LM International

LM International Item No 05353

Application Sam





General Information and Description

the Family tent has 16 m2 main floor area, plus two 3.5 m2 vestibules, for a total area of 23 m2, double-fold with ground sheet.
It is the standard tent used by LM International/ICRC/IFRC and suitable for a family of 5 people, following the recommended minimum living area in hot and temperate climates (3.5 m2 per person), and providing additional space for cold climates.
The technical specifications of this tent were developed by shelter specialists, with close technical cooperation between LM International, IFRC and ICRC, to guarantee a product fit for human use in all climates, with appropriate outdoor life span, at a minimum cost.
The technical specifications of this tent are generic, ensuring that the product can be manufactured by different suppliers in various countries, with the common technical know-how and standard equipment from the tent industry.
LM International purchases Family tents through international tender processes and establishes Frame Agreements (long term Agreements) with manufacturers that have completed validation / qualification of Family Tent samples in one of the LM International approved laboratories. Family tents are subject to random and continuous quality control throughout the Frame Agreement duration period.
For the validation / qualification of Family Tent samples, it is advisable to first ensure the adherence to the main material specifications. Information about approved technical laboratories can be obtained from LM International Supply Management Service in Budapest.
According to its design, Family tents should comply with all the technical requirements, criteria and parameters described in this document and as detailed in the technical specifications section.
Information for laboratory testing:
To complete validation / qualification of Family Tent samples, two (02) complete samples are to be sent to one of the LM International approved laboratories for testing and make up checking. One sample will be used for material testing and the second for a rain test. A product is acceptable only if all criteria are passed on the same sample.

weight and Volume

gross weight per unit:approx. 62 kg

gross volume per unit:approx. 0.23

m^3

Optimal Shipping / Container Information

140 tents per 20' gp without cage, 300 tents per 40' DC without cage. 350 tents per 40' HC without cage.

120 tents / 10 cages per 20' DC with cage (15 tents per cage). 240 tents / 20 cages per 40' DC with cage (15 tents per cage). 240 tents / 20 cages per 40' DC with cage (15 tents per cage).

Expected Life Span

Family tents are designed as a short term shelter solution, particularly in support to emergency situations and is not a substitute for a more permanent shelter. It is expected that Family tents should have a life span of 1 year, minimum, maintaining its sheltering and waterproofing capacities in all types of climates.

Shelf-life: the tent has a shelf-life of minimum 5 years, under normal storage conditions, in dry, clean, and ventilated warehouses. It should be elevated from the ground, not piled, stored on pallets and pallet racks, not in containers or in tented warehouses. tents are sensitive to rain and moisture when packed.

One tent with all accessories can be packed into a master bundle. the outer shell and the inner tent are folded in a way to ensure that the ground sheet protects the tent and accessories from dirt and moisture. the master bundle is made of woven polyethylene (pE) fabric of 180 g/m^2 identical to the one used on the mud flaps. The maximum total length must not exceed 2250 mm, with an approximate diameter of 300 mm in order to have extra space to facilitate repacking.

the metal poles and metal pegs are packed in 2 separate bags to avoid damaging other items inside the master bundle. Both of these bags are made of the same material as the master bundle. these bags have a closure system that ensures that the accessories will not fall out of the bag during transport and handling. particular care should be taken when packing the pegs to assure they will not pierce the bag.

the master bundle is closed with 2 webbing straps on the outside, and each strap has a self-locking buckle that will not slide during transport. Each selflocking buckle can be made either with two rectangular buckles of 4 mm wire, welded-closed, or with one rectangular buckle and one sliding middle bar, of 4 mm steel rod, welded-closed. Each strap has 2 handles (pE or polyester). these straps are not sewn to the bundle.

Before placing the Family tent into the master bundle, the tent must be protected with one additional layer made with a piece of polycotton canvas as per the wall canvas minimum, of 2.3 x 1 m. this canvas is attached around the bundle with 3 ropes of 1 m and 3 mm diameter.

the international standard warning sign "protect from water" should be printed on the outside of the package. the buyer's markings are printed on the outside in indelible ink.

Note: last updated, June 2014

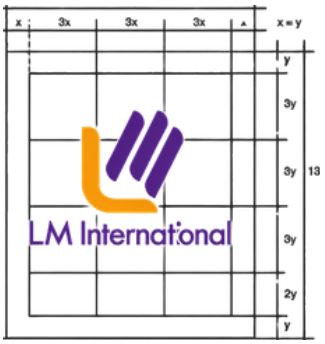
Optional packing

to facilitate loading of Family tents into pallets, size 120 x 80 x 15 cm, an optional package is required / accepted where poles are divided into pieces in order to obtain a package of 1.2 m in length.

the package must be a polycotton bag of 120 x 40 x 30 cm with a zip closure. the bundle must be secured with 2 webbing straps, each with a self-locking buckle that will not slide during transport. Each strap provides 2 handles. the straps must not be sewn to the bag. All other aspects as per standard packaging instructions. the palletized goods must not exceed the length and width of the pallet.

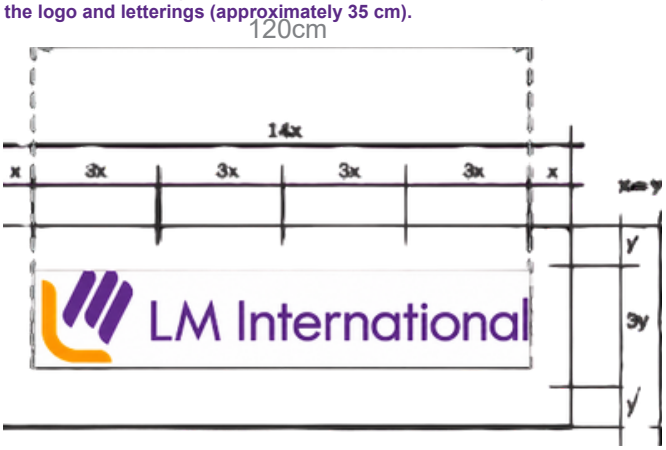
LM International Logo Application Refer

LM International vertical visibility logo on the roof of the tent:
the logo should be printed in blue indelible ink on both sides of the roof and in the middle for maximum visibility as showed on the graphic reference, when using 150 cm material and two seams on the canvas roof (l= 1.35 m and H= 1.65 m), following the "X" and "y" proportionality rule to avoid distortion on the logo and letterings.
Rule: length, l = (1 X = 15 cm), so (9 X = 1.35 m). Height, H = (1 y = 15 cm), so (11 y = 1.65 m).
Alternatively, the vertical visibility logos could be placed diagonally on opposite sides of the roof, when using 200 cm material and a central seam.



LM International horizontal visibility logo on both sides next to the tent's doors:

LM International horizontal visibility logo should be printed in blue indelible ink on both sides of the outer tent on both ends (2) of the tent next to the doors (l= 1.2 m and H = 0.35 m). the width of marking must be 120 cm and the heightproportionate to the width without any distortion of the logo and letterings (approximately 35 cm).



Typeface (Font), Colour specifications for printing:

Font: Helvetica Bold. Colour specification: Pantone Blue 300 or quadrichrome (CMyK). C = 100%, M = 45%, y = 0%, K = 0%.

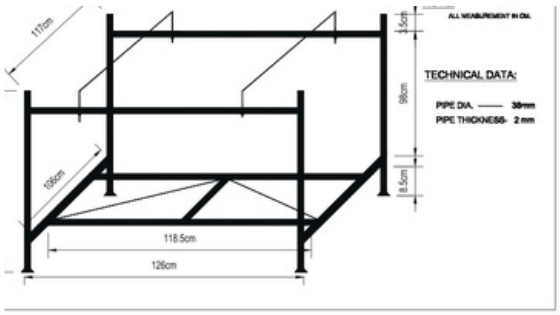
Metallic Cages

It is advisable to use stackable metal frame pallets. Such pallets avoid multiple manual handling of the bags and prevent the bags from being torn, and provides easy and fast on and off loading of containers, trucks, etc. Assures ventilation between the tents while stored in hot and humid climates which are required for long duration storage.

the metal cage pallet is stackable and adapted to optimize the container capacity.







Repair Kit

Should include 1 needle, 20 m stiching thread, 3 m polyester rope or string of 6 mm used to attach the canvas spare piece around the bundle as per information on packaging on page 1.

arkings on the Single B

Marking of LM International logo: (50 x 15 cm): Should be printed in blue indelible ink in color pantone No pMS 300 C on one side of the single bag.



Shipping Marks: Should be printed in blue indelible ink in color Pantone No PMS 300 C including the Purchase Order Number, Purchase Order Quantity, project Symbol, Consignee and Content on one side of the polyethylene bag (25 x 10 cm).





Manufacturer Marking

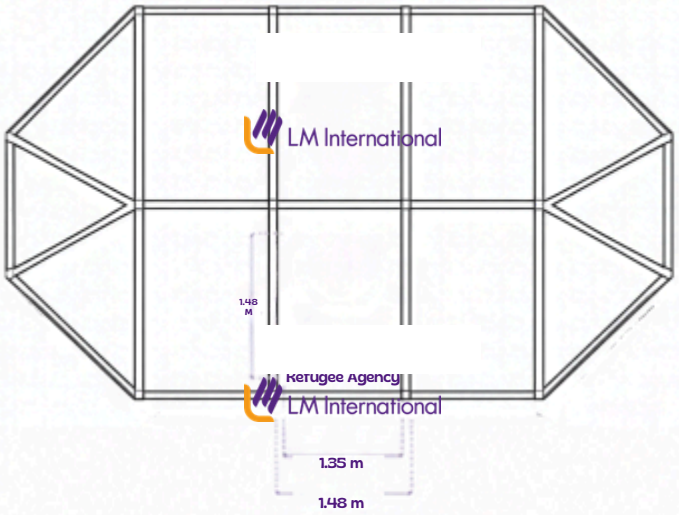
Every tent should include a tag, stitched inside the tent in one corner seam of one side wall, on the outer tent, 10 cm from the end of the wall, and 10 cm above the line where the canvas joins the PE flap, with the manufacturer identification (letters not higher than 2.5 cm). The tag should include 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.

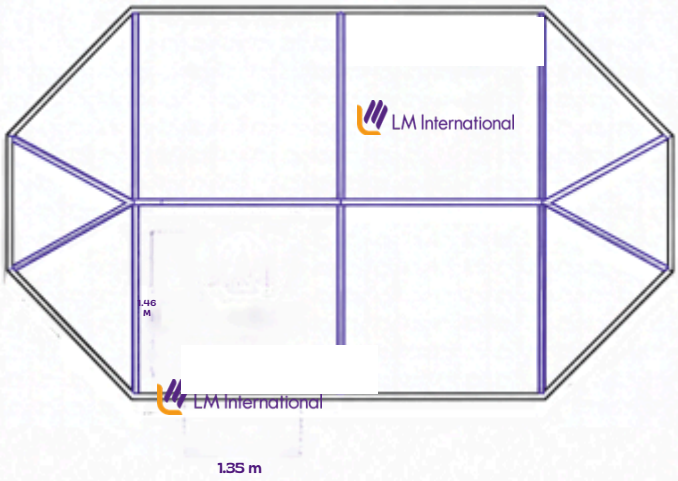
Assembling Instruction and Content List

In the accessory bag, a content list and a set-up / assembling instructions sheet written in English is to be enclosed. the content list and the set-up / assembling instructions sheet have to be printed on durable laminated A4 paper or durable fabric, showing step-by-step, set-up information drawings / photos and tent set up instructions in color.

