EMBATUFF® single-use thermal separator for reefer containers

Designed to transport frozen and refrigerated products in the same container

C&S Packaging Supplier
GRUPO EMBALEX
Since 1918
C/Empordà, 4. Pol. Ind. Can Bernades - Subirà
08130 Santa Perpètua de Mogoda (Barcelona - Spain)
Tel. +34 93 864 00 40 | info@cyspack.com

More info:
www.embatuff.com

TÜV AUSTRIA CERTIFIED
EN ISO 9001 20100203007325
EN ISO 14001 20104203007326
ISO 45001 20116203007327

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The Thermal Separator for reefer containers is a thermal insulator designed to optimize the transportation of frozen and refrigerated products with different temperature needs in a single container. The solution divides the space into 2 or more compartments alternating for example: frozen, fresh, or dry environments.

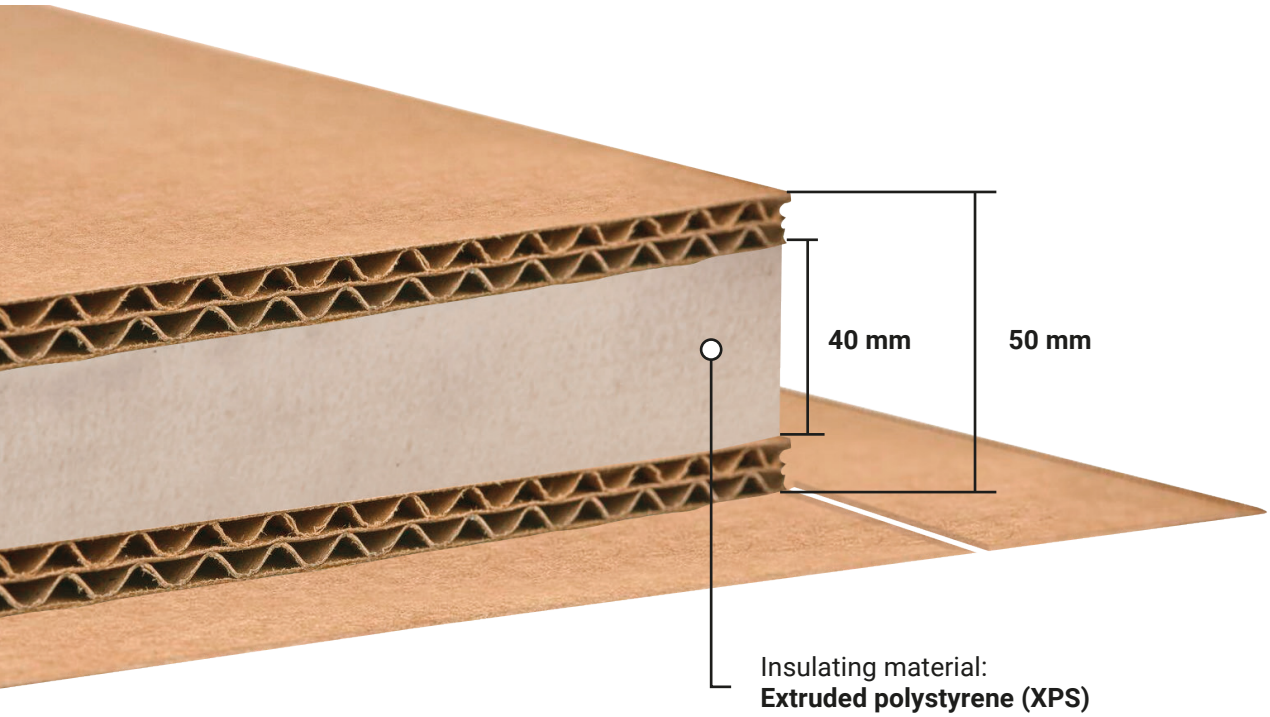
These separators are the perfect tool to improve the overall efficiency of the supply chain within a single shipment, and are especially indicated for the food market.

The Thermal Separator also enhances flexibility by allowing importation of only necessary quantities of product, maximizing efficiency in each shipment.

The solution is made with highly insulating materials such as extruded polystyrene (XPS), with a thermal resistance of 1.20 m² K/W and a thickness of 4 cm. Also adhered to double-channel cardboard sheets for an easier installation process within the container.

The product includes 36 foam strips to be inserted as needed into the container aluminium T Floor. They will help control the airflow from one space into the next compartment, therefore, the resulting temperature inside each space.

