APPLICATION MANUAL

POLITERM® BLU

Ultra-lightweight virgin expanded polystyrene beads **EPS (N)**, premixed with special additives, for the preparation of **lightweight thermal insulating Bound EPS (BEPS) screeds**.
Especially designed for **upgrading the thermal insulation in buildings**.
Available for concrete batching plants.

ARCHITEKTONIDIS MONOTIKA S.A. "TEKTO HELLAS S.A"
Production – Distribution – Application of building insulation materials

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THE PRODUCT

Politerm Blu is consisting of specially treated ultra-lightweight virgin expanded polystyrene beads EPS (N), premixed with special additives, for the preparation of lightweight thermal insulating **B**ound **EPS (BEPS)** screeds. Available in two types of different granulometry– **Politerm® Blu** with a granulometry **Ø3-6mm** and **Politerm® Blu Fein** with granulometry **Ø2mm**. Politerm® Blu products are of controlled density, non-toxic, non-absorbing, rot-proof, dimensionally stable, without CFC, HCFC & HFC, without nutrients that will sustain the development of mold and bacteria. During their production, the beads are premixed with special additives which allow for their perfect mix with water, with the hydraulic binders, their uniform distribution in the mixture and the elimination of the bead floating phenomenon during the screeding of the material.

OUR TECHNOLOGY

Our technology is based on the perfect mixing of the virgin polystyrene beads with the cement. The premixing of the beads with special additives during the production phase allows for the preparation of superlight thermal insulation mortars with desirable characteristics. In more detail, due to the industrial pre-impregnation of the beads with the specialized additive we can achieve:

- Perfect mixing with the hydraulic binder
- Uniform distribution of the beads in the mixture
- Elimination of the bead floating phenomenon
- Consistency of declared values

The industrial pre-impregnation of the beads with the special additives is at the forefront of our technology. To help you understand our technology better, two pictures are given below, one picture of a competitive product and one picture of **Politerm® Blu**. In those pictures the differences in the uniformity of the mixture is evident.

Other products: Separation-floating of beads in the mixture

Politerm® Blu: Uniform bead distribution in the mixture

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INTERMEDIATE LAYER

Substrate under sand-cement and similar types of screeds

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (420lt or 170lt bag) installed by competent applicators using the base layer method for beneath sand-cement screeds, sand anhydrite or premixed screeds.
INTENDED USE: base layer on adequately compacted hardcore/sub-base slabs on floors and roofs without voids and with or without slopes, intermediate substrate of corrugated metal sheet etc.

MINIMUM APPLICATION THICKNESS: 50 mm.
For thicknesses less than 50 mm proceed as follows:
- Thicknesses between 30 mm and 50 mm on well consolidated surfaces (e.g. electrical conduits and/or pipes anchored with cement mortar): this reduced thickness may be considered acceptable.
- For thicknesses between 10 mm and 30 mm: in the mixture of cement and Politerm® Blu add about 200Kg/m^3 of aggregate of a maximum grain size of 0,6 mm (mixed manually) and include an electro-welded metal mesh (Ø2mm).

ITEM SPECIFICATION: Creation of a thermal insulating substrate made of Politerm® Blu manufactured by TEKTO HELLAS S.A.: super-light aggregates of virgin expanded polystyrene beads of constant particle size (Politerm® Blu granulometry Ø3-6mm and Politerm® Blu Fein granulometry Ø2mm) and controlled density. The beads are premixes one by one with special additives during the production phase, which allows for their perfect mixing with the hydraulic binders, the elimination of the bead floating phenomenon and their uniform distribution in the mixture. The preparation of the mixture can be done in densities from 200 to 350Kg/m^3 using only Portland cement 32.5 Cem I ή Cem II, without the addition of sand and/or other additives. Therefore, each cubic meter of mortar will be prepared using only the 840lt of Politerm® Blu beads, Portland cement 32.5 Cem I ή Cem II, in the recommended dosages and the relevant volume of water required for the hydration of the mixture. The obtained lightweight screed is suitable for the subsequent application of sand-cement screed of sand and anhydrite. TEKTO's technology also allows for the preparation of the new highly insulating screed with a density of 180Kg/m^3.