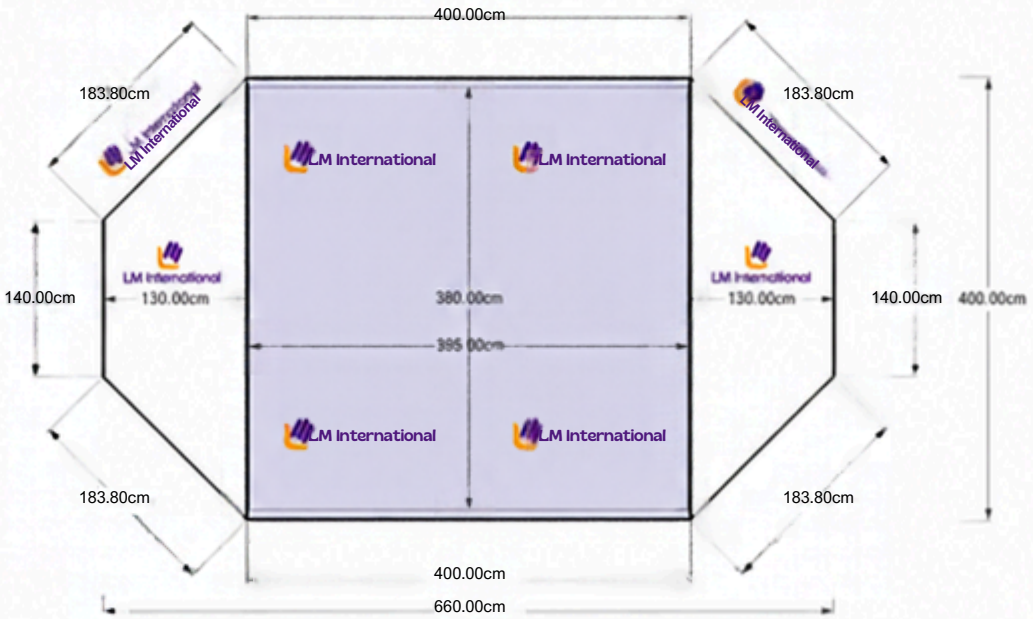
Graphic Reference

LM International vertical logo on the roof of the Family tent





Family tent general View



top View
View

Graphic Reference





Back View



-ront View



Technical Specifications

The specifications of the Family Tent are described below according to technical and performance requirements in five parts as follows:

1. **Materials**
2. **General points for the finished product**
3. **Make-up of the outer tent**
4. **Make-up of the inner tent with ground**
5. **sheet**

poles and accessories

1. MATERIALS

All canvas materials for the tent must be in accordance with the specified characteristics and with ISO 10966, if not specified otherwise hereunder.

Fire Retardant Field testing Conditions Under EN 13823

temperature:	15 - 20 C
Wind:	2 - 5 Knots
Humidity:	60% tO 75%
Weather Conditions:	Sunny Day or partly Cloudy
Rain:	0
Dew point:	10 - 15

1.1 SpECIFICAtIONS FOR tHE OUtER tENt ROOF CANVAS

Denomination and norms	Required minimum values
1. Composition, ISO 1833	Poly-Cotton: (Polyester/Cotton blended fibers yarns). Cotton: 40% (±10), polyester: 60% (±10) = polyester: 50% to 70%, with balance in cotton.
2. Specific weight (g/m^2), ISO 3801	350 g/m^2 ±15% in finished state.
3. Colour	Natural white, not dyed.
4. Water vapor permeability, ISO 17229	Minimum 2000 g/m^2/24h.
5. tensile strength (N), ISO 13934-1 **to apply on 10 test pieces of plain canvas.** **to apply on 5 test pieces with seams, cut from the tent, perpendicular to the seam.**	Warp and Weft 850 N minimum. For plain canvas test: 5 test pieces in warp 5 test pieces in weft. On seams, the grab test is applied on 25 mm width in the 50 mm sample.
6. tear resistance (N), Started, ISO 9073-4	Warp and Weft 60 N minimum.
7. Water penetration resistance, ISO 811 **test pieces of plain canvas.**	30 hpa minimum, with increasing speed at 100 mm per minute.
8. Rain penetration resistance, ISO 5912 **test piece is the complete outer tent only.**	Resistance to rain as per point 4.2.11 applying procedure as point 5.6 during 2 h on one end and 3 h on one side.
9. Dimensional variation, ISO 7771 **When soaking in water.**	Maximum 3%.
10. Resistance to micro-organisms **On tensile strength under ISO 13934-1 after BS6085 (soil burial 28 days).** **to apply on 10 test pieces of plain canvas and 10 test pieces with seams.**	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. For each type of test: 5 test pieces in warp 5 test pieces in weft.

Technical Specifications

1.1 SpECIFICAtIONS FOR tHE OUtER tENt ROOF CANVAS

Denomination and norms	Required minimum values
11. Efficiency of water-repellent treatments after soaking in water Same test as point 7 on samples soaked in water in point 9.	30 hpa minimum, with increasing speed at 100 mm per minute.
12. Efficiency of fungicides product after soaking in water Same test as point 10 on samples soaked in water in point 9.	Maximum 10% of additional loss as compared with the result from point 10. For each type of test: 5 test pieces in warp 5 test pieces in weft.
13. tensile strength After exposure to UV and moisturizing (climatic simulation). Exposure in a climatic chamber under ISO4892-2, type A, 360 hours, followed by tensile test under ISO13934-1.	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. For each type of test: 3 test pieces in warp and 3 test pieces in weft.
14. Flame retardant under EN 13823 and CpAI84	Class B-s1-d0 of the EU regulation. Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame average and maximum 30s after flame per test piece. Ageing under IS) 4892-2, type A, 360 hours.

Technical Specifications

1.2 SpECIFICAtIONS FOR tHE OUtER tENt WAll CANVAS

Denomination and norms	Required minimum values
1. Composition, ISO 1833	Polyester/Cotton blended fibers yarns. Cotton: 40%(±10), polyester: 60% (±10) = polyester: 50% to 70%, balance cotton.
2. Specific weight (g/m^2), ISO 3801	275 g/m^2 ±10% in finished state.
3. Colour	Natural white, not dyed.
4. Water vapor permeability, ISO 17229	Minimum 2000 g/m^2/24h.
5.a. tensile strength (N), ISO 13934-1 **to apply on 10 test pieces of plain canvas.** **to apply on 5 test pieces with seams, cut from the tent, perpendicular to the seam.**	Warp and Weft 650 N minimum. For plain canvas test: 5 test pieces in warp 5 test pieces in weft. On seams, the grab test is applied on 25 mm width in the 50 mm sample.
5.b. tensile strength (N), ISO 13934-1 **to apply on 10 test pieces of plain canvas and 10 test pieces with seams.**	Warp and Weft 650 N minimum. For each type of test: 5 test pieces in warp 5 test pieces in weft.
6. tear resistance (N), Started ISO 9073-4	Warp and Weft 40 N minimum.
7. Water penetration resistance, ISO 811 test pieces of plain canvas.	20 hpa minimum, with increasing speed at 100 mm per minute.

1.2 SpECIFICAtIONS FOR tHE OUtER tENt WAll CANVAS	
Denomination and norms	**Required minimum values**
8. Dimensional variation, ISO 7771 **When soaking in water.**	Maximum 3%.
9. Resistance to micro-organisms **On tensile strength under ISO 13934-1 after BS6085 (soil burial 28 days).** **to apply on 10 test pieces of plain canvas and 10 test pieces with seams.**	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. For each type of test: 5 test pieces in warp, 5 test pieces in weft.
10. Efficiency of water-repellent treatments after soaking in **water Same test as point 7 on samples soaked in water in**	20 hpa minimum, with increasing speed at 100 mm per minute.
point 8. **11. Efficiency of fungicides product after soaking in** **water Same test as point 9 on samples soaked in water** **in point 8.**	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. For each type of test: 5 test pieces in warp 5 test pieces in weft.
12. tensile strength after exposure to UV and moisturizing (climatic simulation) **Exposure in a climatic chamber under ISO 4892-2, type A, 360hours, followed by tensile test under ISO 13934-1.**	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. For each type of test: 3 test pieces in warp and 3 test pieces in weft.
13. Flame retardant under EN 13823 and CpAI84	Class B-s1-d0 of the EU regulation. Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame average and maximum 30s after flame per test piece. Ageing under IS) 4892-2, type A, 360 hours.

Technical Specifications

1.3 SpECIFICAtIONS FOR tHE INNER tENt CANVAS	
Denomination and norms	**Required minimum values**
1. Composition, ISO1833	Polyester/Cotton blended fibers yarns. Cotton: 40%(±10), polyester: 60%(±10) = polyester: 50% to 70%, balance cotton or Cotton 100%.
2. Specific weight (g/m^2), ISO 3801	165 g/m^2 ±10% in finished state. If inner tent canvas has fire retardancy, component's weight is 170 g/m^2 ±10%.
3. Colour	Dyed cream or beige color.
4. Water vapor permeability, ISO	Minimum 2000 g/m^2/24h.
17229 **5. tensile strength (N), ISO 13934-1**	Warp and Weft 300 N minimum.
6. tear resistance (N), ISO 9073-4	Warp and Weft 20 N minimum.
7.**T ReTceehscinshitcananiclc aeSl p tSoepcmeifiicccirfioac-toiaortgnioasnnsisms on tensile strength** Under ISO 13934-1 after BS6085 (soil burial - 14 days). to apply on 10 test pieces of plain canvas and 10 test pieces with seams.	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. 5 test pieces in warp, 5 test pieces in weft.
8. Flame retardant under EN 13823	Class B-s1-d0 of the EU regulation, or above.

1.4 SpECIFICAtIONS FOR tHE pE FABRIC FOR tHE MUD FlApS

The specification of the standard LM International plastic sheeting can also apply with the fire retardancy as mentioned below.

Denomination and norms	Required minimum values
1. Composition	Woven high-density polyethylene black fibers fabric laminated on both sides with low density polyethylene coating. Alternatively plastic tarpaulin can be used.
2. Specific weight (g/m^2), ISO 3801	190 g/m^2±30gr
3. a. tensile strength (N), ISO 13934-1 to apply on 10 test pieces of plain pE fabric. to apply on 5 test pieces with seams, cut from the tent, perpendicularly to the seam, at the junction of pE and canvas.	Warp and Weft 650 N minimum. Elongation 15% to 25%. For plain pE fabric test: 5 test pieces in warp 5 test pieces in weft. On seams, the grab test is applied on 25 mm width in the 50 mm sample.
3.b.tensile strength (N), ISO 1421 to apply on 10 test pieces of plain canvas and 10 test pieces with seams of one side wall canvas and one side PE mud flap.	Warp 650 N minimum weft 650 N minimum for each type of test: 5 test pieces in warp 5 test pieces in weft.
4.tear resistance (N), ISO 4674 (A2)	100 N minimum warp and 100 N minimum weft.
5. Resistance to micro-organisms	Insensitive to micro-organisms. Not to be tested.
6. Resistance to UV In percentage of tensile strength loss under ISO 1421 after 1500 hours UV under AStM g53/94 (UVB 313 nm peak).	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. 5 test pieces in weft, and 5 in warp.
7. Colour	White if made with IFRC/ICRC/LM International standard plastic sheeting.
8. Flame retardant under EN 13823 and CpAI84	Class B-s1-d0 of the EU regulation. Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame per test piece. Ageing under ISO 4892-2, type A, 360 hours.

1.5 SpECIFICAtIONS FOR tHE pE FABRIC FOR tHE gROUND SHEEt

The specification of the standard LM International plastic sheeting can also apply with the fire retardancy as mentioned below.

Denomination and norms	Required minimum values
1. Composition	Woven polyethylene fabric coated on both sides with low density polyethylene. Alternatively plastic tarpaulin can be used.
2. Specific weight (g/m^2), ISO 3801	190 g/m^2± 30 grams.
3. tensile strength (N), ISO 1421	Warp 300 N minimum weft 300 N minimum.
4. tear resistance (N), ISO 4674 (A2)	Warp 60 N minimum weft 60 N minimum.
5. Resistance to micro-organisms	Insensitive to micro-organisms.

Technical Specifications

1.5 SpECIFICAtIONS FOR tHE pE FABRIC FOR tHE gROUND SHEEt

The specification of the standard LM International plastic sheeting can also apply with the fire retardancy as mentioned below.

Denomination and norms	Required minimum values
6. Water penetration resistance, ISO 811 **test pieces of plain canvas.**	20 hpa minimum.
7. Resistance to UV **In percentage of tensile strength loss under ISO 1421 after 300 hours UV under AStM g53/94 (UVB 313 nm peak).**	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. 5 test pieces in weft 5 test pieces in warp.
8. Colour	White if made with LM International standard plastic sheeting.
9. Flame retardant under EN 13823 and CpAI84	Class B-s1-d0 of the EU regulation. Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame per test piece. Ageing under ISO 4892-2, type A, 360 hours.

