TPS

Thermal Packaging Solutions

Temperature Controlled Packaging Experts.

Insulated Shipping Container Liners

Supplying customers in the UK & EU

Manufacture

Distribute

Deliver

We manufacture Container Liner Insulation Kits to prevent condensation, safeguarding perishables like food, drinks, cosmetics, and pharmaceuticals during storage and transit. Some commonly stored goods also include furniture, vehicles, tools, chemicals, and electronics.

We Manufacture Our Kits For:

- Homeowners
- Storage Companies
- Cold Chain Shipments
- Home Conversions
- Container Conversion Companies

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Insulation Options for Optimal Protection

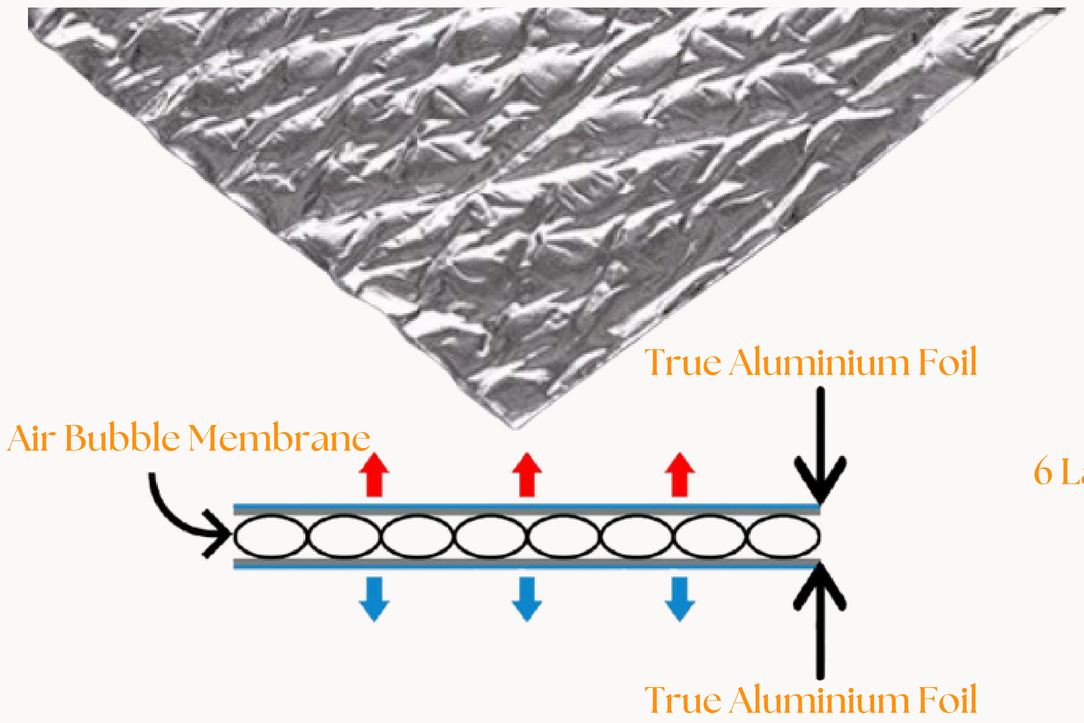
ThermaPack Double

- Ideal for storage containers, maintaining a stable internal temperature.
- Made from true aluminum foil for superior insulation.
- 4mm thick, yet equivalent to 55mm of polystyrene in performance.

