

MANTO IZOPOR PLUS



Manto Izopor Plus is a carbon reinforced expanded polystyrene board that is produced specially with respect to TS EN 13499 standards for external thermal insulation composite systems. It should not be stored in direct sunlight even for a short period due to its dark colour.

Application

First of all, the surface to be used in the application should be checked to ensure that it is smooth and dry. If the surface is rough and with scrapes, it should be cleaned by brushing. Unevenness, major defects and cracks should be repaired by means of plaster. For wood surfaces acrylic based mortar, for the other surfaces cement based fixing mortar is used. Shortly after spreading fixing mortar over the boards, they are adhered to the wall surface so that there is no gap left between the seams. The boards are laid down in an alternating pattern at the facades and the corners. When the fixing mortar is completely dry (approximately after 24 hours) the anchoring process can be started. Special insulation fastening anchors are used which are chosen with respect to the wall properties. Tiled surfaces or surfaces with old plaster are not suitable for anchoring. After anchoring process reinforced layer is formed. Cement based undercoat plaster is applied to the surface by trowel. Afterwards, an alkali resistant, glass fiber based reinforcement mesh is placed on top by trowel in such a manner that the edges are overlapped by 10 cm. Consequently, second coat plaster is applied on the mesh and the reinforced layer comes to an end. When the reinforced layer is completely dry; permeable, solvent-free decorative cladding material with the desired texture is applied to the reinforced layer using a trowel or roller and the process is completed. Exterior cladding thickness and the quantity to be applied depend on the plaster type. Different surface forms can be achieved on the finishing plaster by different polishing methods.

For detailed information visit; www.ttmanto.com
www.terrathermmanto.com.tr



Thickness (cm)	Width x Length (cm)	Package (m ²)
3	50 x 100	8,00
4	50 x 100	6,00
5	50 x 100	5,00
6	50 x 100	4,00
7	50 x 100	3,50
8	50 x 100	3,00
10	50 x 100	2,50
12	50 x 100	2,00
14	50 x 100	1,50