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2
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Any where St., Any City, ST 12345

1.6 SPECIFICATIONS FOR THE MOSQUITO NET FOR DOORS, WINDOWS, VENTILATION OPENINGS, INNER AND OUTER TENTS

All mosquito nets must be treated with long lasting insecticide in accordance to WHO standards and purchased from a manufacturedbyafully qualified WHOPES approved mosquito net manufacturer.

Technical Specifications

Denomination and norms	Required minimum values
1. Material, ISO 1833	polyester 100%, or pE 100%.
2. Fabric, ISO 8388	Warp knitted.
3. Denier	75/100 for the polyester and 100 to 150 for the pE.
4. Filament	Multi-filament 36 or higher for the polyester and Monofilament for the pE.
5. Mesh size	25 holes/cm^2 (156 holes/$inch^2$)
6. Weight, ISO 3801	85 to 100 g/m^2 for polyester and Min 38 g/m^2 for pE depending of denier.
7. Shrinkage, ISO 5077	5% maximum.
8. Bursting strength, ISO 1393-8	250 kpa minimum for polyester and 320 kpa minimum for pE.
9. Bursting strength after exposure to UV and moisturizing (climatic simulation), ISO 1393-8 Exposure in a climatic chamber under ISO 4892-2, type A, 360 hours, followed by bursting test under ISO 13938	30% maximum strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product. Number of test pieces: 3 test pieces.
10. Colour	White.

Technical Specifications

1.7 SpECIFICAtIONS FOR tHE gUyINg pOINtS OF tHE OUtER tENt	
Denomination and norms	**Required minimum values**
1. Material composition	polyethylene/polypropylene/polyester ropes. polyester straps. Steel rings. Elastic device.
2. tensile strength (N), ISO 13934 On samples taking the complete guying point assembly including the entire reinforcement pieces. See note here under.	3000 N minimum for the 6 side points (3 test pieces). 1400 N minimum for the 4 other points (2 test pieces). Elongation of the elastic device under 1000 N: minimum 50 mm, maximum 100 mm.
3. Resistance to UV In percentage of tensile strength loss after exposure in a climatic chamber under ISO 4892-2, type A, 360 hours.	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product.
4. Colour	Black ropes and straps, galvanized steel.
Note for point N°2: Sample size: W 300 x l 500 mm. Sample to be cut at the centre guy line for the side point (500 mm length is with eave included). Samples to be cut on the top corner of the outer doors for the other points. Samples to be folded in order to fit into the traction apparatus with the entire width of the canvas being submitted to the traction when clamped in the apparatus jaw. the sample must include: the tent roof canvas, the reinforcement of the canvas, the strap, the ring, the elastic device, the buckle, the runner and a sufficient part of the guy rope (the ring and the runner do not need to be included in the UV test). the traction must be applied between the tent roof canvas and the guy rope.	
1.8 SpECIFICAtIONS FOR tHE HAMMER	
Denomination and norms	**Required minimum values**
1.type	Sledge hammer, 1 kg head, with 30 cm wooden handle. In accordance with ISO15601 and below specification.
2.Handle	No chip, rough surface, holes, knots. Smooth surface. Dry and strong flexible wood. Handle adjusted to head in order to protrude on other side of the head, and be blocked with a metal wedge or be a conical shape (like hoes). Moisture minimum 10%, maximum 15%, under ISO3130.
3.pull apart test	After two series of 25 vigorous blows with varying delivery angle, apply traction of 500 N trying to pull out the handle, head being fixed in a jaw, this should not create any damage to the hammer head and the handle, and the handle should remain firmly attached to the head.

2. GENERAL pOINTS FOR THE FINISHED pRODUCT

2.1 performances:
the final product must be able to withstand 75 km/h wind, to be strongly attached to the ground and tensioned without any damages.

When closed, the tent must give a good protection against dust, wind, rain, snow, insects and small crawling fauna.

Minimum roof load to be 300 N/m^2 under ISO8937 (snow load for camping tent).

The recommended final packed tent weight is approximately 62 kg.

2.2 Seams and stitching:
All seams subject to possible tension are double-lock stitched and water-proofed. Stitching should produce strong, long lasting, neat and

professional looking seams.

the stitch count as well as UV and rot-proof sewing threads are appropriate and adapted to each fabric. It allows for strong waterproof seams with at least the same life span as the tent.

the seams are always oriented in order to let the rain run freely, to avoid retaining water lines or water pockets.
Wherever possible, the colour of the sewing thread is adapted to the fabric color.

Note: gluing or any othermethods thatdo not ensure theoverall performanceofthetentarenotaccepted on stiching.

2.3 Ropes, webbing bands, toggles, loops, reinforcement nettings, and all other accessories:
All ropes and webbing bands are heat cut. All ropes are knotted to the tent from the factory. All above mentioned items are rot-proof and UV-proof at least as much as the tent canvas which they are sewn to. No webbing or rope is sewn through a stitch going from outside the tent to inside the tent to avoid water penetration by capillarity, or are made of waterproof materials. laces or loops can also be made of the same canvas as the tent roof/wall for the outer tent loops, and of the same canvas they are sewn to for the inner tent loops.

2.4 Zipper fasteners:

All the zipper fasteners should conform to a resistance of 700 N lateral traction under ISO5912.

2.5 Eyelets:

All metal eyelets should be rustproof and correctly placed, reinforced with a fabric patch and of a minimum 10 mm inner diameter.

2.6 Metal rings:
All metal rings should be rustproof galvanized and closed by welding.

2.7 Dimensional tolerance:
Unless otherwise specified, a tolerance of maximum ±3% is accepted on all dimensions.

2.8 Long storage (shelf life):
the tent is treated and packed in such a way that it can be stored up to minimum of 5 years in proper storage conditions without any

damage or performance reduction. the tent should be stored elevated from the ground (on pallets and pallet racks) in a dry, clean and ventilated warehouse.

the tent must be manufactured and packed in clean and appropriate conditions to avoid contamination from soil dust and other contaminants.

3. MAKE-Up OF OUTER TENT

3.1 General description of outer tent:

the outer tent is made of several cloth sections which form the general shape of the tent. the seams run from the ridge down to the roof

edges, perpendicular to the ridge line. the outer tent is supported by 3 upright poles +1 ridge beam, 6 side poles and 4 door poles, 3 guy ropes on each side and 2 guy ropes at each end. the attachment points of each guy rope are reinforced.

3.2 Dimensions / erecting system:

Centre height:	2.2 m
Width:	4 m
Ridge length:	4 m
Side wall height:	1.25 m
Door height:	1.4 m
Centre base length:	6.6 m

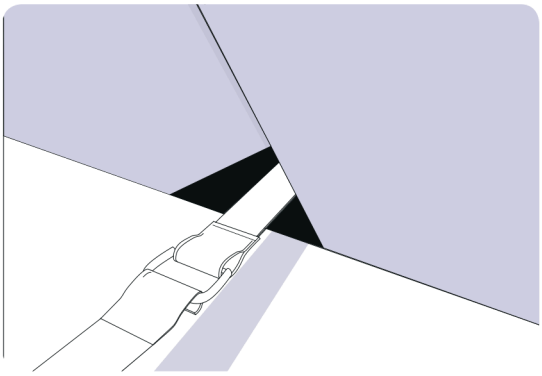
the outer tent is placed over the ridge beam which is held by 3 upright poles, one at each end of ridge beam, and one at the centre of the ridge beam. the outer tent is maintained in position on the ridge pipe with 2 canvas sleeves of 100 mm long, closed by Velcro on full 100 mm length, one sleeve at each end of the ridge, at 200 mm from the end.

the side walls are held by 6 side poles with a metal hook on top to hook into the eyelet of the webbing band (25 mm wide) placed on the inside of the wall top. Side wall poles do not protrude through the outer tent. The hook at the top of the side poles to be as flat as possible.

3.3 Reinforcements:

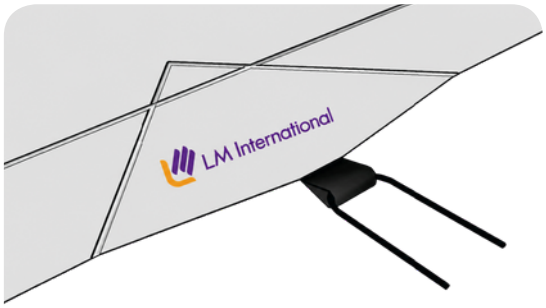
the 10 roof guying points are made of 50 mm wide polyester straps, sewn to the eave in extension of the roof. the eave is made with a

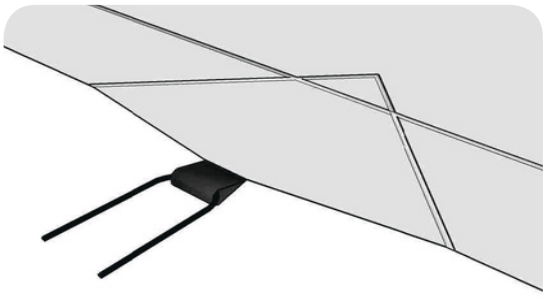
double fold of the roof canvas, of 200 mm width, running all around the tent roof, including above the doors. the eave is part of the roof panel, without interruption of the canvas. On the 6 side guying points an additional layer of pVC coated canvas is added on the inside to protect against abrasion from the top of the pole.





In addition, the 6 side guy points have a second triangular piece of canvas of 300 mm side length sewn to the roof, from the edge of the eave.





3. MAKE-Up OF OUTER TENT

3.4 Attachment system (guy lines):

the outer tent is anchored to the ground using 10 guy lines which are attached to 10 metal pegs.

Each guying point on both sides presents a loop made of 50 mm wide webbing. the length of the webbing allows, when folded double, the creation of a minimum 30 mm long loop, to be stitched to the tent with a strong Z or X sewing on minimum 50 mm long.

the webbing loops are placed perpendicular to the tent edge on the sides, at 30° angle in the corners, and in the alignment of the vestibules roof shape at both ends.

10 metal rings are attached to the loops with an elastic device. the ropes pass into the 10 metal rings. When tensioning, the ropes slide in the metal rings. At the other end, the ropes have a fixed knotted loop to place over the peg.
the attachment points are made in such a way that they comply with resistance specified in chapter 1.7.

3.5 Side windows:





Internal View

The outer tent has 2 long windows with mosquito netting and a rain flap running on both sides of the tent. The inside dimensions of the windows are 3600 mm wide and 600 mm high and the top edge of the window is placed 100 mm below the roof of the tent. the window openings are reinforced either with strong reinforcement netting (large holes strong plastic net) or with standard netting and strips of 20 mm poly-cotton webbing that reinforce the window horizontally (1 webbing) and vertically (7 webbings). these webbings are sewn to the edges of the tent opening and to the mosquito netting. The window flap is 3960 mm wide x 400 mm high. The flap is stitched 50 mm above the top of the window. The flap is held by 25 mm Velcro webbing which is placed along the length of the vertical sides and bottom and at a 25 mm distance from the window opening. Loops and plastic toggles or hooks are used to keep the flap open when it is rolled up.

3.6 Ventilation 1/2 cones on top of the vestibules:



External View



Internal View

The outer tent has 2 ventilation openings in front and back with reinforcement netting and a rain flap. These vents are triangular and are placed at the top of both vestibules. The inside dimensions of the vents are 250 mm wide and 300 mm high. The vent flaps are made in such a way that they are distanced from the ventilation opening when open, making a V2 cone shape of 250 mm in its middle. The flap can be closed with a 25 mm Velcro attached to the full width.

the vent openings are reinforced either with strong reinforcement netting (large holes strong plastic net), or with standard netting and with two strips of 20 mm cotton or polyester webbing that bisects the vent horizontally and vertically. these webbings are sewn to the edges of the vent opening and to the netting.

3. MAKE-Up OF OUTER TENT

3.7 Outer tent doors:

Door size: W 1.3 x H 1.4 m.

Door flap size: W 1.4 x H 1.6 m:

- Upper part: W 1.4 x H 0.9 m, made of canvas.
- lower part: W 1.4 x H 0.7 m, made of woven pE fabric.

the vestibule doors can be used as awnings by moving the front door poles to the 2 eyelets placed at the bottom of the door, in the corners. the rolled up door is held up by 2 loops and 2 plastic toggles or hooks.

the doors can be closed by means of a lacing/loop system. the loops are made of 4 mm rope or canvas strips (7 loops and eyelets per door side). For each lace/loop system, a toggle or a hook is placed in order to attach the last loop.

