UNHCR
United Nations High Commissioner for Refugees
Haut Commissariat des Nations Unies pour les réfugiés

SELF-STANDING FAMILY TENT

UNHCR Item No 00008154

Item Application Sample

General Information and Description

The Self-Standing Family Tent has 18,5 m^2 of main floor area.

It is the standard tent used by UNHCR and is suitable for a family of five people. It follows the recommended minimum living area for hot and temperate climates (3.5 m2 per person), and provides additional space for cold climates.

Shelter specialists developed the tent's technical specifications to guarantee a product fit for human use in all climates, with an appropriate outdoor life span, at a minimal cost.

The technical specifications for this tent are generic. This ensures that the product can be manufactured by different suppliers in various countries, with common technical know-how and standard equipment from the tent industry.

UNHCR purchases family tents through international tender processes and establishes frame agreements (long term agreements) with manufacturers that have completed validation / qualification of Self-Standing Family Tent samples in one of the UNHCR approved laboratories. Self-Standing Family tents are subject to random and continuous quality control throughout the frame agreement duration period.

For the validation / qualification of Self-Standing Family Tent samples, it is advisable to first ensure adherence to the main material specifications. Information about approved technical laboratories can be obtained from the UNHCR Supply Management Service in Budapest.

Self-Standing Family tents should comply with all technical requirements, criteria and parameters described in this document, and as detailed in the technical specifications section.

Information for laboratory testing:

To complete the validation / qualification of the Self-Standing Family Tent samples, three (03) complete samples are to be sent to one of the UNHCR approved laboratories for testing and make up checking. One sample will be used for material testing and the remaining two for a rain test and a large scale fire test (if needed). A product is only acceptable if all criteria are passed on the same sample.

Optimal Shipping / Container Information

With pallet	Without pallet
• 96 tents per 20' GP	• 150 tents per 20' GP
• 240 tents per 40' DC	• 312 tents per 40' DC
• 240 tents per 40' HC	• 364 tents per 40' HC

Packing

One tent with all accessories are packed into a master bag that ensures its' protection from dirt and moisture. The master bag is made from woven polyethylene (PE) fabric of 190 g/m2 identical to that used for the main tent cover.

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.

The bag must be a PE bag with the dimensions 115 cm x 55 cm x 45 cm, with a zip closure. The bag must be secured with two webbing straps, each with a self-locking buckle that will not slide during transportation. Each strap provides two handles. The straps must not be sewn to the bag. All other aspects are as per standard packaging instructions. The palletised goods must not exceed the pallet length and width.

Weight and Volume

Gross weight per unit: approx. 52 kg

Gross volume per unit: approx. 0.285 m^3

Expected Life Span

Self-Standing Family Tents are designed as a short-term shelter solution, particularly as a support during emergency situations, and is not a substitute for more permanent shelters. It is expected that family tents should have a minimum lifespan of one year, maintaining its shelter and waterproof capacities in all types of climates.

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

SELF-STANDING FAMILY TENT

UNHCR Item No 00008154

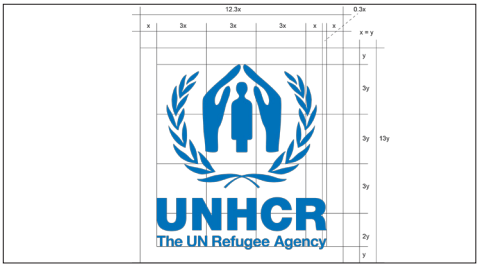
UNHCR Logo Application Reference

UNHCR vertical visibility logo on the roof of the tent:

The logo should be printed in blue indelible ink on both sides of the shade cover, and in the middle for maximum visibility, as shown on the graphic reference, when using 150 cm material and two seams on the mesh shade cover (l= 1.35 m and H= 1.65 m), following the "X" and "y" proportionality rule to avoid distortion of the logo and letterings.

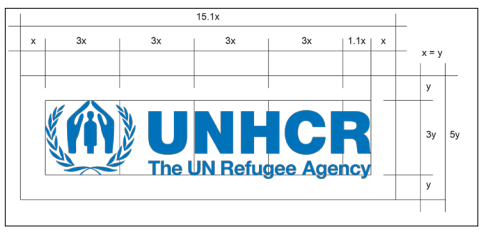
Rule:

Length, l = (1 X = 15 cm); Height, H = (1 y = 15 cm)



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

The UNHCR 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 the markings must be 120cm and the height proportionate 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%.

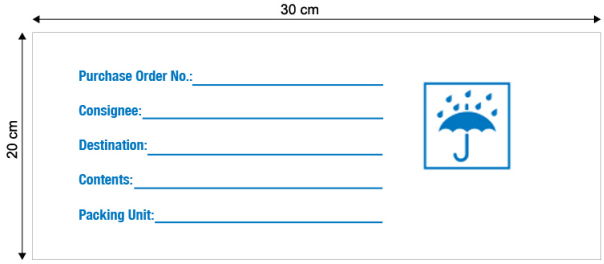
Repair Kit

Should include: two curved needles, 50 m stitching thread, three pole repair sleeves, 10 m duct tape 50 mm wide, PE fabric 50 cm x 50 cm, mosquito mesh 50 cm x 50 cm, a repair manual and 4 locks.

Markings on the Single Bag

Marking of UNHCR logo: (50 cm x 15 cm): Should be printed in blue indelible ink in colour pantone blue 300 C on one side of the single bag.

Shipping Marks: Should be printed in blue indelible ink in colour pantone blue 300 C including: purchase order number, purchase order quantity, project symbol, consignee and content on one side of the polyethylene bag (30 cm x 20 cm).



Manufacturer marking

Every tent should include a tag, stitched on the inside of the front side wall, on the outer tent material. This should be 10 cm from the left side wall, in the bottom seam between front wall panel and mud flap, and display the manufacturer's identification (letters must not be 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.

SELF-STANDING FAMILY TENT

UNHCR Item No 00008154

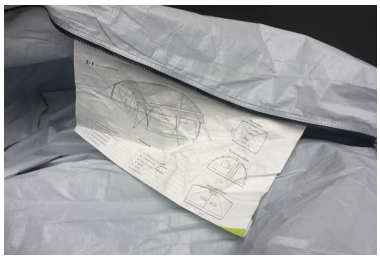
Assembling Instruction and Content List

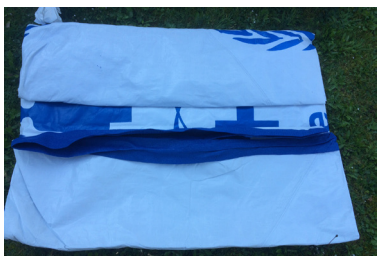
A content list and assembly manual, printed on durable, waterproof fabric or Tyvec paper, will be stitched to the zipper of the pack bag, in the top and centre of the bag. It must show step-by-step set-up instructions, including drawings / photos, in colour.