- High thermal insulation
- Easy to apply
- Lightweight



TECHNICAL DATA SHEET

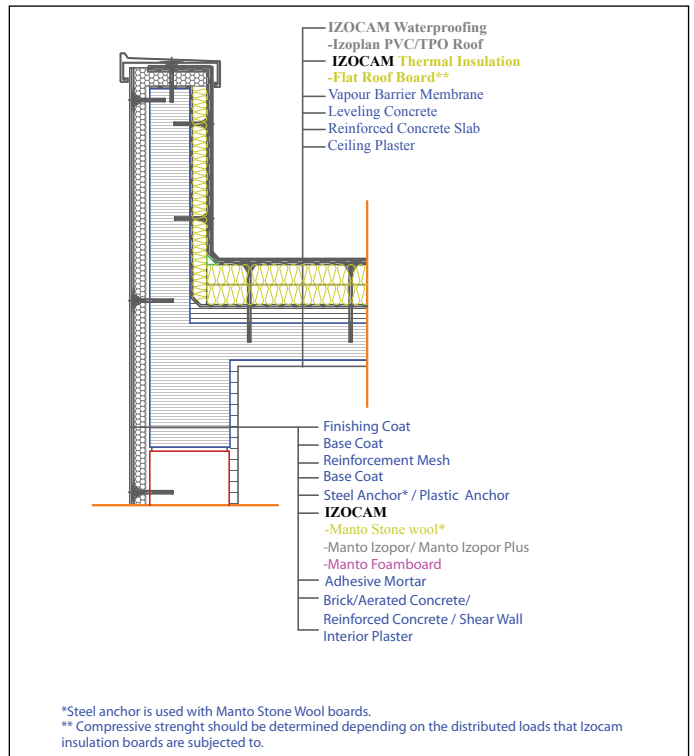
izocam Manto Izopor Plus

Properties	Symbol	Unit	Description	Tolerance	Standard
Material			Expanded Polystyrene (Carbon reinforced)		TS EN 13163
Density	ρ	kg/m ³	16	-1	-
Width x Length	W x L	mm	500 x 1000	± 2 mm (W2) ± 2 mm (L2)	TS EN 822
Thickness	t	mm	30 40 50 60 70 80 100 120 140	± 1 mm (T2)	TS EN 823
Reaction to fire	-	-	E	-	TS EN 13501-1
Declared Thermal Conductivity (10 °C)	λ_D	W/m.K	0,032	-	TS EN 13163
Thermal Resistance	R_D	m ² .K/W	0,90 1,25 1,55 1,85 2,15 2,50 3,10 3,75 4,35	-	TS EN 13163
Squareness	-	mm/m	S2	2 mm/m	TS EN 824
Flatness	-	mm/m	P4	± 5 mm/m	TS EN 825
Dimensional Stability	-	%	DS(N)2	$\pm 0,2$ %	TS EN 1605
Bending Strength	-	kPa	BS 100 (min.)	-	TS EN 12089
Compressive Strength	σ_{10}	kPa	CS(10)60 (min.)	-	TS EN 826
Water Absorbtion by Total Immersion	-	%	WL(T)2	≤ 2 %	TS EN 12097
Dimentional Stability Under Specified Temp. and Humidity Conditions	-	%	DS(70,90)1	$\leq 1,0$ %	TS EN 1604
Capilarity	-	-	None	-	-
Packaging Material	-	-	PE Bag	-	-
Other Information	Manto Izopor Plus insulation boards are produced regarding to the technical specifications of insulation boards stated in TS EN 13499 standards for "Expanded polystyrene based external thermal insulation composite systems" and in compliance with TS 7316 EN 13163 standard.				

Safety Reminders for Loading, Unloading, Shipping and Storing

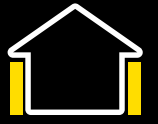
- These operations should be done indoors in case of rainy weather conditions.
- Loading and unloading should be done by (at least) two people.
- The packages should be put on top of each other with extra care.
- Only backshutter of the truck body should be opened during unloading.
- Unloading should be carried out from backside to the front.
- The products should be wrapped by a waterproof cover even if the shipping distance is short.
- Products should not be put into upright position during shipping and storing.
- Products can be stored with or without pallets by superposing the packages.
- Products should not be pulled by their package.
- Products should not be stepped on and should not be used as steps.
- The packages should be put on the floor with extra care so the corners of the product especially is not damaged by a hit.
- Precautions should be taken against sun, rain and exposed flame.
- When the packages piled in the truck body are being tied up hard padding (wood, cardboard, etc.) should be put on the corners of the packages to protect them against possible damages by ropes.
- Products should be stored in their packages until the application.
- The packages should not be stacked too close to each other by force in order to gain space.

Izocam is not responsible for any problem because of misprinting. Izocam, the manufacturer, reserves the right to alter product specifications without prior notice. Izocam also manufactures special products upon request. For your requirements, you are requested to contact our Export Department.



ENEPSM2012/01





Manto Izopor is an expanded polystyrene board that is produced specially with respect to TS EN 13499 standards for external thermal insulation composite systems. It is manufactured as blocks and rested for some time.

Application

First of all, the surface to be used in the application should be checked to ensure that it is smooth and dry. If the surface is rough and with scrapes it should be cleaned by brushing. Unevenness, major defects and cracks should be repaired by means of plaster. For wood surfaces acrylic based mortar, for the other surfaces cement based fixing mortar is used. Shortly after spreading fixing mortar over the boards, they are adhered to the wall surface so that there is no gap left between the seams. The boards are laid down in an alternating pattern at the facades and the corners. When the fixing mortar is completely dry (approximately after 24 hours) the anchoring process can be started. Special insulation fastening anchors are used which are chosen with respect to the wall properties. Tiled surfaces or surfaces with old plaster are not suitable for anchoring. After anchoring process reinforced layer is formed. Cement based undercoat plaster is applied to the surface by trowel. Afterwards, an alkali resistant, glass fiber based reinforcement mesh is placed on top by trowel in such a manner that the edges are overlapped by 10 cm. Consequently, second coat plaster is applied on the mesh and the reinforced layer comes to an end. When the reinforced layer is completely dry; permeable, solvent-free decorative cladding material with the desired texture is applied to the reinforced layer using a trowel or roller and the process is completed. Exterior cladding thickness and the quantity to be applied depend on the plaster type. Different surface forms can be achieved on the finishing plaster by different polishing methods.