The lacing/loop system is protected by a double 50 mm flap to prevent rain and drafs. Each door has one side closable from inside and the other side closable from outside.



3.8 Side walls, vestibule walls, mud flaps:

total height is 1.45 m corresponding to 1.25 m vertical plus 0.2 m on the ground.

The upper part (0.75 m) of the walls is made of Polyester Cotton fabric, lower part (0.7 m) of PE fabric. The mud flaps are equipped with 22 eyelets (7 on each side including corners, 2 on each vestibule side), placed on a line reinforced with a full length 50 mm webbing sewn or heat-sealed to the mud flap at floor level, on the inside. Stitch length and thread to be appropriate for the materials to prevent tearing of the mud flap along the stitching (not applicable if heat-sealed).

the outer tent is attached to the side poles, with webbings or canvas strings stitched on the inner side of the outer tent, where the pE joins the poly-cotton, in front of each side pole and door pole (10 points in total).







3. MAKE-Up OF OUTER TENT





the vestibule walls are made in the same way, to complete the outer tent between the doors and the side walls. One of the vestibule carries the chimney hole.

3.9 Chimney reinforcement:

A chimney reinforcement with a non-perforated opening is placed at 0.5 m from one corner, on one end of the tent, between the corner of one side wall and the corner of one tent door. this is made of heat resistant fabric (minimum 900°C). It is the type of fabric that keeps the fibers tight when cut.

the lower edge of the opening is 500 mm above the ground, where the canvas joins the pE part (a band of canvas of 2 to 3 cm is allowed between the PE and the fireproof material).

Inside dimensions: 250 mm x 650 mm

The chimney flap is 350 mm wide x 750 mm high. The flap is stitched at the bottom at the lower edge of the chimney opening. The flap is held by 25 mm Velcro webbing which is placed along the entire vertical sides and upper end at a 25 mm distance from the chimney opening.

the tent fabric is cut away completely at the position of the chimney opening. the edges of the Chimney opening are hemmed stitched to the inside.





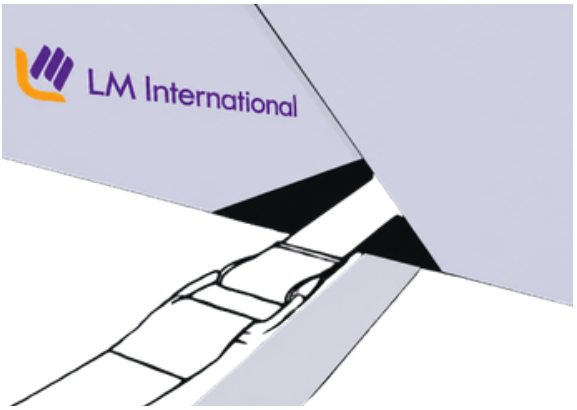
External View

Internal View

3. MAKE-Up OF OUTER TENT

3.10 other accessories:

4 loops of 30 mm each are placed on the inside of the tent in places where inner tent doors have corresponding toggles, at the top of the inner tent door zips (see inner tent door description). 10 D-rings (25 x 4 mm thickness), inside the outer tent, to allow the inner tent to be hooked to these D-rings (see inner tent description point 4/4): 6 are placed in the webbings at the top of each side-pole's position, 4 are placed in intermediate position.





6 D-rings placed on 25 mm webbing are sewn at floor level to the mud flap, inside, to hook the inner tent attachment strings.

3.11 plastic for document pouch:

On the outside of each left hand vestibule wall there will be a clear plastic document sleeve. the material will be UV stabilized polyurethane transparent plastic with a minimum thickness of 0.15 mm. the lower edge of the sleeve will be 800 mm above the ground. the sleeve will have an opening on the left side with the other three sides sewn with two rows of stitching to the tent. the inside dimensions of the sleeve after sewing will be 230 mm high and 310 mm wide.



Technical Specifications

4. MAKE-Up OF INNER TENT wITH GROUND SHEET

4.1 General description:

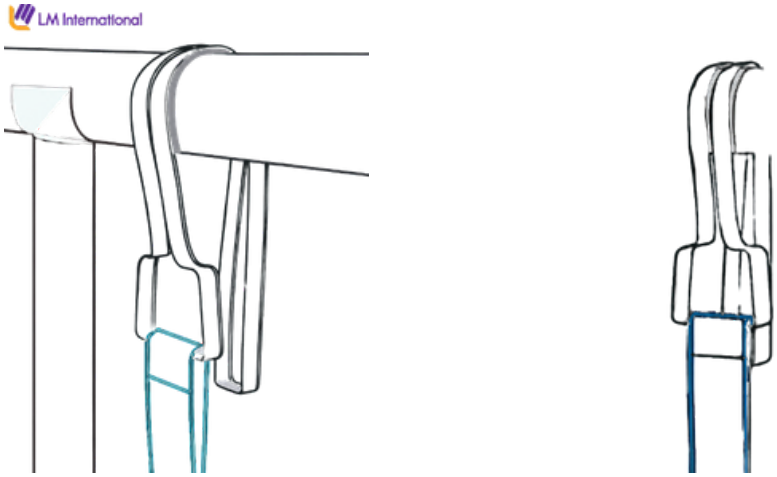
The inner tent is square shaped and is hanging inside the outer tent structure. All dimensions are meant to allow a 10 cm air gap between

the outer tent and the inner tent.

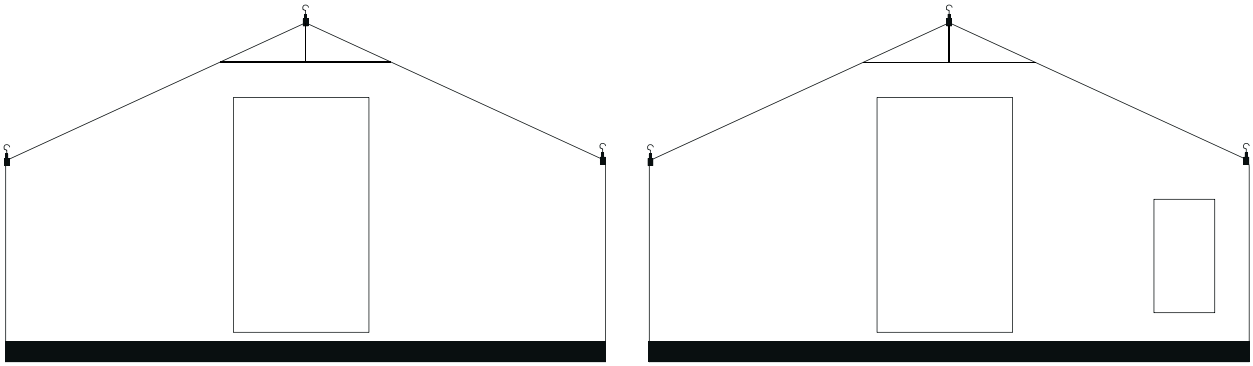
At the ground sheet level it is hooked to the outer tent D-rings with 6 elastic webbings and plastic hooks of 20 mm width.

The inner tent shall be partitioned with the same material in the middle dividing the tent into two equal segments in shorter transverse direction.

The inner tent has a chimney reinforcement, 2 windows, 2 doors and 2 vents. The bath tub ground sheet (floor) is made of woven PE fabric sewn to the inner tent and extends up the sides of the wall to assure that the inside remains waterproof. No stitching is allowed at the lower part of the groundsheet to assure 100% waterproofing.



Ridge



Inner tent Front

Inner tent Rear

Technical Specifications

4. MAKE-Up OF INNER TENT wITH GROUND SHEET

4.2 Inner tent dimensions:
the inner tent, when hooked to the outer tent has a center height of 2.1 m, a width of 3.8 m, a wall height of 1.15 m and a base length of
3.95 m.

4.3 Inner doors:
Each door opening is 1 m wide and 1.75 m high from the floor (1.55 m measured from the upper edge of the ground sheet).

the door panels (1.1 m wide) are placed in the center of the front and rear walls.

the doors are made of the same material as the tent and closed with polyester n°10 coil zipper fasteners at the 2 vertical sides. the zipper fasteners can be opened from inside and outside.

The doors have a 200 mm PE flap at the bottom, made of same material as the ground sheet.

Black UV stabilized ropes or canvas laces with plastic toggles or hooks are used to keep the door opened when rolled up.

Mosquito nets (1.1 m wide) are placed on the inside of the doors. The 2 vertical sides are closed with n°10 polyester coil zipper

fasteners. The bottom edge of the mosquito flap closes with one piece of 25 mm Velcro along the entire width.
to facilitate the door closing:

- 2 elastic webbing loops of 80 mm with toggles or hooks are placed at the top of each door side aligned with the zippers. they attach to the corresponding 3 cm loops available inside the outer tent.

- 2 webbing loops with eyelets are placed at the bottom of each door side aligned with the zippers. they are used to attach the tent to the ground with pegs of 6 x 230 mm. the webbing loops are stitched into the seam where the pE joins the fabric, and are 200 mm long.








4. MAKE-Up OF INNER TENT wITH GROUND SHEET

4.4 Inner tent suspension system:

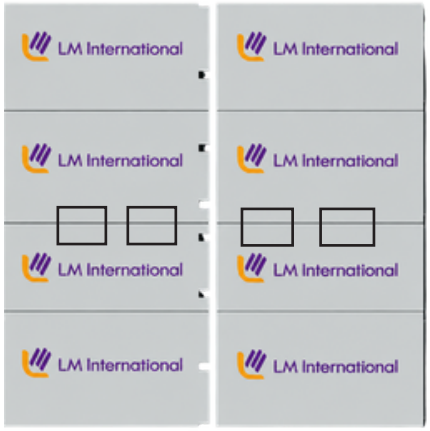
the inner tent is placed between the 2 end upright poles. It is attached (knotted) to these poles by 2 strings or strips of 25 mm by 200 mm

long at each end.

the inner tent is suspended from the ridge pipe with 8 galvanized 4 mm wire hooks mounted on 8 webbing loops of 50 mm wide. the total length of the loops including the metal hook is 100 mm. One at each end, two in the centre at 100 mm from the centre pole gap, and the 4 others equally spaced each side. The side walls of the inner tent are hooked with strong plastic or metal hooks mounted on webbing loops to the corresponding D-rings of the outer tent inside, at the top of each side pole and in the intermediate positions. the loops are made of non elastic 25 mm wide webbing bands and the finished length including the hook is 100 mm. 5 hooks in total per side.

the elastic webbing bands for the bottom of the walls are stitched to the tent in the seam where the pE and fabric are joined.

the inner tent has 32 loops of 20 mm, made of canvas, for the attachment of the optional inner lining or the optional inner partition. the loops are placed in the inside of the inner tent at every place where the inner tent is attached to the outer tent or to the frame, plus 2 loops at the bottom of each door where the webbings for the ground attachment are placed (8 at the ridge, 5 at the top of each side wall, 3 at the bottom of each side wall, 2 at the base of each door).





4.5 Inner tent ventilation system:

The inner tent has 2 triangular vents at each gable top, made of mosquito net and reinforced with 20 mm webbings. The size of the triangle

is 750 x 300 mm (all space from the ridge to the top of each door).

The ventilation system can be closed with a flap opening downwards, and sealed with 25 mm Velcro on all sides.

4.6 Inner tent windows:







The inner tent has 2 windows of same size and same reinforcement, corresponding to the outer tent windows. The flap made of same material as the inner tent is placed inside and opens downwards. It closes with 25 mm Velcro on all sides, and hangs freely when open.

4.7 Accessories inside the inner tent:

to hang light weight properties, 3 hooks of 20 mm mounted on webbing and 1 pouch of 150 x 200 mm made of netting material sewn on

3 sides are sewn inside the inner tent at the ridge. the pouch hangs from the ridge at the place of the 2nd ridge hook; the 3 hooks are placed at the level of the 3rd, 6th and 7th ridge hooks.