Its economic efficiency is already measurable from the first shipment. although the material at the destination can be reused in a well-planned logistics chain but users must be careful since the logistics of its unused return are not cost-effective.



EMBATUFF

Nº1 Thermal liner manufacturer in Europe
THERMAL SOLUTIONS FOR CARGO

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Designed to transport frozen and refrigerated products in the same container

- **Cost-effective solution to optimize supply chain**
- **Divides spaces into different temperatures**
- **Made for standard reefer container specifications (20’/40’)**
- **Quick and easy installation**

Includes 36 foam strips for inserting into the slots in the container floor, cutting off the air flow.

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EMBATUFF® single-use thermal separator for reefer containers

Technical characteristics **double-flute corrugated board**

Quality Code	BC185 BC1482308214	Channel type	BC	DC Class	DD2	% recycled	57,5

Description Composition	Acronyms paper	Paper description	Grammage Nom. (g/m²) +/- 7%	Thickness min. UNE-EN ISO 3034	6,5
	KRA	KRAFT	175	E.C.T. min. (kN/m) UNE-EN ISO 3037	7,5
	SQN	RECYCLED SEMI-CHEMICAL	130	Weight Ecoemb. box (g) +/- 7%	7259,9
	MED	MEDIUM	95	Grammage Eco quality (g/m²) +/- 7% UNE-EN ISO 536	761,0
	SQN	RECYCLED SEMI-CHEMICAL	130		
	KRA	KRAFT	175	LCBO (PSI) UNE-EN ISO 2759	199,1

Technical characteristics **XPS**

Thickness (mm): 40 / Thermal resistance (m²-K / W): 1.20

CHARACTERISTICS	TEST METHOD	CLASS according to EN 13164	SOPRA XPS CB	UNIT
Minimum compressive strength (10% deformation)	UNE EN 826	CS (10\Y)300*	≥300	kPa
Compressive strength durability against ageing/degradation Compressive creep 2% at 50 years	UNE EN 1606	CC(2/1,5/50)130	≥130 (60 – 120 mm)	kPa
Thermal conductivity at 10°C	UNE EN 12667 UNE EN 12939	λd, 10°C	0,033 (40-80 mm) 0,034 (90-120 mm) 0,035 (130-160 mm)	W/m°K
Dimensional stability under specific conditions	UNE EN 1604	DS (70,90)	≤4	% volume
Freeze-thaw resistance	UNE EN 12091	FTCD1	≤1	% volume
Tensile strength perpendicular to faces	UNE EN 1607	TR200	≥200	KPa
Shear behaviour	UNE EN 12090	SS150	≥150	KPa
Deformation under specific specific compressive loading and temperature conditions	UNE EN 1605	DLT(2)5	≤5	% volume
Water absorption by immersion	UNE EN 12087	WL(T)0,7	≤ 0.7	% volume
Water absorption by diffusion	UNE EN 12088	WD(V)3 WD(V)2 WD(V)1	3 (40-55 mm) 2 (60-95 mm) 1 (≥100 mm)	% volume
Water vapour transmission	UNE EN 12086	-	≥80	μ
Capillarity	-	-	0	-
Reaction to fire	EN 13501-1	-	E	Euroclass
Application temperature limit	-	-	-50/+75	°C
Thermal coefficient of linear expansion	-	-	0,07	mm/m·K
Dimensions: Thickness Length and width Rectangularity in length and width	UNE EN 823 UNE EN 822 UNE EN 824	T1 - -	e < 50 ±2 50 ≤ e ≤ 120 +3, - e >120 +6, -2 1250 ± 8 x 600 ±8 ≤5	mm mm mm/m
Surface finish	-	-	Sin piel	-
Side finish	-	-	Canto recto	-

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Technical characteristics **foam**

Product	Flexible polyurethane foam
Designation	TCU20
Type	Polyether

Test	Standard	Test method	Limits	Units
Density	ISO 845	PQL001	18 ± 1	Kg/m3
ILD at 25 %	ISO 2439	PQL002	78 - 106	Nw
ILD at 40 %	ISO 2439	PQL002	97 - 131	Nw
ILD at 65 %	ISO 2439	PQL002	184 - 248	Nw
Elongation	ISO 1798	PQL003	min. 120	%
Tensile strength	ISO 1798	PQL003	min. 110	Kpa.
Compression at 40	ISO 3386/1	PQL004	2,9 ± 0,3	Kpa.
Resilience	ASTM D 3574	PQL005	min. 30	%
Permanent deformation	ISO 1856	PQL006	máx. 6	%