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The prepared mortar will exhibit the following characteristics:

CHARACTERISTICS	TYPE				
	180	200	250	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	200	225	275	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,059	0,067	0,074	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,054	0,064	0,072	0,079	0,123
Compression strength, **MPa (N/mm²)**	-	0,55	0,84	1,32	1,94
Compression strength, **kPa**	-	550	840	1.320	1.940
Flexural strength, **MPa (N/mm²)**	-	0,33	0,48	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	210	289	487	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	238	382	512	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0				
Water vapour permeability, **μ** (ELOT EN 12086)	5-20				
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0				
Specific heat, **J/kgK**	1000				
Shrinkage, **mm/m**	n.a.	0,427	n.a.	0,352	0,270
Resistance to moisture	Rotproof				
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)				

The application of Politerm® Blu on existing concrete slabs, concrete beam decks, compacted sub-bases etc, can be done without using an electro-welded mesh in the pour. If the application surface is comprised of insulation boards, bituminous and/or synthetic waterproofing layers, tiled floors, or corrugated metal sheet etc, prior to the application of Politerm® Blu install an electro-welded mesh (minimum dimensions: wire Ø 2mm – mesh 50x50 mm) appropriately tied and spaced from the application surface.

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WARNING AND PRECAUTIONS:

- When applying the Politerm® Blu every existing structural joint and/or expansion joint of the surface must be maintained and extended up through the Politerm® Blu screed.
- Before applying the Politerm® Blu screed, thoroughly clean the receiving surface.
- Before applying Politerm® Blu on porous or cementitious existing floors, once you clean the surface proceed to wet the surface well, without leaving puddles of water. When applying on non-porous or waterproofed surfaces like plastic sheets, insulating boards, tiles etc, do not wet the surface.
- When required, day joints in Politerm® Blu should be cast vertically.
- When continuing the pouring the next day, the day joints need to be treated with Edilstik Latex in a “fresh on fresh” application.
- Avoid mixing and application of Politerm® Blu when the temperatures are less than +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should however evaluate the costs and benefits of using antifreeze additives on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and methods indicated in the technical sheets, the product packaging and in this manual. In areas of high traffic protect Politerm® Blu accordingly.
- *It is essential to contact our engineering department when considering any application different from that described in our technical data sheets and our manuals.*

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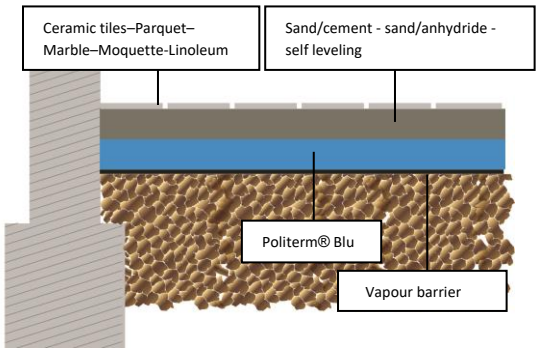
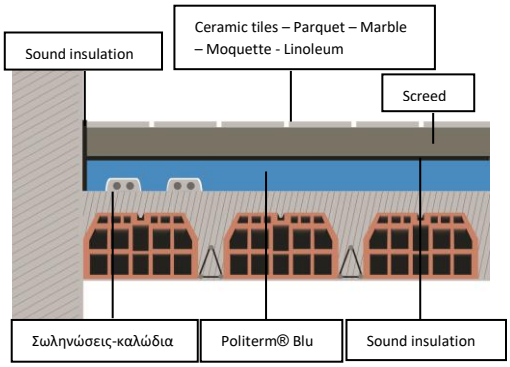
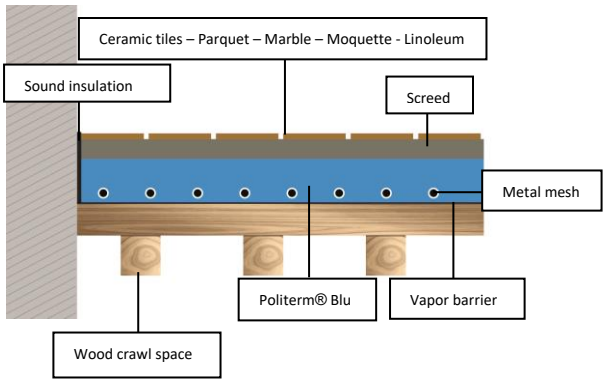
On ground: Lightweight thermal insulating substrate