Technical Specifications

4. MAKE-Up OF INNER TENT wITH GROUND SHEET

4.8 Ground sheet:
The integrated ground sheet is made of pE woven fabric. the seam that attaches the ground sheet to the sides of the inner tent is 200

mm above the floor. To avoid water infiltration, no stitching seams are allowed in the groundsheet. All seams to be welded by heat sealing and have a 25 mm overlap. A reinforcement patch of 150 x 150 mm of the same material in the centre of the groundsheet to be glued or sealed, to avoid the centre pole damaging the groundsheet.

4.9 Chimney reinforcement:
A chimney reinforcement with non-perforated opening is placed at 0.5 m from one corner, on one end of the tent, between the corner of

one side wall and the corner of one tent door. this is made of heat resistant fabric (minimum 900°C).

Inside dimensions: W 250 x H 800 mm.

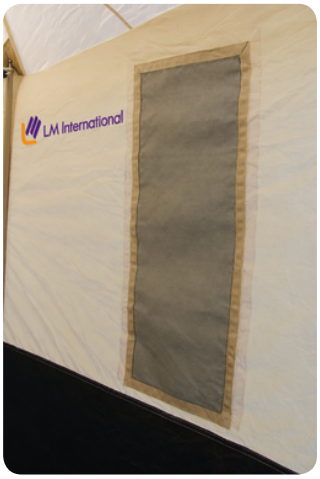
the lower edge of the opening is 300 mm above the ground.

the tent fabric is to be cut away completely at the position of the chimney opening. the edges of the opening are hemmed

stitched.



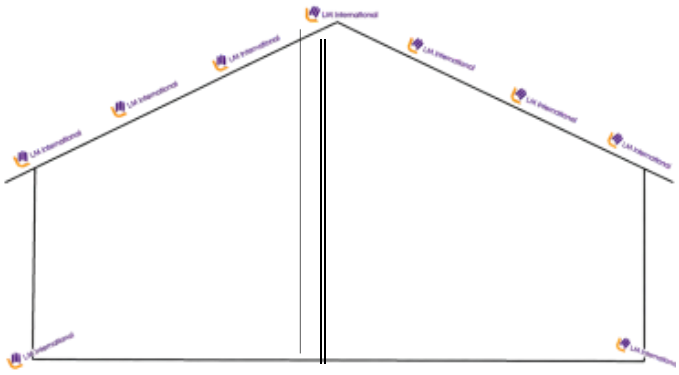




4.10 Inner partition:
One partition running from either side of the centre pole to the side walls, constructed from 2 half-partitions, stitched together at the top.

the partition is attached to the loops on the inner tent at the roof and wall levels with 10 pairs of string, and to the centre pole with 2 pairs of string.

the partition can be maintained open with 2 additional pair of string.





Technical Specifications

5. pOLES AND ACCESSORIES

5.1 poles:

Each section should be fitted together by a male / female joint of 100 mm made with an inserted pipe point-welded or crimped into one of

the pipes (not to be made with press-reduced pipe diameter).

- Ridge beam:

4 m long, with minimum outer diameter of 30 mm galvanized or painted steel pipe, minimum 1.2 mm wall thickness, in 2 pieces or 4 pieces depending on type of packaging.

the ends of the ridge beam to be reinforced with 2 short pipes of 27.5 mm outer diameter and of 100 mm length , inserted and point welded at both ends of the ridge.

22.5 mm holes drilled at 20 mm from both ends for upright poles to fit in.

the ends of the ridge beam to be protected with a non-sharp, non-cutting plastic cap.

- Upright poles:

2 upright poles of 2200 mm each (end plug included), with minimum outer diameter of 25 mm, galvanized or painted steel pipe of minimum 1.2 mm wall thickness, comes in one piece or in two pieces depending of the type of packaging. these 2 poles have a narrowed diameter of 21.5 mm by 40 mm long at the top end (end plug included), to insert into the ridge. the top end of these 2 poles to have a plastic bushing protruding in order to protect from the edges of the pipe.

1 central upright pole of 2170 mm each (size without U-bracket), with minimum outer diameter of 30 mm galvanized or painted steel pipe of minimum 1.2 mm wall thickness, comes in one piece or in two pieces depending on the type of packaging. this pole comes with a U-shaped metal bracket of 30 mm length .

the base of the 2 upright poles must have a round metal or plastic base-plate of 50 mm diameter.

The base of the central pole must have a soft flexible plastic or rubber base plate of minimum 50 mm diameter that will protect and avoid damage to the ground sheet while keeping proper stability.

- Side poles:

6 side poles of 1.25 m with minimum outer diameter of 19 mm painted or galvanized steel pipes of minimum 1 mm wall thickness, in one piece or in two pieces depending of the type of packaging. Each pole comes with a bended 20 to 30 mm pin on top in form of a flat hook.

4 door poles of 1.4 m with minimum outer diameter of 19 mm painted or galvanized steel pipes of minimum 1 mm wall thickness, in one piece or in two pieces depending on the type of packaging.

The 4 door poles come with a 50 mm pin at the top. The top of each pole must have a bend 20 to 30 mm pin form into a flat hook.

Side poles and door poles base plates are made with a round piece of plastic of 40 mm diameter, with a pin of 20 to 30 mm length pointing downward.

5.2 Ropes/loops/ guy runners:

6 ropes, black, UV treated, 3 m long each, 8 mm diameter, with a minimum tensile strength of 300 kg. 4

ropes, black, UV treated, 3 m long each, 6 mm diameter, with a minimum tensile strength of 140 kg. All

ropes to be passed in the rings of the tent from factory.

All ropes to have a securely knotted loop at one end, to place over the peg.

Hard wood or strong UV proof plastic guy runners, red color, already mounted on the ropes.

the grain of the wood runners to run lengthwise on the runner.

Size of the runners: 100 x 35 x 12 mm for wood runners, 15% less if made of plastic, the holes must be the same diameter as that of the ropes and adapted to the good running and blocking of the supplied ropes.



5.3 pegs and accessories:

6 pegs of 450 mm length made of angled iron of 25 x 25 mm, 3 mm thick, with an iron rod of 50 mm length and 6 mm diameter welded

on the top. On one end, both wings of the angled iron are cut at a 45° angle to form a pointed end. On the other end, both wings of the angled iron are pressed together to touch each other, and the 6 mm rod is welded on top of that end. the 6 mm rod produces a 25 mm prominence slightly bended downwards. these 6 pegs have 2 slots on each side, not opposite, to improve grip in soft ground. the width of the slots is approximately 3 mm, the depth is maximum 3 mm. pegs are painted or galvanized.





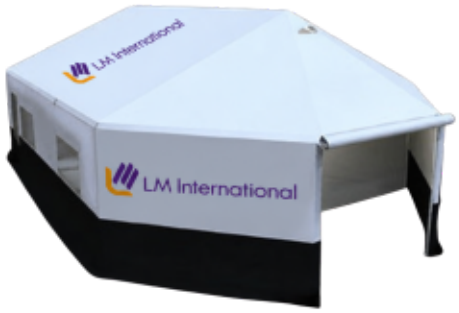


4 pegs of 300 mm length after bending, made of iron rebar of 10 mm diameter, with a hook bended on one end, “candy cane” shape, or a cross shape, painted or galvanized.

26 pegs of 230 mm length , made of iron bar of 6 mm diameter, with a round or cross shaped head on one end, to avoid damaging the mud flap when pushed in the eyelets, painted or galvanized.

1 metal hammer of 1 kg with 300 mm wooden handle. (See specification in part 1).

Item Application Sample





formation and D

the Framed tent is ideal to be used in urban areas (hard surfaces). It is used by LM International/ICRC/IFRC and suitable for a family of 5 people, following the recommended minimum living area in hot and temperate climates (3.5 m2 per person), and providing additional space for cold climates. In cold climates, it is advisable to supply the “Winterization Kit for Family tent”.
The technical specifications of this tent were developed by shelter specialists, with close technical cooperation between LM International, IFRC and ICRC, to guarantee a product fit for human use in all climates, with appropriate outdoor life span, at a minimum cost.
The technical specifications of this tent are generic, ensuring that the product can be manufactured by different suppliers in various countries, with the common technical know-how and standard equipment from the tent industry.
LM International purchases Framed tents through international tender processes and establishes Frame agreements (long term agreements) with manufacturers that have completed validation / qualification of Family Tent samples in one of the LM International approved laboratories. Family tents are subject to random and continuous quality control throughout the Frame Agreement duration period.
For the validation / qualification of Family Tent samples, it is advisable to first ensure the adherence to the main material specifications. Information about approved technical laboratories can be obtained from LM International Supply Management Service in Budapest.
according to its design, Framed tents should comply with all the technical requirements, criteria and parameters described in this document and as detailed in the technical specifications section. this tent is heavier and more expensive as compared to the standard Family tent. this tent is meant for situations where the standard Family tent is not the appropriate solution, i.e. urban areas with restricted space to install tents.
this self-standing frame tent allows easy set up on hard surface, offers more inner volume, and requires fewer surfaces for erection, as compared to the standard Family tent. Nevertheless, to assure a good wind resistance, the tent needs to be securely anchored to the ground with the provided guy ropes and pegs.The symmetric flaps offer the possibility to join 2 tents together lengthwise to create larger units.

packing

one tent with all accessories is packed in one bundle. the inner tent and outer tent are folded in a way that assures that the ground sheet provides protection to the tent and accessories from dirt and moisture.

the bundle is made of woven pE fabric of 180 g.

total length is maximum 2250 mm, approximate diameter is 400 mm. the metal poles and metal pegs are packed in 2 separate bags to avoid damaging other items inside the master bundle. Both of these bags are made of the same material as the master bundle.

these bags have a closure system that assures that the accessories will not come out of the bag during transport and handling. particular care is taken when packing the pegs to assure they will not pierce the bag.

the bundle is closed with 2 webbing straps of 25 mm width, each strap with a self-locking metal buckle that will not slide during transport. Each strap has 2 handles (pE or polyester). these straps are not sewn to the bundle.

the buyer’s markings are printed on the outside in indelible ink.

the international standard warning sign “protect from water” is printed on the outside of the package.

xpected Life Spa

the tent is not a long-term habitat solution. It is meant for emergencies. It has a minimum 1-year lifespan, irrespective of climate.

Note: last updated, June 2015

Weight and Volume

gross weight of Framed tent: 87 kg approx.

Dimensions of Framed tent: 220 x 40 x 40 cm (0.35 m^3)

Dimensions

Centre height:	2.4 m
Width:	4.15 m
Ridge length:	4 m
Side wall height:	1.50 m
Door height:	1.6 m
Centre base length:	5.2 m

Optimal Shipping / Container Information

It is advisable not to load the tents as bulk shipment as they are too heavy and can be damaged during transportation (due to connectors).

load ability with metallic cages:

20'DC – 70 Framed Tents

40'HC - 140 Framed tents

40'DC – 140 Framed Tents

gross weight of cages with Framed tents (9 tents per cage) – 810 **kg (approx.)**

Dimension of cage with Framed tents (9 tents per cage) – 125 x 117 x 113 cm

Manufacturer Marking

Every tent should include a tag, stitched inside the tent in one corner seam of one side wall, on the outer tent, 10 cm from the end of the wall, and 10 cm above the line where the canvas joins the PE flap, with the manufacturer identification (letters not higher than 2.5 cm). 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.

Metallic Cages

It is advisable to use stackable metal frame pallets. Such pallets avoid multiple manual handling of the bags and prevent the bags from being torn, and provides easy and fast on and off loading of containers, trucks, etc. assures ventilation between the tents while stored in hot and humid climates which are required for long duration storage.

the metal cage pallet is stackable, protected from corrosion and adapted to optimize the container capacity.



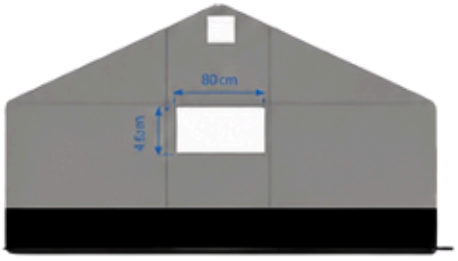




Single erecting: Setting up of one single tent











optional erecting: Setting up two tents jointly in order to achive bigger inner space











LM International Logo Application Ref

LM International

LM International vertical visibility logo on the roof of the tent.
the vertical visibility logo should be printed in purple indedile ink on both sides of the roof and in the middle for maximum visibility as showed on the graphic reference, when using 150 cm material and two seams on the canvas roof (= 1.35 m and H= 1.65 m), following the "X" and "y" proportionality rule to avoid distortion on the logo and letterings. RULE: length 1. I = (1 X = 15 cm), so (9 X = 1.35 m). Height, H = (1 y = 15 cm), so (11 y = 1.65 m).
alternatively, the vertical visibility logos could be placed diagonally on opposite sides of the roof, when using 200 cm material and a central seam.