For detailed information visit; www.ttmanto.com
www.terratherrmmanto.com.tr

Thickness (cm)	Width x Length (cm)	Package (m ²)
3	50 x 100	8,00
4	50 x 100	6,00
5	50 x 100	5,00
6	50 x 100	4,00
7	50 x 100	3,50
8	50 x 100	3,00
10	50 x 100	2,50
12	50 x 100	2,00
14	50 x 100	1,50

- High thermal insulation
- Easy to apply
- Lightweight

TECHNICAL DATA SHEET

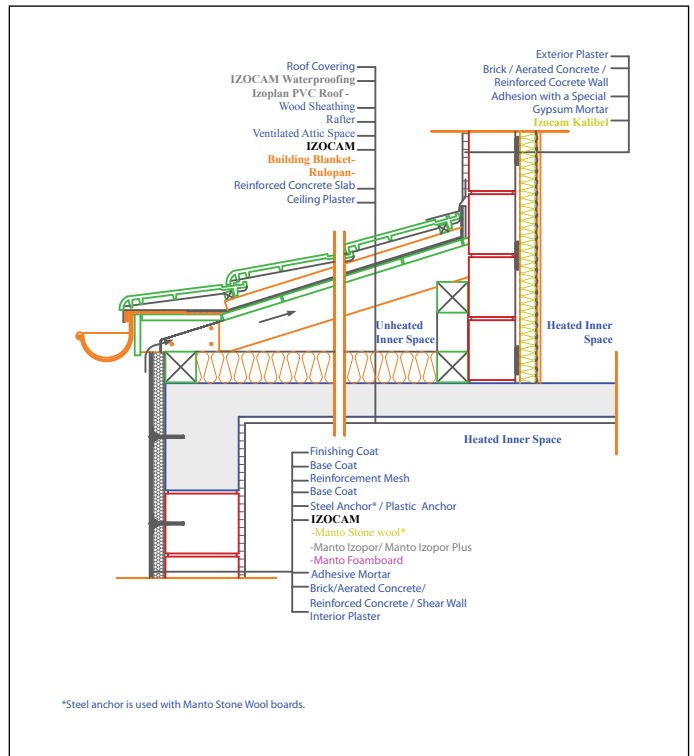
izocam Manto Izopor

Properties	Symbol	Unit	Description	Tolerance	Standard
Material			Expanded Polystyrene		TS EN 13163
Density	ρ	kg/m ³	16	-1	-
Width x Length	W x L	mm	500 x 1000	± 2 mm (W2) ± 2 mm (L2)	TS EN 822
Thickness	t	mm	30 40 50 60 70 80 100 120 140	± 1 mm (T2)	TS EN 823
Reaction to fire	-	-	E	-	TS EN 13501-1
Declared Thermal Conductivity (10 °C)	λ_D	W/m.K	0,039	-	TS EN 13163
Thermal Resistance	R_D	m ² .K/W	0,75 1,00 1,25 1,50 1,75 2,05 2,55 3,05 3,55	-	TS EN 13163
Squareness	-	mm/m	S2	2 mm/m	TS EN 824
Flatness	-	mm/m	P4	± 5 mm/m	TS EN 825
Dimensional Stability	-	%	DS(N)2	$\pm 0,2$ %	TS EN 1605
Bending Strength	-	kPa	BS 100 (min.)	-	TS EN 12089
Compressive Strength	σ_{10}	kPa	CS(10)60 (min.)	-	TS EN 826
Water Absorbption by Total Immersion	-	%	WL(T)2	≤ 2 %	TS EN 12087
Dimentional Stability Under Specified Temp. and Humidity Conditions	-	%	DS(70,90)1	$\leq 1,0$ %	TS EN 1604
Capilarity	-	-	None	-	-
Packaging Material	-	-	PE Bag	-	-
Other Information	Manto Izopor insulation boards are produced regarding to the technical specifications of insulation boards stated in TS EN 13499 standards for "Expanded polystyrene based external thermal insulation composite systems" and in compliance with TS 7316 EN 13163 standard.				

Safety Reminders for Loading, Unloading, Shipping and Storing

- These operations should be done indoors in case of rainy weather conditions.
- Loading and unloading should be done by (at least) two people.
- The packages should be put on top of each other with extra care.
- Only backshutter of the truck body should be opened during unloading.
- Unloading should be carried out from backside to the front.
- The products should be wrapped by a waterproof cover even if the shipping distance is short.
- Products should not be put into upright position during shipping and storing.
- Storing can be carried out by superposing the products with or without pallets.
- Products should not be pulled by their package.
- Products should not be stepped on and should not be used as steps.
- The packages should be put on the floor with extra care so the corners of the product especially is not damaged by a hit.
- Precautions should be taken against sun, rain and exposed flame.
- When the packages piled in the truck body are being tied up hard padding (wood, cardboard, etc.) should be put on the corners of the packages to protect them against possible damages by ropes.
- Products should be stored in their packages until the application.
- The packages should not be stacked too close to each other by force in order to gain space.

Izocam is not responsible for any problem because of misprinting. Izocam, the manufacturer, reserves the right to alter product specifications without prior notice. Izocam also manufactures special products upon request. For your requirements, you are requested to contact our Export Department.