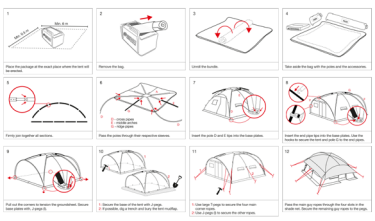
Packing list

A	1x	Outer tent (guy lines pre-installed)
B	1x	Inner tent (pre-installed)
C	1x	Inner partition (pre-stitched in inner tent)
D	2x	Grey poles (crossing arches)
E	1x	Orange pole (middle arches)
F	2x	Blue poles (front and back arch)
G	1x	Green pole (ridge pole)

H	1x	Shade cover (guy lines pre-attached)
I	22x	J-pegs 30 cm length
J	6x	T-pegs 40 cm length
K	1x	Repair kit
L	1x	Hammer
M	1x	Assembly Manual





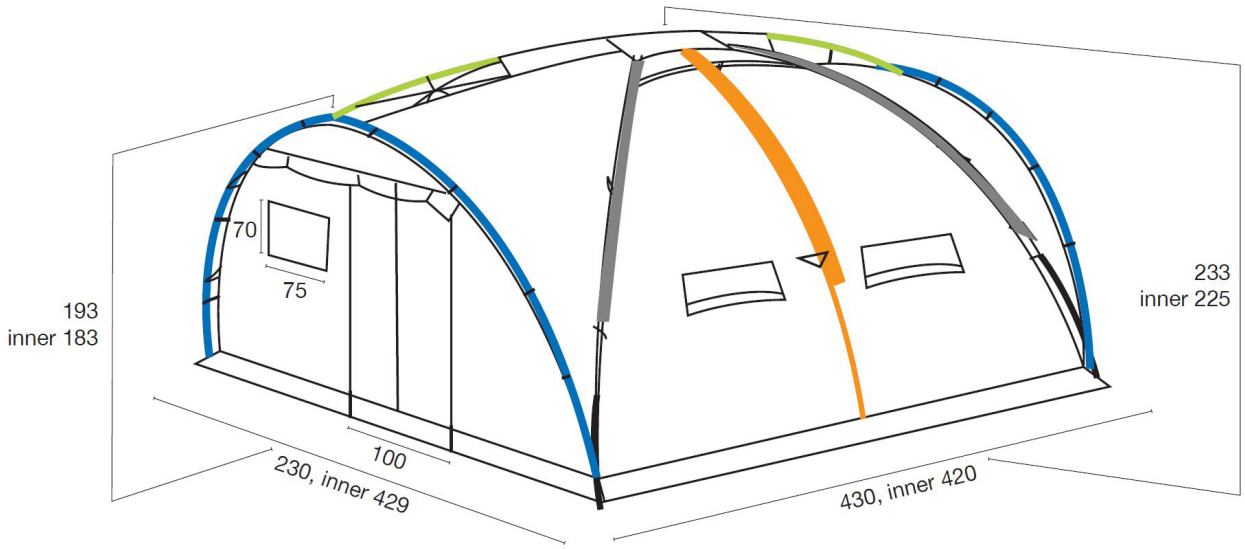


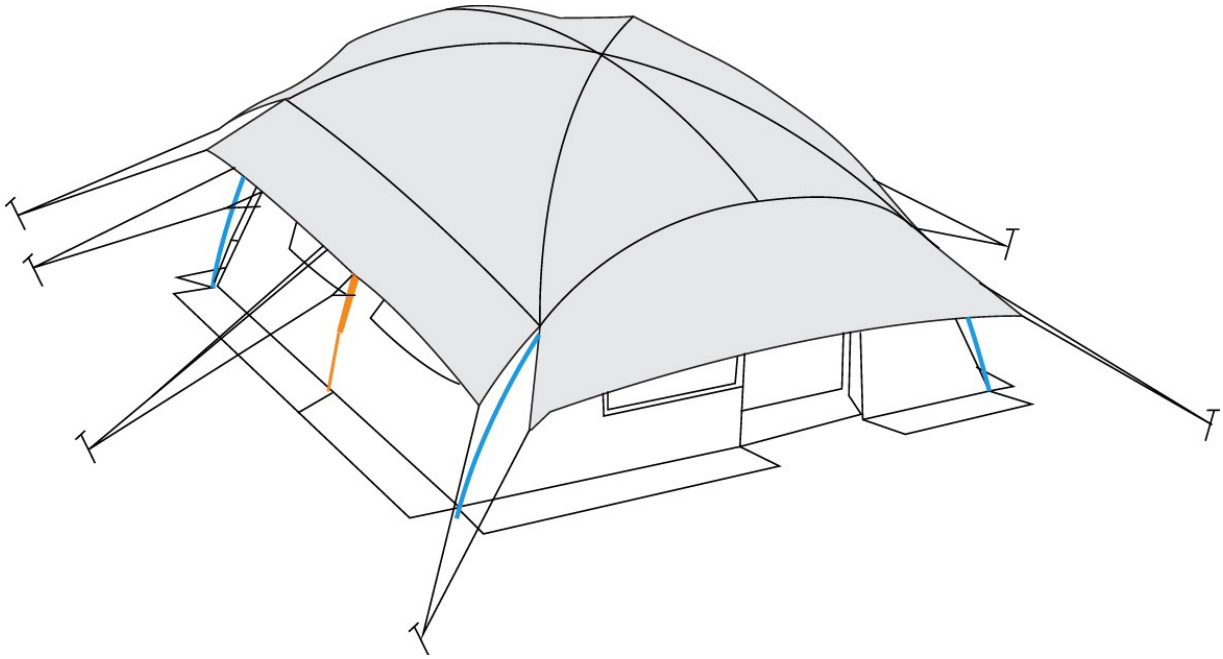
SELF-STANDING FAMILY TENT

UNHCR Item No 00008154

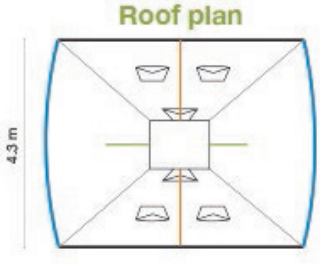
Graphic Reference

Family Tent General View

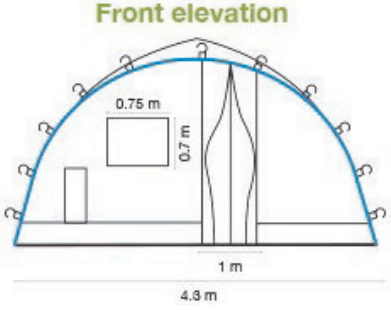




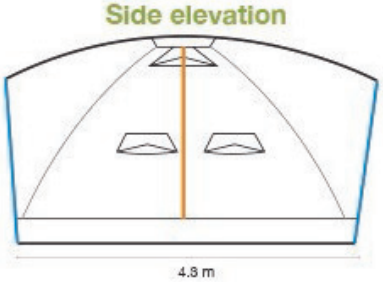
Roof plan



Front elevation



Side elevation



SELF-STANDING FAMILY TENT

UNHCR Item No 00008154

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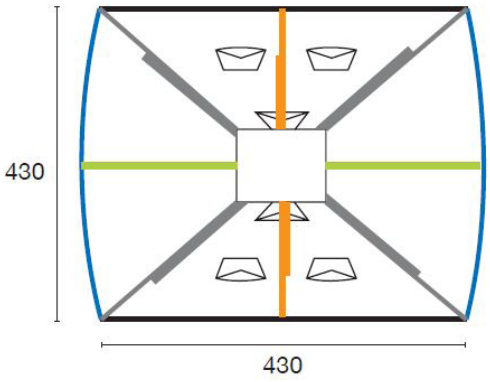
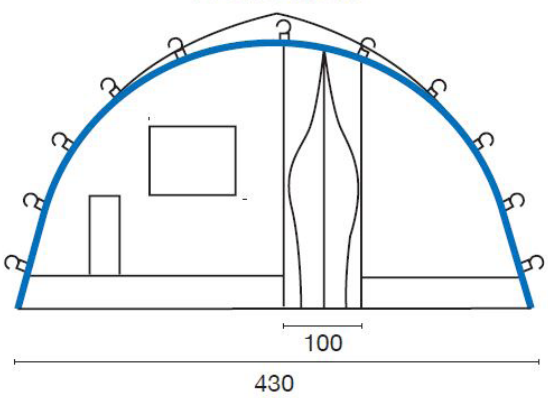
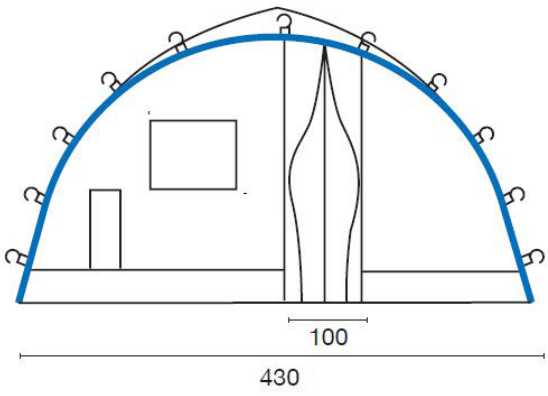
Roof Plan



Front Elevation



Rear Elevation

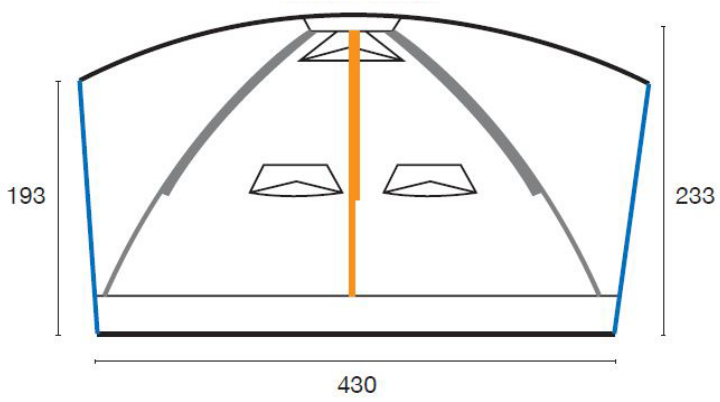


SELF-STANDING FAMILY TENT

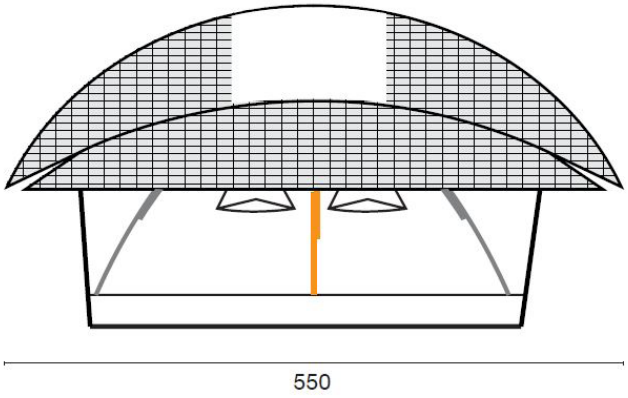
UNHCR Item No 00008154

Graphic Reference

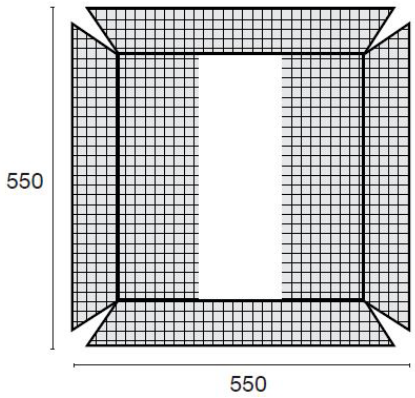
Side View



Shade Net Cover - Side View



Shade Net Cover - Top View



Technical Specifications

The specifications of the lightweight Self-Standing Family Tent are described below, according to technical and performance requirements, in five parts:

1. Materials
2. General points for the finished product
3. Composition of the outer tent, ground sheet and shade net
4. Composition of the inner tent
5. Poles and accessories

1. MATERIALS

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

Information for testing:
Three complete tents must be sent as a sample to the laboratory.
The test pieces will be cut from one complete tent.
The second complete tent will be used for the rain test.
The third complete tent will be used for the large scale fire test after furnishing it with the minimum CRI for 5 people.