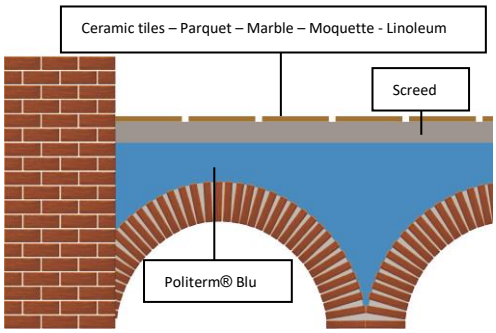
Floor: Lightweight thermal insulating substrate



Wood crawl space: Thermal insulating layers



Special application: Vaulted or waffle floor leveling



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INTERMEDIATE LAYER

Substrate under self-leveling screeds and underfloor heating systems

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (420lt or 170lt bag) installed by competent applicators using the substrate laying method under self-leveling screeds: meaning they are suitable for the subsequent application of self-leveling screeds.

INTENDED USE: base layer on adequately compacted hardcore/sub-base slabs on floors and roofs without voids and with or without slopes, intermediate substrate of corrugated metal sheet etc.

FOR USE UNDER SELF LEVELING SCREEDS:

1. The specific characteristics (very low water absorption) of Politerm® Blu, when correctly mixed and installed as per the manufacturer's instructions, make the use of a waterproof layer between the Politerm® Blu and the self-leveling screed obsolete.
2. When placing Politerm® Blu directly on the ground or in situations where damp conditions may occur beneath the Politerm® Blu the installation of a damp proof membrane, dpm will be necassary. In certain circumstances it may be necessary to incorporate a vapor control layer (VCL) between the Politerm® Blu substrate and the self-leveling screed.
3. In cases of particular static situations such as roofs, it is necessary to install a separating layer between the base made of Politerm® Blu and the self-leveling screed.
4. The thickness of the self-leveling screed, placed over Politerm® Blu, should be in accordance with the recommendations of the manufacturer of the self-leveling screed.

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FOR USE BENEATH UNDERFLOOR HEATING SYSTEMS:

1. The specific characteristics (very low absorption) of Politerm® Blu base mortars, when correctly mixed and installed as per the manufacturer's instructions, make the use of a waterproofing layer between the Politerm® Blu and the underfloor heating system unnecessary.
2. Installation of UFH piping system in rigid insulation panel: follow the installation instructions of the supplier of the thermal heating system.
3. Installation of UFH piping system without panel: using the thermal performance characteristics of the Politerm® Blu insulating layer it is possible to calculate a Politerm® Blu substrate thickness that makes the need for additional rigid insulation boards irrelevant. In that case, it is necessary to install galvanized sheets, joined together on top of the Politerm® Blu, on which it is possible to fix the UFH piping.

MINIMUM APPLICATION THICKNESS: 50 mm

For thicknesses less than 50 mm proceed as follows:

- Thicknesses between 30 mm and 50 mm on well consolidated surfaces (e.g. electrical conduits and/or pipes securely anchored and fully covered with cement mortar): the application thickness may be considered acceptable.
- For thicknesses between 10 mm and 30 mm: add to the mix of Politerm® Blu about 200 Kg/m^3 of aggregate with a maximum grain size of 0,6 mm (mixed manually) and include an electro-welded mesh (Ø2mm).

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The prepared screed will have the following characteristics:

CHARACTERISTICS	TYPE				
	180	200	250	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	200	225	275	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,059	0,067	0,074	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,054	0,064	0,072	0,079	0,123
Compression strength, **MPa (N/mm²)**	-	0,55	0,84	1,32	1,94
Compression strength, **kPa**	-	550	840	1.320	1.940
Flexural strength, **MPa (N/mm²)**	-	0,33	0,48	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	210	289	487	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	238	382	512	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0				
Water vapour permeability, **μ** (ELOT EN 12086)	5-20				
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0				
Specific heat, **J/kgK**	1000				
Shrinkage, **mm/m**	n.a.	0,427	n.a.	0,352	0,270
Resistance to moisture	Rotproof				
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)				

When laying Politerm® Blu on existing concrete roof, concrete beam decks, it can be done without using an electro welded mesh in the pour. If the receiving surface has insulation boards, bituminous and/or synthetic waterproofing layers, or corrugated steel sheets etc, before applying Politerm® Blu install an electro-welded mesh (minimum dimensions: wire Ø 3mm – mesh 50x50mm) needs to be included, which should be appropriately tied and spaced from the application surface.