120cm

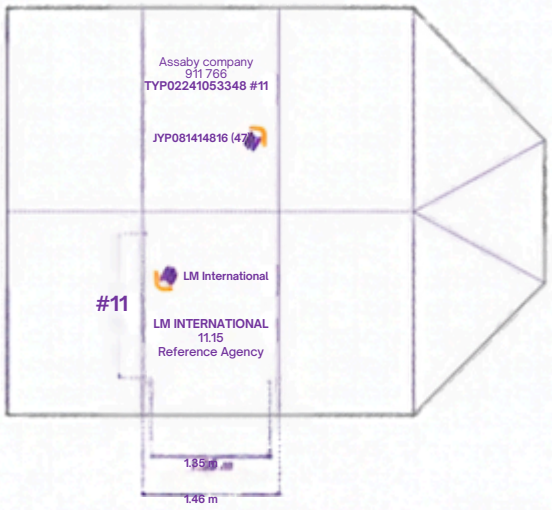
LM International

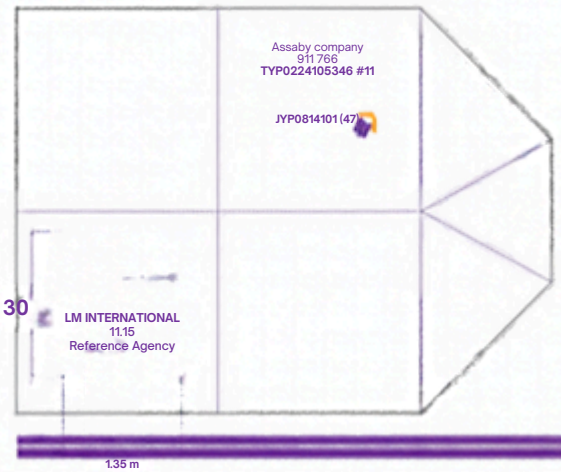
LM International horizontal visibility logo on both sides next to the tent's doors:
LM International horizontal visibility logo should be printed in purple indedile ink on both sides of the outer tent on both ends (2) of the tent next to the doors (I = 1.2 m and H = 0.35 m), the width of the marking must be 120 cm and the height proportional to the width without any distortion of the logo and letterings (approx. 35 cm).

Typeface (Font), Colour specifications for printing: Font: Helvetica Bold. Colour specification: Pantone Pupil, X = 0%, Y = 0%, K = 0%

LM International

LM International vertical logo on the roof of the Framed tent





ical Specifica

The specifications of the Framed Tent are described below according to technical and performance requirements in five parts as follows:

1. Materials
2. General points of the finished
3. product
4. Make-up outer tent
5. Make-up inner tent with ground sheet
   Frame, poles and access

1. MATERIALS

All canvas materials for the tent must meet the specifications below and ISO 10966.

Information for testing:

- Two complete tents would be required to perform all the laboratory tests.
- the test pieces would be cut from one complete tent.
- the second complete tent would be used for the rain test.
- a product is deemed acceptable only if the same sample passes all criteria.

1.1 SpECIFICatIoNS FoR tHE oUtER tENt CaNVaS

Denomination and norms	Required minimum values
1. Composition, ISo 1833	Polyester and cotton blended fibers yarns. Cotton: 40% (±10), polyester: 60% (±10) i.e., 50 to 70% polyester, with balance in cotton.
2. Specific weight (g/m^2), ISo 3801	350 g/m² (±10%) in finished state, before FR Treatment.
3. Colour	Natural white, not dyed.
4. Water vapor permeability, ISo 17229	Minimum 2000 g/m^2/24h.
5. tensile strength (N), **apply ISo 13934-1 to 10 test pieces of plain canvas.** **apply ISo 13935-1 on 5 test pieces with seams, cut from the ten perpendicular to the seam, in the roof.**	Warp and weft 850 N minimum. For plain canvas test: 5 test pieces in warp direction, 5 test pieces in weft. on seams, the test is applied to 50 mm width on the sample, as described in ISo 13935-1 page 7.
6. tear resistance, started (N), ISo 9073-4	Warp and Weft 60 N minimum.
7. Water penetration resistance, ISo **811 test pieces of plain canvas.**	30 hpa minimum, increasing speed at 100 mm per minute.
8. Rain penetration resistance, ISo 5912 **test piece is the complete outer tent only.** **there should be no water penetrating inside the inner and outer tent, including through wick effect. only the 4 places at the to of the door poles may have some leakages through the eyelets.**	apply procedure as per point 4.2.11 in ISo 5912 in point 5.6 plus following: A visual control from the inside of the tent, while the artificial rain is on, must be done after 2h and 5h, with the complete tent.
9. Dimensional variation when soaked in water, ISo 7771	Maximum 3%.

1.1 SpECIFICatIoNS FoR tHE oUtER tENt CaNVaS	
Denomination and norms	**Required minimum values**
10. tensile strength resistance after exposure to micro-organisms **Under ISo 13934-1 and ISo 13935-1 after completing BS 6085 (soil burial - 28 days).** **apply on 10 test pieces of plain canvas and 5 test pieces with seams.**	30% maximum strength-loss on minimum required value and 50% maximum strength loss on original value of the same product. For plain canvas test: 5 test pieces in warp direction, 5 test pieces in weft. on seams, the test is applied to 50 mm width on the sample, as described in ISo 13935-1 page 7.
11. Efficiency of water-repellent treatments after soaking in water. **Same test as point 7, on samples soaked in water under ISo 7771 without wetting agent.**	30 hpa minimum, increasing speed at 100 mm per minute.
12. Efficiency of fungicides product after soaking in water **Same test as point 10, on samples soaked in water under ISo 7771 without wetting agent.**	10% maximum additional loss as compared to the results from point 10.
13. tensile strength after exposure to UV and moisturizing (climatic simulation) **Exposure in a climatic chamber under ISo 4892-2, type a, 360 hours, followed by tensile test under ISo 13934-1.**	30% maximum strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product. Number of test pieces: 3 test pieces in warp direction, and 3 test pieces in weft.
14. Flame retardant under Cpal84	Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame average and maximum 30s after flame per test piece. Ageing under IS) 4892-2, type A, 360 hours. For the groundsheet it should pass Cpa184 section 5 and for all other components including mud flap, it should pass Cpa184 section 6.

1.2 SpECIFICatIoNS FoR tHE INNER tENt CaNVaS	
Denomination and norms	**Required minimum values**
1. Composition, ISo1833	Polyester/Cotton blended fibers yarns. Cotton: 40%(±10), polyester: 60%(±10) i.e., 50 to 70% with balance in cotton or cotton 100%.
2. Specific weight (g/m^2), ISo 3801	130 g/m2 ±10% in finished state, before FR Treatment.
3. Colour	Dyed cream or beige color.
4. Water vapor permeability, ISo 17229	Minimum 2000 g/m^2/24h.
5. tensile strength (N), ISo 13934-1	Warp and Weft 300 N minimum.
6. tear resistance (N), ISo 9073-4	Warp and Weft 20 N minimum.
7. tensile strength resistance after exposure to micro-organisms Under ISo 13934-1 after BS6085 (soil burial - 14 days). **apply on 10 test pieces of plain canvas.**	Maximum 30% of strength loss on minimum required value and maximum 50% strength loss on original value of the same product. 5 test pieces in warp, 5 test pieces in weft.
8. Flame retardant under Cpal84	Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame average and maximum 30s after flame per test piece. Ageing under IS) 4892-2, type A, 360 hours. For the groundsheet it should pass Cpa184 section 5 and for all other components including mud flaps, it should pass Cpa184 section 6.

1.3 SpECIFICatIoNS FoR MUD Flap pE FaBRIC

Specifications for standard LM International plastic sheeting can also apply. In this case the original lab report from the PE factory will be accepted if still valid.

Denomination and norms	Required minimum values
1. Composition	Woven, high-density polyethylene black fibers, fabric laminated on both sides with low-density polyethylene coating. alternatively plastic tarpaulin can be used.
2. Specific weight (g/m^2), ISo 3801	130 g/m2 ±10% in finished state, before FR Treatment.
3. tensile strength (N)	Warp and weft 650 N minimum.
apply ISo 13934-1on 10 test pieces of plain pE fabric.	Elongation 15% to 25%. For plain pE fabric test: 5 test pieces in warp direction, 5 test pieces in weft.
apply ISo 13935-1 on 5 test pieces with seams, cut from the tent perpendicular to the seam, at the junction of pE and canvas.	on seams, the test is applied to 50 mm width on the sample, as described in ISo 13935-1 page 7.
4. tear resistance (N) **ISo 4674-1 (method B)**	Warp 100 N minimum, weft 100 N minimum.
5. Resistance to micro-organisms	Insensitive to micro-organisms. Not to be tested.
6. UV resistance as percentage of tensile strength-loss **Under ISo 1421, after 1500 hours.** **UV under aStM g53/94 (UVB 313 nm peak).**	30% maximum strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product. 5 test pieces in weft direction, and 5 in warp direction.
7. Colour	White if made with LM International standard plastic sheeting.
8. Flame retardant under Cpal84	Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame per test piece. Ageing under ISo 4892-2, type a, 360 hours. For the goundsheet it should pass Cpa184 sectin 5 and for all other components, including mud flaps, it should pass CPA 184, section 6.

1.4 SpECIFICatIoNS FoR tHE gRoUNDSHEEt pE FaBRIC

Specifications of standard LM International plastic sheeting can also apply. In this case the original lab report from the PE factory will be accepted if still valid. The same type of PE as per the one used for the mud flaps can be used for the ground sheet. In this case the criteria below do not apply.

Denomination and norms	Required minimum values
1. Composition	Woven polyethylene fabric, coated on both sides with low-density polyethylene. alternatively plastic tarpaulin can be used.
2. Specific weight (g/m^2), ISo 3801	130 g/m2 ±10% in finished state, before FR Treatment.
3. tensile strength (N), ISo 1421	Warp 300 N minimum, weft 300 N minimum.
4. tear resistance (N), ISo 4674-1 (method B)	Warp 60 N minimum, weft 60 N minimum.

1.4 SpECIFICatIoNS FoR tHE gRoUNDSHEEt pE FaBRIC

Denomination and norms	Required minimum values
5. Resistance to micro-organisms	Insensitive to micro-organisms. Not to be tested.
6. UV resistance as percentage of tensile strength-loss **Under ISo 1421, after 300 hours.** **UV under aStM g53/94 (UVB 313 nm peak).**	30% maximum strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product. 5 test pieces in weft direction, 5 test pieces in warp.
7. Colour	White if made with LM International standard plastic sheeting.
8. Flame retardant under Cpal84	Pass CPAI84 sections 5 and 6 with maximum 10s after flame average and maximum 30s after flame average and maximum 30s after flame per test piece. Ageing under IS) 4892-2, type A, 360 hours. For the groundsheet it should pass Cpa184 section 5 and for all other components including mud flaps it should pass Cpa184 section 6.

1.5 SPECIFICATIONS FOR THE MOSQUITO NET, INNER TENT DOORS AND WINDOWS

Denomination and norms	Required minimum values
1. Material, ISo 1833	polyester 100%, or pE 100%.
2. Fabrication, ISo 8388	Warp knitted.
3. Denier	75/100 for the polyester. 100 to 150 for the pE.
4. Filament	Multi-filament 36 or higher for the polyester. Monofilament for the PE.
5. Mesh size	25 holes/cm² (156 holes/inch²).
6. Weight, ISo 3801	85 to 100 g/m² for polyester. 40 to 47 g/m² for pE.
7. Shrinkage, ISo 5077	5% maximum.
8. Bursting strength, ISo 13938	250 kpa minimum for polyester. 320 kpa minimum for pE.
9. Bursting strength after exposure to UV and moisturizing (climatic simulation) **Exposure in a climatic chamber under ISo 4892-2, type a, 180 hours, followed by bursting test under ISo 13938.**	30% maximum strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product. Number of test pieces: 3 test pieces.
10. Colour	White.