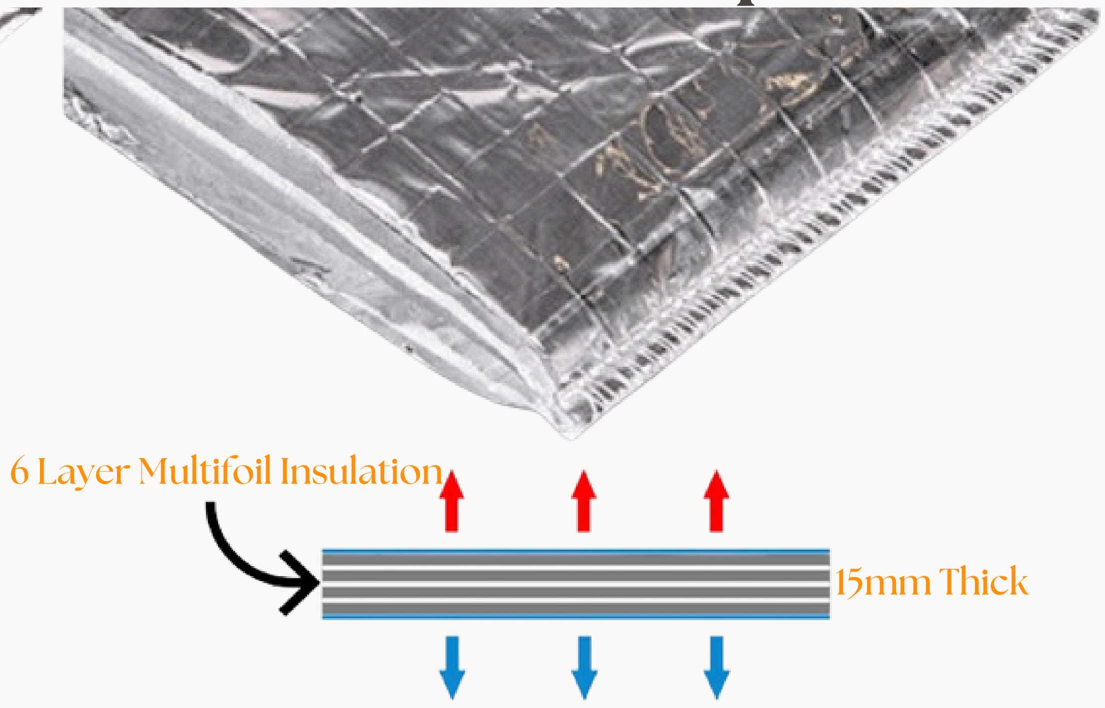
EcoQuilt Expert

- Best for container conversions into offices, living spaces, or temperature-sensitive storage.
- Features 2 layers of wadding-laminated foil and 3 layers of radiant foil, separated by wadding.
- 15mm thick, yet performs like 75mm of polystyrene.

ThermaPack Double



EcoQuilt Expert



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Insulation for Optimal Protection

Our Kits Include:

- Pre-Cut, Labeled Insulation Rolls
- High-Tack Adhesive Backing
- Foil Joining Tape
- Step-by-Step Installation Support

How Our Kits Reduce Condensation

Reflective Thermal Cavities

Our bespoke insulated envelopes are the perfect solution for protecting temperature-sensitive contents. We can manufacture and supply custom-sizes to ensure optimal performance.

Vapour Barrier

Proper taping and sealing of overlaps and edges create an effective vapor control layer, preventing moisture buildup

Superior Thermal Performance

High-insulation properties reduce thermal bridging, limiting temperature fluctuations inside the container.

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U-value Data

TPS ThermaPack Double Container U-value

Layer	D(mm)	λ layer	λ bridge	Fraction	R layer	R bridge	Description
1	25	R-value[1]			0.670	0	Cavity Before Product
2	3.7	R-value			0.125	0	ThermaPack Double
3	25	R-value [2]	50.0	0.500	0.670	0.00050	Corrugation Cavity
4	1.5	50.0				0	Galvanized Steel
					0.040		Rse (External)
	55mm (total wall thickness)				1.635		

[1]Calculated with specified emissivity of 0.05
[2]Calculated with specified emissivity of 0.05

Total resistance: Upper limit: 1.214 Lower limit: 0.966 Ratio: 1.257 Average: 1.090 m²K/W

U-value (uncorrected) 0.917
U-value (corrected) 0.917 (△U not added since it's less than 3% of U
U-value (rounded) 0.92 W/m²K

U-values (W/m²K) indicate heat transfer through a surface—the lower the value, the better the insulation. A U-value test on ThermaPack Ultra Double in a 20ft container resulted in 0.92 W/m²K, compared to 2.89 W/m²K for an uninsulated container. This improves thermal efficiency by 102.6%.

TPS EcoQuilt Container U-value

Layer	D(mm)	λ layer	λ bridge	Fraction	R layer	R bridge	Description
					0.130		Rsi
1	25	R-value[1]			0.670	0	Cavity Before Product
2	15	R-value			1.370	0	EcoQuilt
3	25	R-value[2]	50.0	0.500	0.670	0.00050	Corrugation Cavity
4	1.5	50.0				0	Galvanized Steel
					0.040		Rse
	67mm (total wall thickness)				2.880		

[1]Calculated with specified emissivity of 0.05
[2]Calculated with specified emissivity of 0.05

Total resistance: Upper limit: 2.501 Lower limit: 2.211 Average: 2.356 Ratio: 1.131 m²K/W

U-value (uncorrected) 0.424
U-value (corrected) 0.465
U-value (rounded) 0.47 W/m²K

U-values (W/m²K) indicate heat transfer through a surface—the lower the value, the better the insulation. A U-value test on ThermaPack Ultra Double in a 20ft container resulted in 0.92 W/m²K, compared to 2.89 W/m²K for an uninsulated container. This improves thermal efficiency by 102.6%.

Installation Options

Fixing Instructions – Container Liner Insulation Kit

1. Ensure the container's walls, roof, and floor are clean, dry, and free from grease or dust.

2. Start insulating the walls:
   - Fix the first wall section from the center of the back wall, working forward to the middle of the front door.
   - Repeat for the second wall section, again starting from the back.

