W: 2% of the value of the PO 0.36m².K/W >result≥0.29m².K/W: 5% of the value of the PO 0.29m².K/W >result: 10% of the value of the PO and subject to lot refusal

	AQL Blankets synthetic medium thermal resistance **Specifications and Quality Control**	IOMQC-AQLS001 VER 2.0 01.03.2018

Nonconformities classification: Critical: **C**; Major: **M**; Minor: **m**

Items	Characteristics	Nonconformities classification	QC type	AQL	QC Inspection at IOM warehouses and lab testing (Samples of blankets must be from compressed bales)
Bales	Marking on the bales	m	Ok/Nok	6,5	Marking expected: IOM Horizontal Logo + IOM Medium Thermal Blanket -110000001 + PO number and Quantity + Batch number and Manufacturing date +Packing units: To be marked with consecutive numbers (i.e 1/20, 2/20...)+ Indicate gross weight and dimensions. No logo of the supplier allowed. Marking must remain readable and well fixed on the bale after minimum 10 handlings.
	Bales length	m	Measurement	6,5	Minimum: 80cm ; Maximum:90cm.
	Bales width	m	Measurement	6,5	Minimum: 50cm ; Maxi:60cm.
	Bales height	m	Measurement	6,5	Minimum: 65cm ; Maxi:75cm. Height of the bales to be compressed by maximum 40% from free state to final compressed and strapped state.
	Bales strapping	m	Measurement	6,5	Compressed and strapped with 5 straps (2 lengthwise, 3 crosswise)
	Bales quality	m	Ok/Nok	6,5	Bales to be wrapped in a water-tight micro perforated plastic film and covered with a polypropylene or jute woven bag.

Content	m	Ok/Nok	6,5	Quantity per bale: 20 pieces.
Packaging	m	Ok/Nok	6,5	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 of the case.
Material	C	Ok/Nok	0	Woven/knitted, dry raised both sides, 100% virgin polyester and/or acrylic fibres or polyester/cotton (Content ISO 1833 on dry weight)
Colours	M	Ok/Nok	4,0	A uniform dark color that is not black (e.g. dark blue, grey, brown). No red or white. Colour should be well fixed and not run with washing.
Length	m	Measurement	6,5	Minimum: 198cm ; Maximum:206cm. To be taken on flat stabilised sample, without folds.
Width	m	Measurement	6,5	Minimum: 148.5cm ; Maximum:154.5cm. To be taken on flat stabilised sample, without folds.
Weight	m	Measurement	6,5	Minimum:400g/m2; maximum:700g/m2. Weight determined by total weight/total surface.
Thickness	M	Measurement	4,0	6.5 mm minimum. ISO 5084 (1KPa on 2000mm²)
Tensile strength	M	Measurement	4,0	250N warp and weft minimum. ISO13934-1
Tensile strength loss after washing	M	Measurement	4,0	Maximum 5% warp and weft after 3 consecutive machine washing at 30°C and one flat drying. ISO13934-1 and ISO 6330
Shrinkage maxi.	M	Measurement	4,0	Maximum 5% warp and weft after 3 consecutive machine washing at 30°C and one flat drying. ISO 6330
Weight loss after washing	M	Measurement	4,0	Maximum 5% after 3 consecutive machine washing at 30°C and one flat drying.
Thermal resistance ISO 11092	Specific	Measurement	4,0	Rct= 0.25m².K/W minimum, rounded to the nearest 0.01, passed on samples picked from compressed bales. Mechanical conditioning: after opening of the bale, the blanket shall be dry tumbled in a dryer (500l minimum capacity) without any other load for 15 minutes at a temperature of less than 30°C. Then, the blanket shall be conditioned for at least 24 hours by flat lying at ambient conditions (20°C and 65% Relative Humidity).
Resistance to air flow	M	Measurement	4,0	Maximum 1000 L/m²/s. ISO9237 under 100Pa pressure drop
Finishing	m	Measurement	6,5	Whipped seam at 10mm from the edge with 10 to 13 stitches/10cm or stitched ribbon or hemmed on 4 sides. The edges finishing should be straight. The corners can be round up to a radius of 100mm maximum.
Organoleptic test	M	Ok/Nok	4,0	No bad smell, not irritating to the skin, no dust. 4<pH<9. Free from harmful VOC (Volatile Organic Components).
Fire resistance	C	Ok/Nok	0	Resistance to cigarette - No ignition. ISO12952-1 Resistance to flame - No ignition. ISO12952-2
Blanket identification	m	Ok/Nok	6,5	Every blanket should include a tag, stitched in the hem. The tag should include the manufacturer's name, a unique reference batch number and the date of manufacturing. No company logo should be included with the manufacturer's marking.
Homogeneous quality	M	Ok/Nok	4,0	The blankets should be homogeneous and not presenting fibbers missing.

The row group label spanning the material-through-homogeneous rows: **Blankets synthetic medium thermal resistance**

Entry Links

Logistics Emergency Catalogue

Contacts

ContactFor further information, contact sheltersupport@iom.int

Version and document date

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