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WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu screed any existing structural joints and/or expansion joints of the surface must be maintained and extended up through the Politerm® Blu
- Before laying the Politerm® Blu screed, clean the application surface thoroughly.
- When laying the Politerm® Blu screed on porous or cementitious existing floor, after cleaning the surface and before laying the screed, wet the surface well without leaving and puddles. Do not wet the surface when laying on non-porous or waterproof surfaces like plastic sheets, insulation boards, waterproof layers, or tiles.
- When required the day joints of the Politerm® Blu screed must be cast vertically.
- When continuing the laying after a day joint, treat the joint surface with the Edilstik latex adhesive and continue the laying with a "fresh on fresh" method.
- Avoid mixing and laying the Politerm® Blu screed when the temperatures are less than +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should evaluate the costs and the benefits of using antifreeze on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and the methods indicated in the technical sheets, the product packaging and in this manual.
- In case of high traffic floors, appropriately protect the screed.
- *It is essential that you contact our Engineering Department when considering any application that differs from that described in our technical data sheets and our manuals.*

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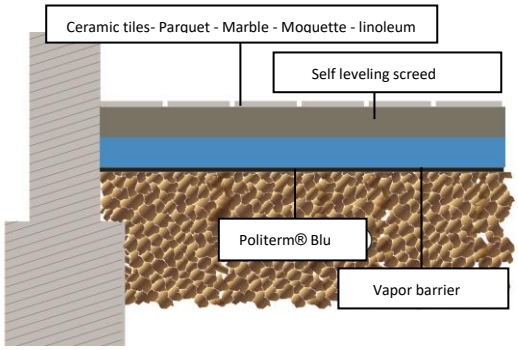
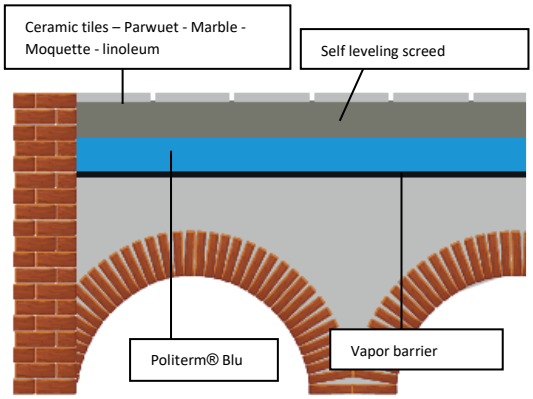
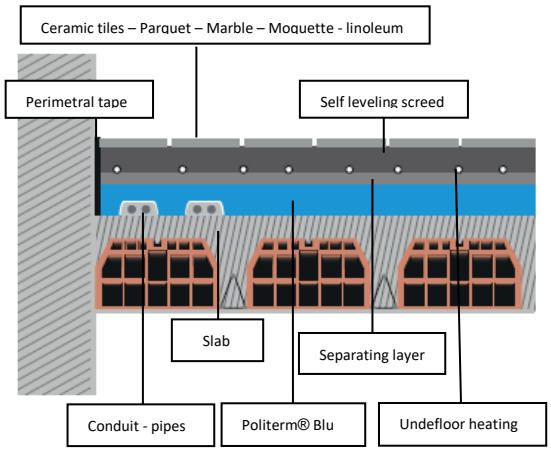
Substrate: Lightweight thermal insulation substrate



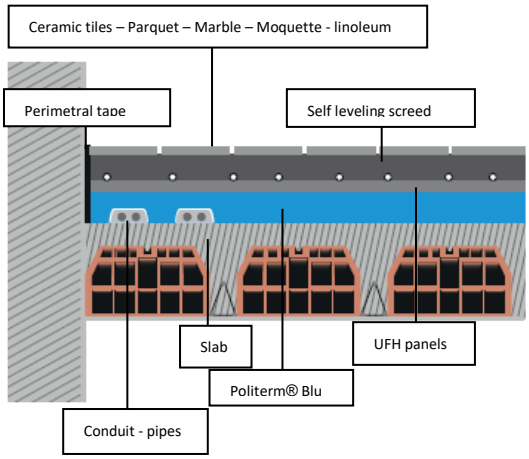
Special application: Single layer lightweight thermal insulation screed