1.6 SpECIFICatIoNS FoR tHE oUtER tENt gUyINg poINtS

Denomination and norms	Required minimum values
1. Material compositions	polyethylene, polypropylene or polyester ropes, polyester straps, steel rings, elastic device.
2. tensile strength (N), ISo 13934 **on the samples with a complete guy point ensemble including all of the reinforcement pieces.** **Refer to note below.**	3000 N minimum for the 6 side guy points (3 test pieces). 1400 N minimum for 4 other guy points (2 test pieces). Elongation of the elastic device under 1000 N: 50 mm minimum, 100 mm maximum.
3. UV resistance in percentage of tensile strength-loss after exposure in a climatic chamber **Under ISo 4892-2, type a, 360hours.**	30% maximum strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product 1 test piece at 1400 N, and one at 3000 N.
4. Colour	Black ropes and straps, galvanized steel.

Notes for point n°2:

- Sample size: W 300 x l 500 mm.
- Sample to be cut at the centre guy line for the 6 side points (500 mm length including eave).
- Samples to be cut on the top corner of the outer doors for the 4 other points.
- Samples to be folded in order to fit in the traction apparatus so that the entire width of the canvas is submitted to the traction when clamped in the jaw of the apparatus. Samples must include: a canvas section from the tent roof, canvas reinforcements, strap, ring, elastic device, buckle, runner and a significant part of the guy rope (the ring and the runner do not need to be included in the UV test).
- traction must be applied between the tent's roof canvas and the guy rope.

1.7 SpECIFICatIoNS FoR HaMMER

Denomination and norms	Required minimum values
1. type	Sledge hammer, 1 kg head, with 30 cm wooden handle. In accordance with ISO 15601 and the specifications listed below.
2. Handle	No chips, rough surfaces, holes or knots. Smooth surface. Strong dry flexible wood. Handle adjusted to head in order to protrude on other side of the head, and be blocked with a metal wedge; or have a conical shape (like a hoe). Moisture minimum 10% and maximum 15%, under ISo 3130.
3. pull apart test	Clamp head in a vice jaw after two series of 25 vigorous blows from varying delivery angles. apply traction of 500 N while trying to pull out the handle, there should be no damage to the hammer's head or handle, and the handle should remain firmly attached to the head.

2. GENERAL pOINTS FOR THE FINISHED pRODUCT

2.1 performances:
The final product must be able to withstand 75 km/h wind, to be strongly attached to the ground and tensioned without any damages.

When closed, the tent must give a good protection against dust, wind, rain, snow, insects and small crawling fauna. Minimum roof load to be 300 N/m² under ISo8937 (snow load for camping tent). In combination with additional central 31 mm support pole included in optional winter package.

The recommended final packed tent weight is approximately 87 kg.

2.2 Seams and stitching:
all seams subject to possible tension are double lock stitched and water proofed. Stitching produces strong, long lasting, neat and

professional looking seams.

the stitch count as well as UV and rot-proof sewing threads are appropriate and adapted to each fabric. It allows for strong waterproof seams with at least the same life span as the tent.

the seams are always oriented in order to let the rain run freely, to avoid retaining water lines or water pockets.

Wherever possible the colour of the sewing thread is adapted to the fabric colour.

2.3 Ropes, webbing bands, toggles, pegs, reinforcement fittings, and all other accessories:
all ropes and webbing bands are heat cut. all ropes are knotted to the tent from the factory.

all above mentioned items are rot proof and UV proof at least as much as the tent canvas which they are sewn to. No webbing or rope is sewn through a stitch going from outside the tent to inside the tent to avoid water penetration by capillarity, or are made of waterproof materials.

laces or loops can also be made of the same canvas as the tent roof/wall for the outer tent loops, and of the same canvas they are sewn to for the inner tent loops.

2.4 Zipper fasteners:
all the zip fasteners conform to a resistance of 700 N lateral traction under ISo5912.

2.5 Eyelets:
all metal eyelets are rustproof and correctly placed, reinforced with a fabric patch and of a minimum 10 mm inner diameter.

2.6 Metal rings:
all metal rings are rustproof galvanized and closed by welding.

2.7 Dimensional tolerance:
Unless otherwise specified, a tolerance of maximum ±3% is accepted on all dimensions.

2.8 Long storage (shelf life):
the tent is treated and packed in such a way that the tent can be stored up to minimum 5 years in proper storage conditions without any

damage or performance reduction. Store elevated from the ground (on pallets and pallet racks) in a dry, clean and ventilated warehouse.

the tent must be manufactured and packed in clean and appropriate conditions to avoid contamination from soil dust and other contaminants.

We recommend using metal frame pallets, these pallets avoid multiple manual handling of the bags, easy and fast on and off loading of containers, trucks, etc. assures ventilation between the tents while stored.

Technical Specifications

3. MAKE-Up OF OUTER TENT

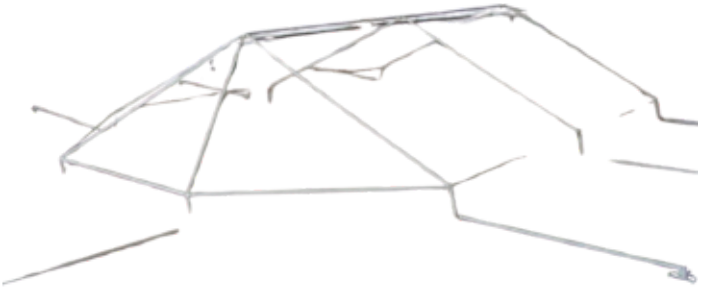
3.1 General Description of outer tent:

the outer tent is made of several cloth sections that form the general shape of the tent. the seams are running from the ridge down to

the roof edges, perpendicular to the ridge line. the outer tent is supported by a metal frame with 2 up standing poles to support the ridge of the frame, 4 guy ropes on each side, 2 guy ropes at front end and 1 guy rope at the back. the attachment points of each guy rope are reinforced.

3.2 Dimensions / erecting system:

Centre height:	2.4 m
Width:	4.15 m
Ridge length:	4 m
Side wall height:	1.50 m
Door height:	1.6 m
Centre base length:	5.2 m



the outer tent is placed on the frame and maintained in position to the frame by using strings, Velcro straps and webbing bands with hooks (please refer to point 3.8)

3.3 Reinforcements:

the 11 roof guying points are made of 50 mm wide polyester straps, sewn to the fabric in extension of the roof. on the 4 corner guying

points an additional layer of pVC coated canvas is added on the inside.

the entire length of the ridge is reinforced on the inside with a 150 mm strap of same fabric as the roof.

the attachment sleeves for the ridgepipe are sewn to this reinforcement.

FAMILY TENT

3.4 Attachment system (guy lines):

the outer tent is anchored to the ground using 11 guy lines which are attached to 11 metal pegs.

Each guying point on both sides presents a loop made of 50 mm wide webbing. the length of the webbing allows, when folded double, the creation of a loop of minimum 30 mm long, to be stitched to the tent with a strong Z or X sewing on minimum 50 mm long.

the webbing loops are placed perpendicularly to the tent edge on the sides, at 30° angle in the corners, and in the alignment of the vestibules roof shape at ends.

11 metal rings are attached to the loops by the means of an elastic device. the ropes pass into the metal rings. When tensioning, the ropes are sliding in the metal rings.

At the other end, the ropes have a fixed knotted loop to place over the peg.

The attachment points are made in such way they comply with resistance specified in point 1.7.





3. MAKE-Up OF OUTER TENT

3.5 Windows:





The outer tent has 6 windows. 5 with mosquito netting and a rain flap running on both sides of the tent and one on the back side. 1 small window with transparent PE fabric on the vestibule. This window has a flap inside made with the same canvas material as the iner tent.

the inside dimension of the large windows are 80 cm wide and 45 cm high and the top edge of the window is placed ±30 cm below the roof of the tent. the 5 window openings are reinforced either with strong reinforcement netting (large holes strong plastic net) or with standard netting and strips of 20 mm polycotton webbing that reinforce the window horizontally (1 webbing) and vertically (1 webbing). These webbings are sewn to the edges of the tent opening and to the mosquito netting.

The window flap is 90 cm wide x 55 cm high. The flap is held by 25 mm Velcro webbing which is placed along the length of the vertical sides and bottom and at a 25 mm distance from the window opening. Loops and plastic toggles or hooks are used to keep the flap open when rolled up.

3.6 Ventilation ½ cones on top of the vestibules:



The outer tent has 2 ventilation openings in front and back with reinforcement netting and a rain flap.

Front vent is triangular and is placed on the top of the vestibule. the inside dimensions of the vent is 280 mm wide and 250 mm high. the vent flaps are made in such a way that they are distanced from the ventilation opening when open, making a ½ cone shape of 250 mm in its middle.

The flap can be closed with a 25 mm Velcro attached to the full width.

the back ventilation opening is rectangular and placed on top of the wall, Size 300 x 300 mm.

the vent openings are reinforced either with strong reinforcement netting (large holes strong plastic net), or with standard netting and with two strips of 20 mm cotton or polyester webbing that bisects the vent horizontally and vertically. these webbings are sewn to the edges of the vent opening and to the netting.

3.7 Outer tent door

Front door

Size: W 1.5 x H 1.5 m

Door flaps are 1.5 m wide x 1.6 m high:

- Upper part is 1.5 m wide x 1.08 m high, made of canvas.
- lower part is 1.5m wide x 0.52 m high, made of woven pE fabric.

Rear door

Size: W 1.0 x H 2.1 m

Door flaps are 1.0 m wide x 2.1 m high:

- Upper part is 1.0 m wide x 1.58 m high, made of canvas.

- lower part is 1.0 m wide x 0.52 m high, made of woven pE fabric.

3. MAKE-Up OF OUTER TENT

the vestibule doors can be used as awnings. the rolled up door is hold up by 3 loops and 3 plastic toggles or hooks.

the doors can be closed by means of lacing/loop system. the loops are made of 4 mm rope or canvas strips (7 loops and eyelets per door side). For each lace/loop system, a toggle or a hook is placed in order to attach the last loop.

The lacing/loop system is protected by a double 50 mm flap to prevent rain and draughts.

Each door has one side closable from inside and the other side closable from outside.



3.8 Side walls, vestibule walls, mud flaps:

total height is 1.70 m corresponding to 1.50 m vertical plus 0.2 m on the ground.

the upper part (1 m) of the walls is made of polyester Cotton fabric, lower part (0.7 m) of pE fabric.

The mud flaps are equipped with 12 eyelets (2 on each side, 4 in front and 4 rear), placed on a line reinforced with a full length 50 mm webbing sewn to the mud flap at floor level, on the inside.

alternatively plastic sheeting can be used and instead of webbing bands reinforcement bands are acceptable. Stitch length and thread to be appropriate for the materials to prevent tear off of the mud flap along the stitching.

the outer tent is attached to the frame and poles, with 8 Velcro straps for the roof pipes.
The mud flaps are hooked with 25 mm large adjustable webbing band with hook to the base plates.





Technical Specifications

3. MAKE-Up OF OUTER TENT

3.9 Chimney reinforcement:

a chimney reinforcement with non-perforated opening is placed at side wall, between the corner and the window. this is made of heat resistant fabric (minimum 900°C). The type of fabric that keeps the fibers not loose when cut.

the lower edge of the heat-resistant fabric must be 500 mm above the ground, where the canvas joins the pE part (a band of canvas of 2 to 3 cm is allowed between the PE and the fireproof material).

Inside dimensions: W 250 x H 600 mm.

The chimney flap outside is 350 mm wide x 700 mm high. The flap is stitched at the bottom 50 mm under the lower edge of the chimney opening. The flap is held by 25 mm Velcro webbing which is placed along the entire vertical sides and upper end at a 25 mm distance from the chimney opening.

the tent fabric is cut away completely at the position of the chimney opening. the edges of the chimney opening are hemmed stitched to the inside.





3.10 Connection flap:

Made of the same fabric as the outer tent. Symmetric flap system offers the possibility to connect 2 tents together lengthwise.