ENEPSM2012/01



IZOPOR BOARD



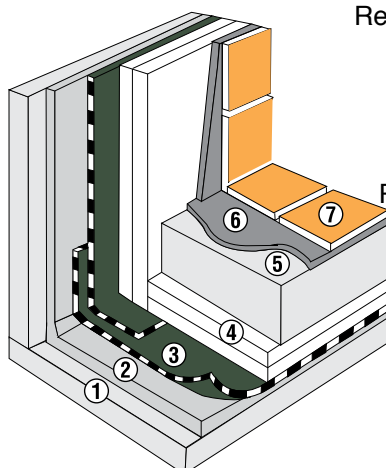
Izopor Board is an expanded polystyrene board that is used in between two walls, at double layer sandwich wall panels for thermal insulation purposes. It is used for the thermal insulation of cold storage rooms as well owing to its thermal insulation properties and that it can be used at lower temperatures. It is manufactured as blocks and cut into the required size heated parallel wires.

Application

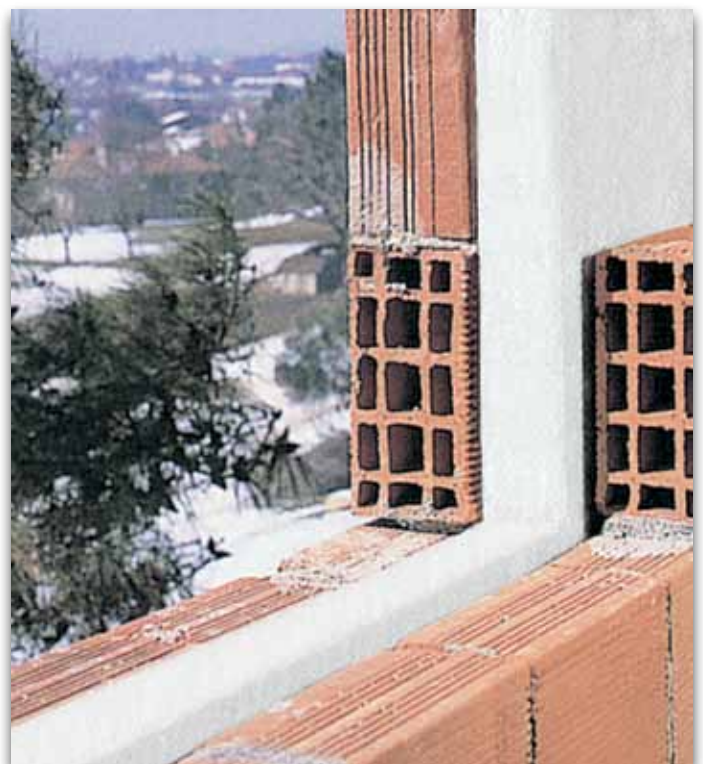
Wall Board is applied loose in between two wall components such as bricks, AAC blocks, concrete blocks at the facades. In this application, known as sandwich wall insulation, two wall components should be connected to each other with special fasteners at certain intervals. Building physics conditions should be reached for the insulation of cold storage rooms. The most important aspect to be considered is that the vapour barrier should definitely be on the side facing the warmer area. Vapour barrier material is adhered to the inner side of the ceiling and the wall. Izopor boards are fastened on top of that. Cement based prime plaster, glass cloth reinforcing mesh and prime plaster are applied on the boards. The application is completed by wall coating.

For the slabs, trowel coating or levelling screed is applied on existing reinforced concrete slab surface. After vapour barrier is laid down, Izopor Boards are laid loose in a manner that no gap is left at the joints. Consequently, 5 cm reinforced screed with minimum dosage (500) is applied on the Izopor Boards and then the application is completed with the desired floor covering.

Thickness (cm)	Width x Length (cm)	Package (m ²)
2	50 x 100	12,00
2,5	50 x 100	9,50
3	50 x 100	8,00
4	50 x 100	6,00
5	50 x 100	5,00
6	50 x 100	4,00
7	50 x 100	3,50
8	50 x 100	3,00
10	50 x 100	2,50



- Reinforced concrete slab ①
- Levelling screed ②
- Izopor water proofing (vapourproofing) ③
- Izopor ④
- Reinforced concrete slab ⑤
- Fixing mortar ⑥
- Flooring cover ⑦