A product is deemed acceptable only if the same sample passes all criteria.

All the tent envelope materials (roof, walls, mud flap and floor) must 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 groundsheet it should pass CPA184 section 5 and for all other components including mud flap, it should pass CPA184 section 6.

Fire Retardant Field Testing Conditions:

Temperature:	15 - 20 C	Weather Conditions:	Sunny Day or Partly Cloudy
Wind:	2 - 5 Knots	Rain:	0
		Dew Point:	10 - 15

1.1 SPECIFICATIONS FOR THE MAIN TENT MATERIAL - ROOF, WALLS AND MUD FLAPS; GROUND SHEET; DOORS, OUTER WINDOW SHATTERS AND SHADE NET REINFORCEMENT STRIPS

Denomination and norms	Required minimum values
1. Composition	Woven high-density polyethylene black fibre 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/m2 ± 10 g
3. Tensile strength at the state of origin (N), ISO 1421-1_1998	Warp and weft >500 N Elongation 15% to 25% in warp and weft
4. Tear resistance at the state of origin (N), ISO 4674-1 B 2003, with a test strip of 200 x 200 mm	Minimum 100 N warp and minimum 100 N weft
5. Resistance to UV Percentage of tensile strength loss under ISO 1421-1 after 1500 hours UV under ASTM G53/94 (UVB 313 nm peak)	Minimum 80% of the original value of the actual product, AND not less than 475 N
6. Flame retardant under EN 13823 + A1 and CPAI84	Minimum class D, s2, d2. Pass CPAI84 sections 5 and 6 with maximum 10 s after flame average and maximum 30 s after flame per test piece. Ageing under ISO 4892-2, type A, 360 hours.
7. L.a.b Coordinates, ISO 105J01 for the white coating colour	Minimum L: 82 “a” value between -1.7 and +1.5 “b” value between -4.5 and 0
8. Opacity, measured as minimum reflection and maximum transition, in the range of visible light and near infrareds.	Measured under ISO13468-1. Values should be measured respectively from 350 nm to 750 nm, and from 750 nm to 2500 nm wavelength. The final result is the average of the average in each range. Minimum total reflection: 35% Maximum total reflection: 50 % Maximum total transmission: 5%