4. MAKE-Up OF INNER TENT WITH GROUND SHEET

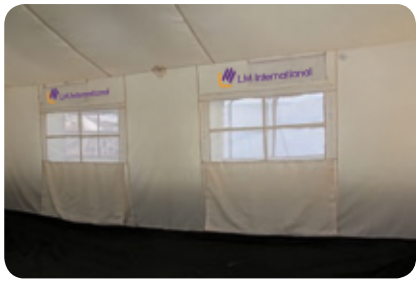
4.1 General description:

The inner tent is square in shape and is hanging inside the outer tent structure and is hooked to the frame. All dimensions are meant to

allow a 10 cm air gap between the outer tent and the inner tent.

at the ground sheet level it is hooked to the frame base plates with 6 elastic webbings and plastic hooks of 20 mm width.

The inner tent has one chimney reinforcement, 5 windows, 2 doors and 2 vents. The bath tub ground sheet (floor) is made of woven PE fabric sewn to the inner tent and extends up the sides of the wall to assure the inside remains waterproof. No stitching is allowed at the lower part of the groundsheet to assure 100% waterproofing. The ridge of the inner tent has 3 equally divided holes reinforced with PVC fabric to allow protruding of the support poles to join the frame.







4.2 Inner tent dimensions:

The inner tent, when hooked to the outer tent has a centre height of 2.3 m, a width of 3.95 m, a wall height of 1.40

m and a base length of 3.80 m.



Back View

Front View

4.3 Inner doors:

The door opening is 1 m wide and at 1.70 m high from the floor (1.50 m measured from the upper edge of the ground sheet).

the door panel (1.0 m wide) is placed in the centre of the front wall.

the doors are made of the same material as the inner tent and close with polyester n°10 coil zip fasteners at the 2 vertical sides. the zip fasteners can be opened from inside and outside.

4. MAKE-Up OF INNER TENT WITH GROUND SHEET

The doors have a 200 mm PE flap at the bottom, made of same material as the ground sheet.

Black UV stabilized ropes or canvas laces with plastic toggles or hooks are used to keep the door opened when rolled up.

Mosquito nets (1.0 m wide) are placed on the inside of the doors. The 2 vertical sides are closed with n°10 polyester coil zip fasteners. The bottom edge of the mosquito flap closes with one piece of 25 mm Velcro along the entire width.

to facilitate the door closing:
2 webbing loops with eyelets are placed at the bottom of each door side aligned with the zips. they are used to attach the tent to the ground with pegs of 6 mm x 270 mm. the webbing loops are stitched into the seam where the pE joins the fabric, and are 200 mm long.

4.4 Inner tent suspension system:







the inner tent is suspended from the frame with 24 to 26 metal galvanized 4 mm wire hooks mounted on webbing loops of 50 mm wide.

the total length of the loops including the metal hook is 100 mm. the hooks are positioned as per below drawing: 6 at the ridge, 5 on each side wall pipe and 4 on each gable pipe. the side walls of the inner tent are hooked with plastic hooks mounted on webbing loops to the corresponding rings of the base plates of the frame.

these elastic webbing bands are stitched to the tent in the seam where the pE and fabric are joined. the inner tent has 26 loops of 20 mm, made of canvas, for the attachment of the optional inner lining or the optional inner partition. the loops are placed in the inside of the inner tent at every place where the inner tent is attached to the frame, plus 2 loops at the bottom of each doors where the webbings for the ground attachment are placed (6 at the ridge, 5 at the top of each side wall, 3 at the bottom of each side wall, 2 at the base of each doors).

4.5 Inner tent ventilation system:



The inner tent has 2 triangular vents at each gable top, made of mosquito net and reinforced with 20 mm webbings. The triangle is 900 x 300 mm (all space from the ridge to the top of each door). The ventilation system can be closed with a flap opening downwards, and sealed with 25mm Velcro on all sides.

4.6 Inner tent windows:







the inner tent has 2 doors, 5 windows, two on each side wall and one at the back wall of same size and reinforcement, corresponding to the outer tent windows. The flap made of same material as the inner tent is placed inside and opens downwards. It closes with 25 mm Velcro on all sides, and hangs freely when open.

4. MAKE-Up OF INNER TENT WITH GROUND SHEET

4.7 Accessories inside the inner tent:
to hang light weight properties, 2 pouches hang above each window, webbing with hooks at the ridge.

4.8 Ground sheet:
the integrated ground sheet is made of pE woven fabric. the seam that attaches the ground sheet to the sides of the inner tent is 200

mm above the floor. To avoid water infiltration no stitching seams are allowed in the groundsheet. All seams to be welded by heat sealing and have a 25 mm overlap.

4.9 Chimney reinforcement:
a chimney reinforcement with non-perforated opening is placed at the side wall corresponding the chimney reinforcement of the outer fold.

this is made of heat resistant fabric (minimum 900°C).

Inside dimensions: W 250 x H 550 mm. the lower edge of the opening is 650 mm above the ground.

the tent fabric to be cut away completely at the position of the chimney opening. the edges of the opening are hemmed stitched.







4.10 Inner partitions:
Two types of inner partition can be added on request, made of the same material as the inner tent. One type is a semi-partition running

from the centre pole to one side wall. one type is a full partition, running from one side wall to the opposite side wall, made with 2 pieces of the semi-partition. these partitions are attached to the inner lining loops at roof and wall levels, and to the centre pole.





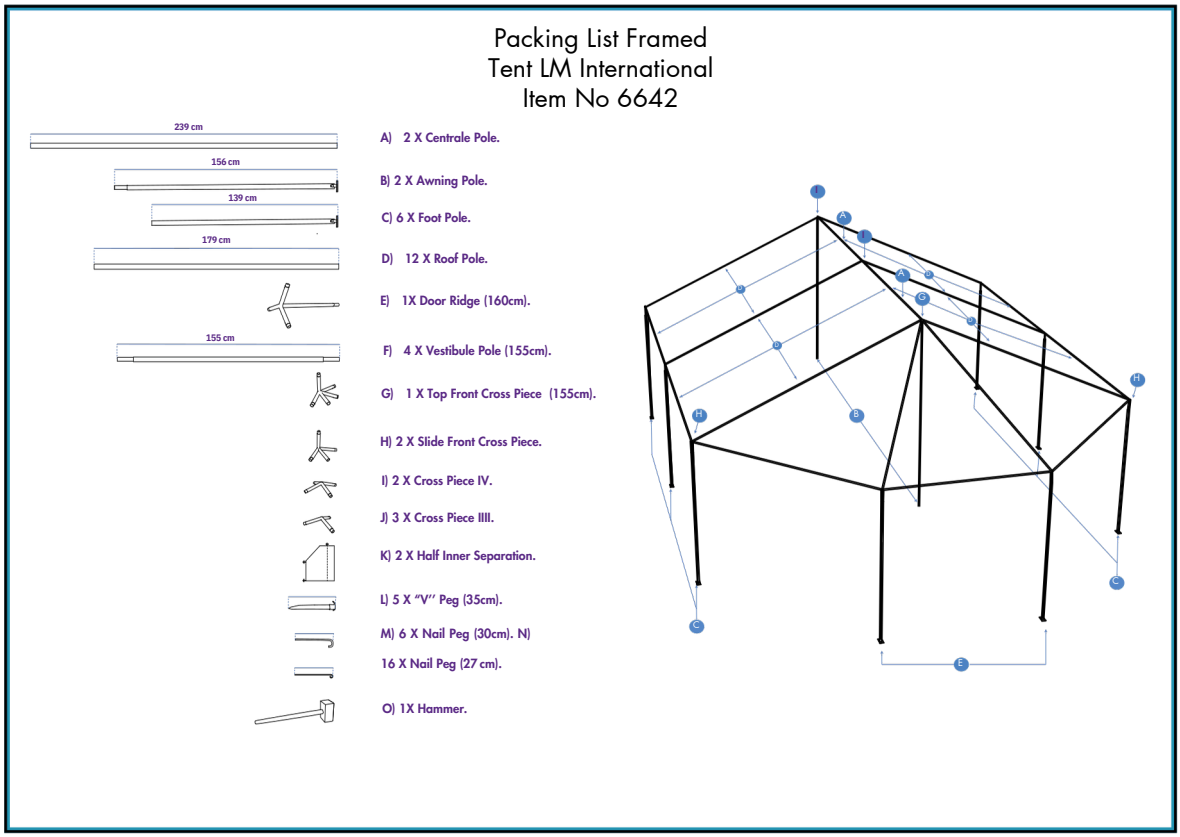


5: FRAME, pOLES AND ACCESSORIES

5.1 Frame and poles:

Frame sections:

- All frame parts are made of 25 x 1.2 mm thick galvanized or painted steel pipe. The male fittings of the cross pieces are to be minimum 8 cm long.
- Each section should fit together with a male and female 80 mm joint, made with a 160 mm long inserted pipe point-welded or crimped into one of the pipes (not to be made with press-reduced pipe diameter).



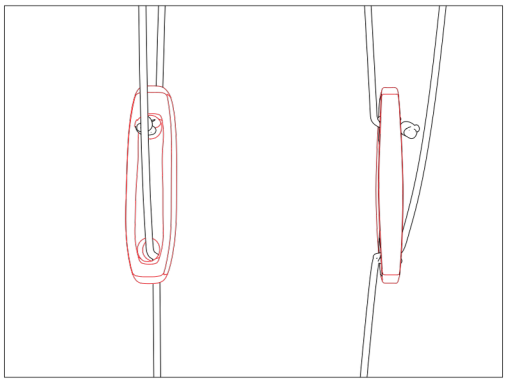
Support poles:

- 2 support central poles of 239 cm each (size without U-bracket), with minimum outer diameter 25 mm galvanized orpainted steel pipe minimum 1.2 mm wall thickness, comes in two pieces. this pole comes with U-shape metal bracket of 30 mm length .
- the base of each pole to have a metal or plastic base plate of 50 mm diameter.
- the poles protrude the inner tent at pVC reinforced positions on the ridge.

5: FRAME, pOLES AND ACCESSORIES

5.2 Ropes/loops/guy runners:

- 4 corner ropes, black, UV treated, 3 m long each, 8 mm diameter, a min. tensile strength of 300 kg.
- 4 intermediate ropes, black, UV treated, 3 m long each, 6 mm diameter, a min. tensile strength of 140 kg.
- 2 vestibule ropes, black, UV treated, 3 m long each, 6 mm diameter, a min. tensile strength of 140 kg.
- 1 back gable rope, black, UV treated, 5 m long, 8 mm diameter, a min. tensile strength of 300 kg.
- all ropes to be passed in the rings of the tent from factory.
- all ropes to have a securely knotted loop at one end, to place over the peg.
- Hard wood or strong UV proof plastic guy runners, red colour, already mounted on the ropes.
- the grain of the wood runners to run lengthwise of the runner.
- Size of the runners: 100 x 35 x 12 mm, holes to be the same as the diameter of the rope.
- the ropes are passed in the runners in a way that makes the maximum blocking effect on the ropes.



5.3 pegs and accessories:

- 5 pegs of 350 mm length , made of angled iron 25 x 25 mm, 3 mm thick, with an iron rod of 50 mm long and 6 mm diameter welded on the top. on one end, both wings of the angled iron are cut at 45° angle to form a pointed end. on the other end, both wings of the angled iron are pressed together to touch each other, and the 6 mm rod is welded on top of that end. the 6 mm rod produces a 25 mm prominence slightly bended downwards. these 4 pegs have 2 slots on each side, not opposite, to improve grip in soft ground. the width of the slots is approximately 3 mm, the depth is maximum 3 mm. pegs are painted or galvanized.
- 6 pegs of 300 mm length after bending, made of iron Rebar of 10 mm diameter, with a hook bended on one end, “candy cane” shape,
- or a cross shape, painted or galvanized.
- 16 pegs of 270 mm length, made of iron bar of 6 mm diameter, with a round or cross shaped head on one end, to avoid damaging the
- mud flap when pushed in the eyelets, painted or galvanized
  1 metal hammer of 1 kg with 300 mm wooden handle. (See specification part 1).
  1 set up instruction sheet in English language plus step by step drawings or photos printed on durable fabric and stitched to the outside of the accessory bag or printed on pole bag.