3. Install the roof insulation, which comes in two rolls for easier handling.

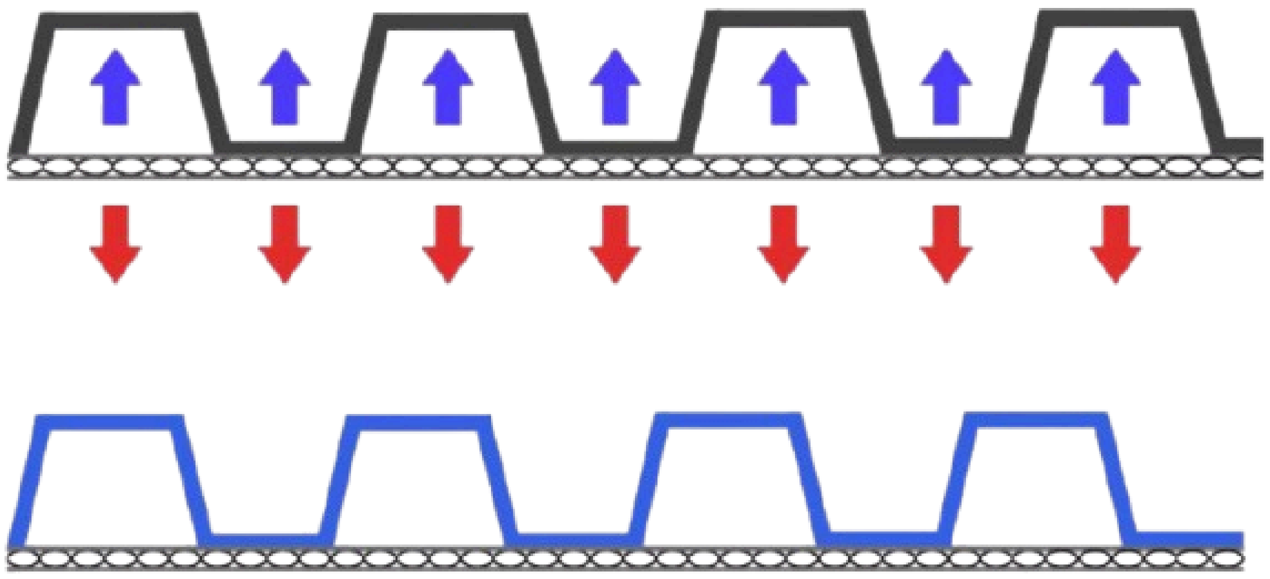
4. If needed, insulate the floor.

5. Seal all edges and joints with silver foil tape to prevent moisture ingress and condensation.

6. Use a strong brush to press and secure the insulation to the walls.

IMPORTANT:

Do not adhere the membrane to the vertical apertures—keep it flat against the wall to maximise thermal efficiency.



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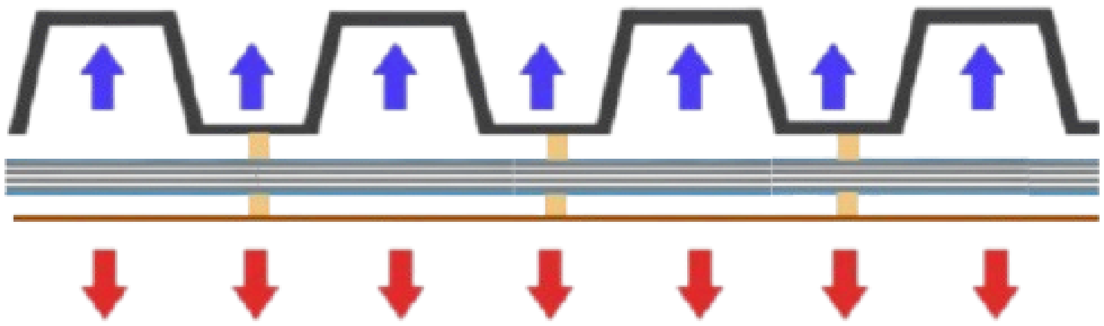
Installation Options

Installation Options for Conversions

There are two installation methods, depending on your needs:

Option 1 (Higher Performance – 40% More Efficient)

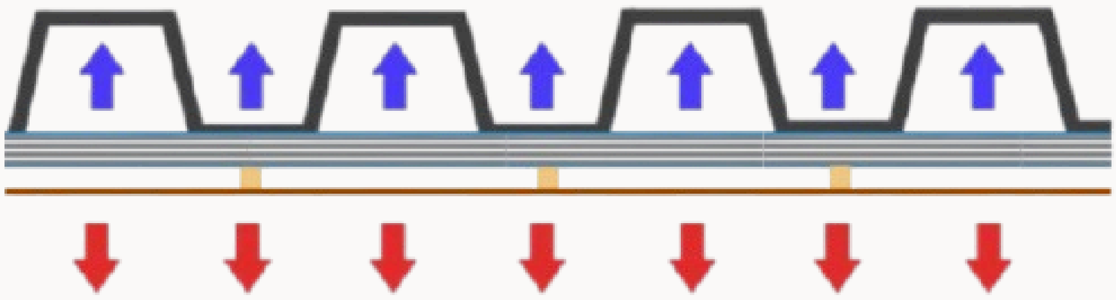
1. Build a batten frame around the perimeter.
2. Create studwork at 400mm centers.
3. Staple insulation to the battens.
4. Add a 25mm batten over the insulation before boarding.



This method enhances performance by 40% due to air gaps on both sides of the insulation

Option 2 (Simpler Installation)

1. Attach insulation directly to the container.
2. Build a batten framework over it.
3. Install the boards.



Floor Installation

1. Lay insulation directly on the floor.
2. Place 25mm x 50mm battens on top.
3. Cover with a thick board for durability

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