Technical Specifications

1.2 SPECIFICATIONS FOR THE WATERPROOFING OF THE MAIN TENT	
Denomination and norms	**Required minimum values**
1. Water penetration resistance Test pieces include seams. Seam tapes are positioned on the inner face of the tent.	30 hPa minimum, increasing speed at 100 mm per minute.
2. Efficiency of waterproofing tape after UV and moisturising (climate simulation) Exposure in a climate chamber under ISO 4892-2, type A, 360 hours. Exposure of the outer side of the tent to the UV. Test pieces on stitched lines.	30 hPa minimum, increasing speed at 100 mm per minute.
3. Rain penetration resistance, ISO 5912:2003 The test piece is the complete tent with the shade net in place. (Attention: ISO 5912:2011 does not apply). Main tent: no more than 10 drops of water should penetrate the tent, in a maximum of two places, including through the wicking effect. Inner tent: water should not penetrate the inner tent, or wet the inner tent canvas.	Apply procedure as per point 4.2.11 in ISO5912:2003 and point 5.6 plus the following: Visual control from the inside the tent, while the artificial rain is on, must be done after two and five hours, with the complete tent. The test operator should ensure that the test set-up does not create condensation inside the tent that could be interpreted as leakage.

1.3 SPECIFICATIONS FOR THE PIPE SLEEVES	
Denomination and norms	**Required minimum values**
1. Composition, ISO 1833	Polyester/cotton blended fibre yarns. Cotton: 40% (±10%), polyester: 60% (±10%) = polyester: 50% to 70%, balance cotton.
2. Specific weight (g/m^2), ISO 3801	275 g/m2 ± 10% in finished state.
3. Colour	Colours must match the colours of the frame pipes.
4. Tensile strength (N), ISO 13934-1	Warp and weft 650 N minimum.
5. Tear resistance (N), ISO 13937-2	Warp and weft 40 N minimum.
6. Tensile strength after exposure to UV and moisturising. 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.
7. Tensile strength resistance after exposure to micro-organisms, ISO 13934-1 and ISO 13935-1 after completing BS 6085 (soil burial – 28 days). Apply on 10 test pieces of plain canvas and five 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: five test pieces in warp direction, five test pieces in weft. On the seams, the test is applied to 50 mm width on the sample, as described in ISO 13935-1 page 7.
8. Flame retardant, CPAI 84	Pass CPAI84 sections 5 and 6 with maximum 10 s after flame average and maximum 30 s after flame per test piece. Ageing under ISO 4892-2, type A, 360 hours.

Technical Specifications

1.4 SPECIFICATIONS FOR THE INNER TENT CANVAS, including inner doors, inner window shutters, inner ventilation shatters and inner partition	
Denomination and norms	**Required minimum values**
1. Compositions, ISO 1833	Polyester/cotton blended fibre yarns. Cotton: 40% (±10%), polyester: 60% (±10%) = polyester: 50% to 70%, balance cotton or cotton 100%.
2. Specific weight (g/m2), ISO 3801	150 g/m2 ± 15% in finished state
3. Colour	Light cream or beige
4. Water vapour permeability, ISO 17229	Minimum 2000 g/m2/24h
5. Tensile strength (N), ISO 13934-1	Warp and weft >300 N
6. Tear resistance (N), ISO 9073-4	Warp and weft >20 N
7. Tensile strength resistance after exposure to micro-organisms, ISO 13034-1 and ISO 13935-1 after completing BS 6085 (soil burial – 28 days). To apply on 10 test samples of plain canvas and 10 test pieces with seams.	30% maximum of strength-loss on minimum required value and 50% maximum strength-loss on original value of the same product. For plain canvas test: five test pieces in warp direction, five test pieces in weft. On the seams, the test is applied to 50 mm width on the sample, as described in ISO 13935-1 page 7.
8. Flame retardant, CPAI84	Pass CPAI84 sections 5 and 6 with maximum 10 s after flame average and maximum 30 s after flame per test piece. Ageing under ISO 4892-2, type A, 360 hours.

1.5 SPECIFICATIONS FOR THE SHADE-NET, except shade net reinforcement strips	
Denomination and norms	**Required minimum values**
1. Compositions, ISO 1833	High Density Polyethylene (HDPE). Shade net reinforcement strips as per technical spec. section 1.1
2. Fabrication, ISO 8388	Warp knitted, warp spacing 5 mm minimum
3. Specific weight (g/m2), ISO 3801	190 g/m2 ± 10% net weight
4. Colour	Very dark blue, pantone 655, with white middle strip
5. Shade rate	80% ± 10%
6. Bursting strength, ISO 13938	600 kPA minimum
7. Bursting strength after exposure to UV and moisturizing (climatic simulation), 1500 hours UV under ASTM G53/94 (UVB 313 nm peak)	Minimum 80% of the original value of the actual product AND not less than 570 kPA.
8. Flame retardant, EN 13823 + A1 and CPAI84	Minimum class D, s2, d2. Pass CPAI84 sections 5 and 6 with maximum 10 s after flame average and maximum 30 s after flame per test piece. Ageing under ISO 4892-2, type A, 360 hours.

Technical Specifications

1.6 SPECIFICATIONS FOR THE MOSQUITO NET, on inner tent doors, windows and ventilation openings	
Denomination and norms	**Required minimum values**
1. Composition, ISO 1833	Polyester 100% or PE 100%.
2. Specific weight (g/m^2), ISO 3801	Warp knitted.
3. Denier	75 - 200
4. Filament	Multi-filament 36 or higher for the polyester and mono-filament for the PE.
5. Mesh size	25 holes/cm2 (156 holes/inch2)
6. Specific weight (g/m2), ISO 3801	85-100 g/m2 for polyester and 38 g/m2 minimum for PE depending on denier
7. Colour	White
8. Shrinkage, ISO 5077	5% maximum
9. Bursting strength, ISO 13938	250 kPA minimum for polyester and 320 kPA minimum for PE
10. 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.	Maximum 30% of strength-loss on minimum required value and maximum 50% strength-loss on original value of the same product. Number of test pieces: three test pieces