- Thermal insulation
- Easy to apply
- Lightweight



TECHNICAL DATA SHEET

izocam Izopor Board

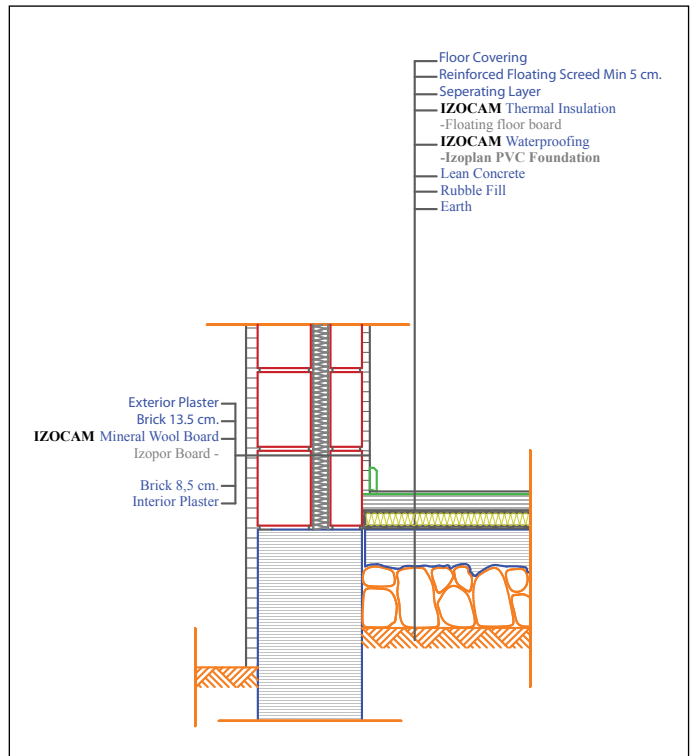
Properties	Symbol	Unit	Description												Tolerance	Standard												
Material			Expanded Polystyrene													TS EN 13163												
Width x Length	W x L	mm	500 x 1000												± 3 mm (W1) ± 6 mm (L1)	TS EN 822												
Thickness	t	mm	10 - 20 - 25 - 30 - 40 - 50												± 2 mm (T1)	TS EN 823												
Reaction to fire	-	-	E												-	TS EN 13501-1												
Squareness	-	mm/m	S1												± 5 mm/m	TS EN 824												
Flatness	-	mm/m	P3												± 10 mm/m	TS EN 825												
Density	ρ	kg/m ³	10	12	14	16	18	20	22	24	26	28	30	-1	-													
Declared Thermal Conductivity (10 °C)	λ_D	W/m.K	0,045	0,042	0,040	0,039	0,037	0,036	0,035	0,035	0,034	0,034	0,033	-	TS EN 13163													
Dimensional Stability	-	%	DS(N)5						DS(N)2						±0,5 %	±0,2 %	TS EN 1605											
Bending Strength	-	kPa	50			75			100			125			135			150			170			200			-	TS EN 12089
Compressive Strength	σ_{10}	kPa	None	30	50	60	80	90	100	120	150						-	TS EN 826										
Water Absorption by Total Immersion	-	%	WL(T)5			WL(T)2						WL(T)1			≤5 %	≤2 %	≤1 %	TS EN 12087										
Dimensional Stability Under Specified Temp. and Humidity Conditions	-	%	DS(70,90)1												≤ 1,0 %	TS EN 1604												
Specific Heat *	-	kcal/kg °C	0,33												-	-												
Capilarity	-	-	None												-	-												

* Literature value.

Safety Reminders for Loading, Unloading, Shipping and Storing

- These operations should be done indoors in case of rainy weather conditions.
- Loading and unloading should be done by (at least) two people.
- The packages should be put on top of each other with extra care.
- Only backshutter of the truck body should be opened during unloading.
- Unloading should be carried out from backside to the front.
- The products should be wrapped by a waterproof cover even if the shipping distance is short.
- Products should not be put into upright position during shipping and storing.
- Storing can be carried out by superposing the products with or without pallets.
- Products should not be pulled by their package.
- Products should not be stepped on and should not be used as steps.
- The packages should be put on the floor with extra care so the corners of the product especially is not damaged by a hit.
- Precautions should be taken against sun, rain and exposed flame.
- When the packages piled in the truck body are being tied up hard padding (wood, cardboard, etc.) should be put on the corners of the packages to protect them against possible damages by ropes.
- Products should be stored in their packages until the application.
- The packages should not be stacked too close to each other by force in order to gain space.

Izocam is not responsible for any problem because of misprinting. Izocam, the manufacturer, reserves the right to alter product specifications without prior notice. Izocam also manufactures special products upon request. For your requirements, you are requested to contact our Export Department.



ENEPSIL2012/01