1.7 SPECIFICATIONS FOR ILLUMINATING MATERIAL marking the exit door	
Denomination and norms	**Required minimum values**
1. Composition ISO 1833	PVC sheet with SrAl2O4 based photo-luminescence
2. After glow intensity DIN67 510 Part 1	Typical light source: Luminance 1000 lux, D65 standard for 10 minutes at 220C. After glow intensity after: 10 min > 320 mcd/m2 60 min > 41.4 mcd/m2 600 min > 2.1 mcd/m2 After glow intensity (to 0.32 mcd/m): >1800 min. under norm DIN67 510
3. Colour	Yellow-green or green

Technical Specifications

1.8 SPECIFICATIONS FOR THE OUTER TENT GUY POINTS	
Denomination and norms	**Required minimum values**
1. Composition	Polyethylene, polypropylene or 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.	3000 N minimum for the four main tent guy points at the four corners of the tent. (three test pieces). Elongation of the elastic device under 1000 N: minimum 50 mm, maximum 100 mm 1400 N minimum for the secondary guy points (three test pieces)
3. Colour	Black ropes and straps, galvanized steel, red or wooden tensioning runners.
Note for point 2: Samples must include a canvas test piece with the minimum size 300 mm (w) x 500 mm (l). Samples must be cut in order to include: a canvas section from the tent, the shade net or the winter flysheet, canvas reinforcements, strap, ring, elastic device, buckle, runner and a sufficient part of the guy rope. Samples to be folded in order to fit in the traction apparatus so that the entire width of the canvas test piece is submitted to the traction when clamped in the jaw of the apparatus. Traction must be applied between the canvas on one end and the guy rope on the other end.	

1.9 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 specifications listed below.
2. Handle	No chips, rough surfaces, holes, knots. Smooth surface. Dry and strong flexible wood. Handle to protrude on the other side of the head, and blocked with a metal wedge or be conical shaped (like hoes). Moisture minimum 10%, maximum 15% under ISO 3130.
3. Pull apart test	After two series of 25 vigorous blows with varying delivery angles, apply a traction of 500 N to try to pull out the handle, with the head 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.

Technical Specifications

2. GENERAL POINTS FOR THE FINISHED PRODUCT

2.1 Performance:

The final product must be able to withstand 75 km/h winds, strongly attached to the ground and tensioned without damage. When closed, the tent must give good protection against dust, wind, rain, snow, insects and small crawling fauna. The final packed tent weight is approximately 52 kg.

2.2 Fire resistance:

The product must be flame retardant to a level that allows users to evacuate the tent in a minimum of two minutes, in case of fire. The safe spacing distance between the guy rope points must be 2 m.

2.3 Seams and stitching:

All seams subject to possible tension are double-lock stitched and waterproofed. Stitching should produce a strong, long-lasting, neat and professional looking seam.

The stitch count as well as UV and rotproof 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.

2.4 Ropes, webbing bands, toggles, loops, reinforcement nettings, and all other accessories:

All ropes and webbing bands must be heat cut. All ropes are knotted to the tent at the factory. All of the above mentioned items must be rotproof and UV proof (to the same degree as the tent canvas to which they are sewn). To avoid water penetration through capillary action, no webbing or rope can be sewn using a stitch that runs from the outside to the inside of the tent; alternatively, they must be made from waterproof materials. The laces and loops of the main tent and shade net can be made from the same PE material or PES material as that of the tent. Inner tent loops can be made from the same canvas to which they are sewn.

2.5 Zipper fasteners:

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

2.6 Eyelets

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

2.7 Metal rings

All metal rings should be rustproof, galvanised and welded closed.

2.8 Dimensional tolerance

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

2.9 Long storage (shelf life)

The tent is treated and packed in such a way that it can be stored for a minimum of five years in proper storage conditions without any damage or performance reduction, including in humid countries. The stored tent should be 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. COMPOSITION OF THE OUTER TENT WITH GROUND SHEET

3.1 General description of the main outer tent:

The tent must comprise several PE cloth sections, forming the general shape of the tent. The seams must run from the top centre down to the floor level, avoiding horizontal lines wherever possible. The outer tent must be supported by three cross arches, two entrance arches, and one ridge pipe. It is secured with 18 guy ropes on reinforced attachment points.

3.2 Dimensions / erecting system:

Centre height:	approx. 2.40 m
Width:	4.30 m
Length:	4.30 m
Ridge length:	4.40 m
Entrance walls height:	1.9 m
Doors height:	1.70 m

The tent is suspended to the pipes and maintained in position by 120 mm high sleeves to insert the pipes.There are three continuous sleeves for the cross arch pipes. At the centre of the tent these sleeves are not interrupted. The sleeve ends are located 500 mm above the ground. There is one continuous sleeve for the ridge pipe. At the centre of the tent this sleeve is continuous. The length of this sleeve is 2 m. The entrance walls are attached to the arches with hooks mounted on 20 mm webbing. the sleevs are of the same color of the pipes (4 different colors in total).

3.3 Anchoring system, outer guy lines on crossed arches

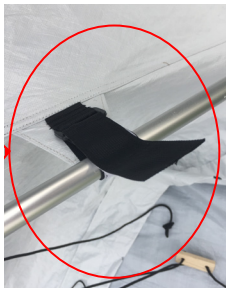
Twelve guy lines attached to six metal pegs, including:

- Six main guy straps in the corners and side center of the tent, 1.6 m from the pipe ends.
- Six secondary guy ropes in the corners of the tent, 0.8m from the pipe ends.

These twelve guy lines are attached to the tent with 20mm webbing stitched together with the pipe sleeves, forming a triangle anchor. The sleeves have the same colors as the pipes (four different colors in total).

3.4 Structure support

The tent is fixed on the arch pipes through metal clips. If in compliance with the tent's lifspan (1 year) the metal clips can be replaced by webbing loops with velcro closure.



3.5 Anchoring system, outer guy lines on end arches, on tent sides

Eight guy ropes attached to four metal pegs, including:

- Four upper guy ropes on the edge of the tent end, 1.9 m from the pipe ends.
- Four lower guy ropes on the edge of the tent end, 1.1 m from the pipe ends.

These eight guy ropes are attached to the tent with a triangular piece of PE sheet stitched to the tent edge, forming a triangle anchor. Both solutios (as shown in the picture) are acceptable as long as they comply with the tent's lifespan.

The guy point needs to be behind the front pole to push the pole forward. To avoid confusion during the tent set up and avoid the pole to be pushed backwards, an alternative option by combining the guy point with the pole strap is acceptable.

3.6 Anchoring system, inner central

In addition to the outside anchoring points, there is an inner central anchoring point. This is made with a webbing loop passing around the four pipes crossing at the top of the tent. This loop is accessible from inside the tent, in order to attach it to a heavy weight placed in the centre of the tent floor, ensuring greater stabilization. This heavy weight can be made with the tent bag filled with stones, gravels, sand, earth, etc.

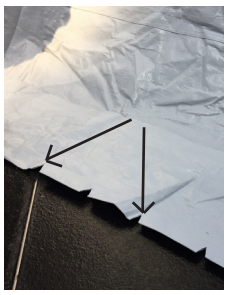
The loop is made from 25 mm webbing that hangs freely around the four pipe sleeves, and is accessible from inside the tent through a slot opening in the roof centre. This loop must withstand a minimum 200 N traction. There is a PE cover of 600 mm x 600 mm on top, so that it is waterproof. The loop can be used to hang the solar light.

3.7 Guy point reinforcement

Guy points must be reinforced in order to pass the tensile test (see part 1). On the four main guy points, this includes elastic shock absorbers, with extension limiters and a galvanised steel ring with a smooth surface through which the rope can be passed. On the other guy points, the rope passes directly into the webbings or the PE pieces.

3.8 Mud flaps

On the four sides, the bottom of the wall is extended with 400 mm width mudflaps laying horizontally on the ground. On the horizontal part of the mud flaps, a continuous pocket of 150 mm width minimum has to be created, around all the perimeter of the tent, except for the two door entrances. The pocket is made with the same PE material of the mud flaps with holes of 10 mm every 0.10-0.25 m on the external pleat, made to allow the water to run off from it. The pocket sides are stitched together every 0.5 m for better stability.



3.9 Windows

The tent has two windows: one at each end of tent, next to each door. The inside dimensions of the windows must be 750 mm (w) x 700 mm (h). The lower edge of the windows must be 700 mm above the ground. The windows are made with a fixed clear translucent UV proof plastic film.

The windows are fixed and cannot be opened. The windows are protected externally with an upward-rolling shutter. The window shutters are made from a PE sheet similar to the tent material. Loops and plastic toggles are provided to keep the flap open when rolled up, and closed.

3.10 Ventilation

The tent has 8 ventilation openings, two on either side of the tent and 4 on the center of roof. The ventilation openings are in the form of a slot that can open and close, with a rain flap. The length of each vent is 1200 mm. The vent flap must be made so that, when opened, it remains distanced from the ventilation opening by 200 mm +/-20 mm. This is achieved through the use of two plastic sticks for each vent, attached on one end to the tent, 350 mm from the ends of the vents.

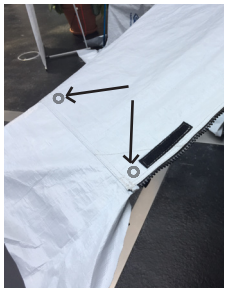
To secure the flap when closed, two Velcro strips 25 mm wide and 100 mm long are provided, 350 mm from the ends. The flaps can be accessed from the outside for opening and closing. The bottom edge of the four ventilation openings is 800 mm from the ground, and the top is 1150 mm from the ground.

3.11 Doors

There is one door at each tent end, with one door edge in the center of the tent panel. Size 1 m (w) x 1.70 m (h). When facing the tent from the outside, the door is located on the right hand side of the tent front (or back) panel. The door flaps are made from the same material as the tent. Each door closes with two vertical zippers.

3.12 Door flaps

The bottom of the door flap is extended with a 400 mm mudflap. The door flap has two metal eyelets as well as two toggles, one on each side of the flap. The eyelets combined with the toggles can be used for locking the tent doors from the inside or outside of the tent (using the locks). aditionally the door flaps can be used as an entrance shading element if combined with poles and ropes.



3.13 Inner tent suspension system-rings

The inner tent is attached to the outer one through plastic rings and hooks, located along each pipe and at the ground sheet level (200 mm above the ground). A minimum number of 63 mm rings need to be provided.

3.14 Plastic pouch for documentation

On the outside front wall, below the window, there must be a clear plastic document sleeve. The material must be UV-stabilised polyurethane transparent plastic with a minimum thickness of 0.15 mm. The lower edge of the sleeve must be 800 mm above the ground. The sleeve must have a rainproof opening on the bottom, with the two vertical sides sewn to the tent. The inside dimensions of the sleeve, after sewing, must be 230 mm (h) by 310 mm (w).

3.15 Manufcturer's identification

The manufacturer's identification should be a strong textile tag, 10 cm x10 cm, with durable print. It should be stitched inside the tent, in the vertical seam of one tent corner. The tag should include the manufacturer's name, the batch number and the production date.

4. COMPOSITION OF INNER TENT WITH GROUNDSHEET

4.1 General description and dimensions

The inner tent is square-shaped and hangs inside the outer tent. All dimensions are designed to ensure a 10 cm air gap between the outer tent and the inner tent.

The inner tent has two windows, two doors, four side ventilation windows and four ceiling openings for ventilation and to control the vents of the main tent. The bathtub groundsheet (floor) is made from woven PE fabric and sewn to the inner tent, extending upwards on all four sides to ensure the inside remains waterproof.

The stitching on the lower part of the groundsheet must be taped to ensure 100% waterproofing. The inner tent, when hooked to the outer tent, must have a centre height of 2.25 m, and the four sides a length of 4.2 m.

Technical Specifications

4.2 Inner doors

Each door opening is 1 m wide and 1.7 m high. The doors are identical to the main tent doors. The doors close with two vertical zippers along the sides. The door bottoms close with 25 mm Velcro strips.

Canvas laces with plastic toggles or hooks must be provided to keep the door opened when rolled to the sides.

Mosquito nets are provided on the inside of each door, with same shape/dimension as the door itself, and have a similar closing system. The mosquito nets are given several pleats on each side to avoid tension on the central zipper.

4.3 Inner tent suspension system-hooks

The inner tent is attached to the outer one through plastic rings and hooks, located along each pipe and at the ground sheet level (200 mm above the ground). 22 hooks are needed for the front and back arch, 13 hooks for the middle arch, 24 for the crossing arches and 4 hooks for the ridge pole.

4.4 Inner tent ventilation system

The inner tent has four triangular ventilation openings of 300 mm side length, in the centre of the roof, made from mosquito netting. The vents are located on either side of the tent and can be opened and closed with zippers on two sides. The vents do not have shutters for minimal permanent ventilation.

In addition, the tent has four bow-shaped ventilation openings, in front of the side vents of the main tent. The openings are 800 mm (l) x 300 mm (h) and are equipped with a mosquito net and a shatter, both openable with a zipper. Openings are used for accessing the outer vents from inside the tent, to operate the opening/closing system of the vents.

4.5 Inner tent windows

The inner tent has two windows of equal size and aligned to the outer tent windows on the front and back tent ends. The windows have a fixed mosquito net with one vertical and one horizontal reinforcement webbing. They can be closed with shutters, made from the same material as the inner tent, opening downwards. The shutters can be rolled down and attached with two strings when open, and closed using a 25 mm wide Velcro strip on three sides.

4.6 Inner tent hanging hooks

To hang lightweight items, eight 20 mm-hooks (mounted on 20 mm webbing) are available. These hooks are located under the cross arches, 500 mm and 1 m from the centre.

4.7 Inner tent pouches

Six pouches, made from inner liner material, 300 mm x 400 mm, are available inside the inner tent under each window. The pouches are stitched on their upper edge and hang freely.

4.8 Groundsheet

The integrated groundsheet must be made from PE woven fabric. The seam, attaching the groundsheet to the sides of the inner tent, must be 200 mm above the floor.

To provide proper tensioning of the groundsheet, the tensioning points must be located at ground level, with reinforced attachment points.

To avoid water infiltration, all stitched seams must be waterproofed, or welded (heat sealed).

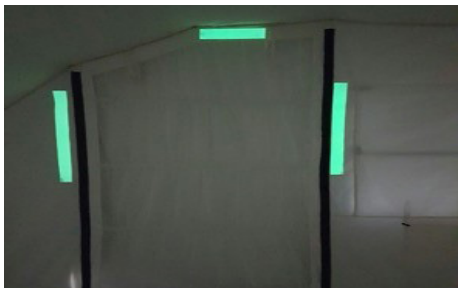
At the bottom of each door, the groundsheet can be open to form a flat threshold. The thresholds have two folds that can open to allow flattening upon the ground. They can be locked in a vertical position with two toggles and two loops.

4.9 Inner partition

The partition divides the inner tent into two equal spaces. It runs from the center of eather tent sides to the other. The partition is stitched to the inner tent along the cross arch centre pipe. It can open in the centre from both sides. Each partition half can be kept open with a pair of laces.

4.10 Illumination strips around inner tent door

Three strips of illuminating material are stitched along the sides and top of the inner tent door, visible from the inside. The illuminating strips are ‘charged’ by sunlight during the day and illuminate during the night to make the exits more visible during emergencies.



4.11 Safety information tag

Safety information must be available inside the tent. This should be in the form of a durable print on a piece of canvas stitched inside the inner tent with the text found in the annex at the end of these specifications.

The tag should be located under one window.

Technical Specifications

5. POLES AND ACCESSORIES

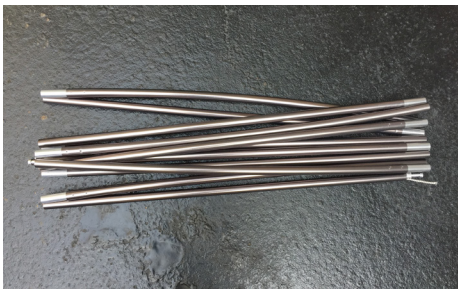
5.1 Poles:

Each section should fit together with a male and female 50 mm joint, made with a 100 mm long inserted pipe crimped into one of the pipes (not to be made with press-reduced pipe diameter). Type of aluminium: 7001-T6.

The pole/pipe-ends are inserted into metal foot plates on each side and corner of the tent. Foot plates need to have a webbing loop that is large enough to insert one man foot, which makes the setup easier.

Cross arch pipe (two units)

- Two aluminium pipes with a minimum 19 mm outer diameter and a minimum 1 mm wall thickness, in 11 pieces, pre-bended and linked with a cold-resistant inner elastic system.
- Length: 8460 mm. Colour: dark grey.
- The ends of the pipe must be closed with an aluminium plug, 10mm Ø pin with 13mm Ø tip, that fits into the foot plate and offers attachment for the inner elastic system. The plug has one end that fits into the foot plates (15mm Ø holes)



Cross arch centre pipe (one unit)

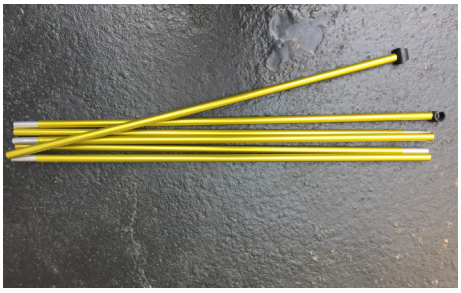
- One aluminium pipe with a minimum 19 mm outer diameter and a minimum 1 mm wall thickness, in nine pieces, pre-bended and linked with a cold-resistant inner elastic system.
- Length: 7230 mm. Colour: orange.
- The ends of the pipe must be closed with an aluminium plug, 10mm Ø pin with 13mm Ø tip, that fits into the foot plate and offers attachment for the inner elastic system. The plug has one end that fits into the foot plates (15mm Ø holes).

End arch pipes (two units)

- Two aluminium pipes with a minimum 19 mm outer diameter and a minimum 1 mm wall thickness, in eight pieces, linked with a cold resistant inner elastic system.
- Length: 6450 mm. Colour: bright blue.
- The ends of the pipe must be closed with an aluminium plug, 10mm Ø pin with 13mm Ø tip, that fits into the foot plate and offers attachment for the inner elastic system. The plug has one end that fits into the foot plates (15mm Ø holes).

Ridge pipe (1 unit)

- One aluminium pipe with a minimum 16 mm outer diameter and a minimum 1 mm wall thickness, in six pieces, linked with an inner elastic system.
- Length: 4650 mm. Colour: light green.
- The ends of the pipe must be closed with a plastic plug. The plugs will clip onto the aluminium pipe of the end arches.



5.2 Pegs

- 6 x 400 mm pegs, made from T-shaped iron 25 mm x 25 mm and 3 mm thick, with a 75 mm iron rod 8 mm in diameter welded on top. At one end, the peg must be cut to form a pointed end. At the other end, the 75 mm by 8 mm rod is welded to the top. The corner next to the top rod must be cut at 60° and smoothed to avoid injuries. The rod produces a 25 mm prominence on each side of the peg. Pegs are galvanised.

- 22 x 300 mm pegs, final net length after bending, made from iron rebar 8 mm in diameter, with a “candy cane” shaped hook on one end, painted or galvanised.

5.3 Ropes/ loops/ guy runners

- Six main guy straps, in the four corners and side centre, black, UV-treated, each 3 m long, 8 mm diameter, with a minimum tensile strength of 3000 N.

- 20 secondary guy ropes, six for lower corner guy points, eight for door ends, and six for the shade net. Ropes are black, UV-treated, each 3 m long with a 5 mm diameter, with a minimum tensile strength of 1400 N.

- All ropes must be attached to the tent or the shade net at the factory.

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

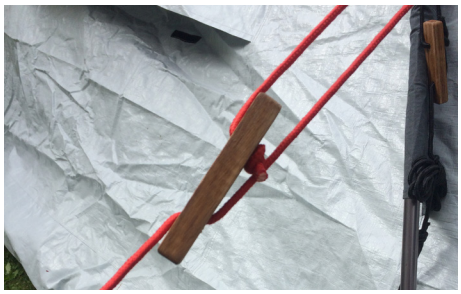
- All ropes are tensioned by sliding on the tent side, or the shade net side, not on the peg side.

- Hardwood guy runners, natural wood colour, pre-mounted on the ropes.

- The grain of the wooden runners must run lengthwise in the runner.

- Size of the runners: 100 mm x 25 mm x 15 mm. The holes must be the same diameter as that of the ropes and adapted to the good running and blocking of the supplied ropes.

- The ropes must be threaded through the runners in the position that represents the maximum blocking position on the ropes as shown in the picture.



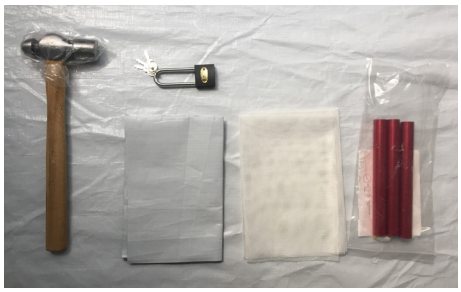
5.4 Accessories

- A 1 kg metal hammer with 300 mm wooden handle (refer to specifications in part 1).

- In the accessory bag, one assembly instruction sheet in English, showing step-by-step assembly information and an item content list, printed on durable laminated paper or durable fabric (see part 7/1)

- One repair kit including: two curved needles, 50 m stitching thread, three pipe repair sections, three spare red coloured aluminium pipe sections.

- 4 locks (preferebly with a keyless opening mechanism)



6.1 Shade net features

The shade net is made of 11 sections to shape over the tent, stitched together with reinforcement bands along all stitching. The tent is fitted with 10 guy points made of 25mm webbing, strongly stitched to each corner. The 10 guy ropes, pre-fitted to the guy points, will be tied to the same 6 T-pegs as used for the tent, whereby the guy lines at the corners of the extensions will be joint to the same T-peg in the 4 corners of the tent. The central part is made of PE sheet, the roof front and back and the extensions on 4 sides are made of PE mesh.

Dimensions: the central part will cover the tent up to a height of about 150 cm. The front and rear extensions are about 4m wide and 1,2m deep. The side extensions are about 4,4m wide and 0,8m deep.

7. CHIMNEY REINFORCEMENT

7.1 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). It is the type of fabric that keeps the fibres 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 side 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.

8. PACKING

8.1 Package:

One tent with all its accessories must come packed in one bundle only. The inner tent and the outer tent are folded so that the plastic part protects the inner tent and accessories from dirt and moisture.

The tent bag is made from the same PE material as that used for the tent. The bag is a hand bag type, with a zipper opening from the centre of one end to the centre of the other.

Total length must not exceed 1.15 m, and must have some extra play to facilitate re-packing.

The package must be secured with two webbing straps on the outside; each strap must have a strong self-locking buckle that will not slide during transport. Each self-locking 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. The straps are not sewn to the bag. Each strap forms one handle on each side of the bag. The metal poles and pegs must be packed in two separate bags to avoid damaging other items inside the bundle. Both bags must be made from the same material as the outer bag. The bags must have a closure system that ensures the accessories remain in their bags during transportation and handling. Particular care must be taken when packing the pegs to ensure they will not pierce the bag. There should not be any extra plastic packing material in the package. The buyer's markings must be printed on the outside in indelible ink. The standard international warning sign "protect from water" must be printed on the outside of the package.

9. ANNEXES

9.1 Safety instruction tag

The text of the safety instruction tag is as follows:

- Don't use open fire in the tent, use a stove with flue pipe
- Locate the stove away from the walls, with protection for the floor
- Use the appropriate protection material to pass a flue pipe through the tent wall
- Always maintain some ventilation, especially when the stove is being used
- When possible, cover the stove with heavy fire resistant material (clay or equivalent)
- Do not lock the doors when people are inside the tent.

9.2 Summary of all the printing requirements

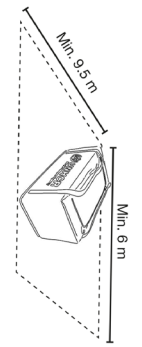
The following points, already detailed in the specifications above, require printing:

- Manufacturer's ID, as described in part 3/13
- Safety information tag, as described in part 4/10 and in part 7/2
- Instruction sheet, as described in part 5/5 and in part 7/1
- Buyer marking on outer bag, as described in part 6/1
- 'Protect from water' on outer bag, as described in part 6/1

8. ANNEXES

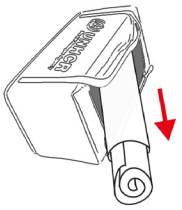
9.3 Assembly instructions

1



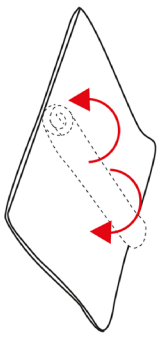
Place the package at the exact place where the tent will be erected.

2



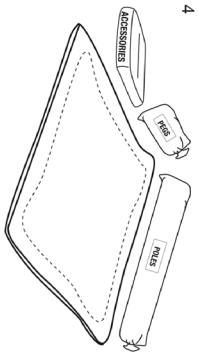
Remove the bag.

3



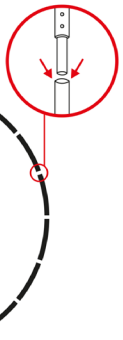
Unroll the bundle.

4



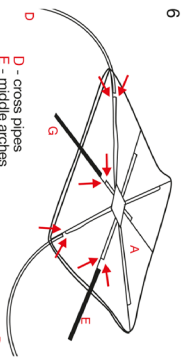
Take aside the bag with the poles and the accessories.

5



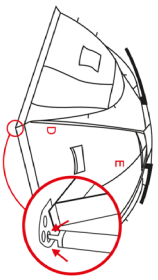
Firmly join together all sections.

6



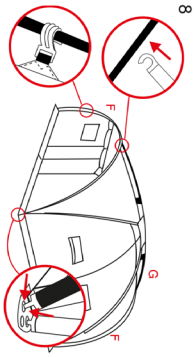
Pass the poles through their respective sleeves.

7



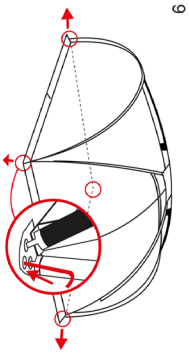
Insert the pole D and E tips into the base plates.

8



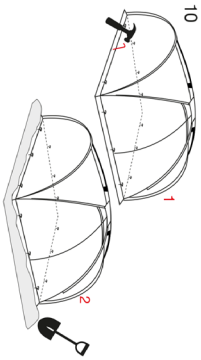
Insert the end pipe tips into the base plates. Use the hooks to secure the tent and pole G to the end pipes.

9



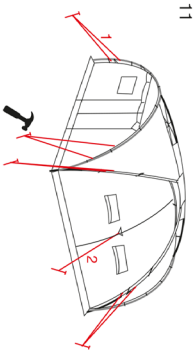
Pull out the corners to tension the groundsheet. Secure base plates with J-pegs (l).

10



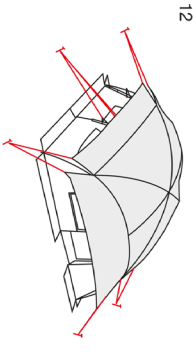
1: Secure the base of the tent with J-pegs.
2: If possible, dig a trench and bury the tent mudflap.

11



1: Use large T-pegs to secure the four main corner ropes.
2: Use J-pegs (l) to secure the other ropes.

12



Pass the main guy ropes through the four slots in the shade net. Secure the remaining guy ropes to the pegs.