Undefloor heating (UFH): Lightweight thermal insulation substrate for UFH without panels



Undefloor heating (UFH): Lightweight thermal insulation substrate for UFH with panels



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ROOF THERMAL INSULATION

Flat or inclined roof with or without gradient formation

Directly beneath waterproofing layer

APPLICATION: lightweight thermal insulation mortar made with POLITERM® BLU (420lt or 170lt bag) installed by competent applicators using the substrate laying method for direct application of a waterproofing layer either poured on, or bituminous (hot or cold application) and/or synthetic.
INTENDED USE: flat roofs and non-traffic terraces (with or without slopes), covering of corrugated roofing sheets etc.
MINIMUM THICKNESS ON ABSORBENT SURFACES: 50 mm.
For thicknesses less than 50 mm proceed as follows:

- Thicknesses between 30 mm and 50 mm on well consolidated surfaces (e.g. electrical conduits and/or pipes securely anchored and fully covered with cement mortar): the application thickness may be considered acceptable.
- For thicknesses between 10 mm and 30 mm: add to the mix of Politerm® Blu about 200 Kg/m^3 of aggregate with a maximum grain size of 0,6 mm (mixed manually) and include an electro-welded mesh (Ø2mm).

MINIMUM THICKNESS ON NON-ABSORBENT SURFACES: 50 mm with galvanized mesh (minimum size: wire Ø 3mm – mesh 50x50mm) at a due distance from the application surface.
TEKTO's technical department is available for any question.
For gradient formation, the minimum thickness must not be less than 50 mm.

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Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	238	382	512	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0				
Water vapour permeability, **μ** (ELOT EN 12086)	5-20				
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0				
Specific heat, **J/kgK**	1000				
Shrinkage, **mm/m**	n.a.	0,427	n.a.	0,352	0,270
Resistance to moisture	Rotproof				
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)				

When laying Politerm® Blu on existing concrete roof, concrete beam decks, it can be done without using an electro welded mesh in the pour. If the receiving surface has insulation boards, bituminous and/or synthetic waterproofing layers, or corrugated steel sheets etc, before applying Politerm® Blu install an electro-welded mesh (minimum dimensions: wire Ø 3mm – mesh 50x50mm) needs to be included, which should be appropriately tied and spaced from the application surface.

Before applying the waterproofing layer, it is necessary to prepare the surface using one of the two methods described below:

a. Abrade the surface using an electric sander fitted with an abrasive disc and dust extraction
Or alternatively

b. Melt the surface polystyrene beads using an LPG roofing gas torch.

Neither method should be employed until 7 days has passed after the screed has been layed.

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WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu screed any existing structural joints and/or expansion joints of the surface must be maintained and extended up through the Politerm® Blu
- Before laying the Politerm® Blu screed, clean the application surface thoroughly.
- When laying the Politerm® Blu screed on porous or cementitious existing floor, after cleaning the surface and before laying the screed, wet the surface well without leaving and puddles. Do not wet the surface when laying on non-porous or waterproof surfaces like plastic sheets, insulation boards, waterproof layers, or tiles.
- When required the day joints of the Politerm® Blu screed must be cast vertically.
- When continuing the laying after a day joint, treat the joint surface with the Edilstik latex adhesive and continue the laying with a "fresh on fresh" method.
- The maximum gradient depends on the strength of the dosage and is between 30% and 40%.
- Politerm® Blu screeds must be protected from rainfall for the first 48 after the application.
- The application of heavy screeds on top of Politerm® Blu is possible after a period of at least 7 days. This time period needs to be extended depending on the maximum application thickness of Politerm® Blu and the weather conditions. The application of waterproofing membranes must be done strictly in accordance to the manufacturer's specifications. The application of liquid waterproofing must be done strictly in accordance to the manufacturer's specifications.
- Avoid mixing and laying the Politerm® Blu screed when the temperatures are less than +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should evaluate the costs and the benefits of using antifreeze on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and the methods indicated in the technical sheets, the product packaging and in this manual.
- In case of high traffic floors, appropriately protect the screed.
- *It is essential that you contact our Engineering Department when considering any application that differs from that described in our technical data sheets and our manuals*.

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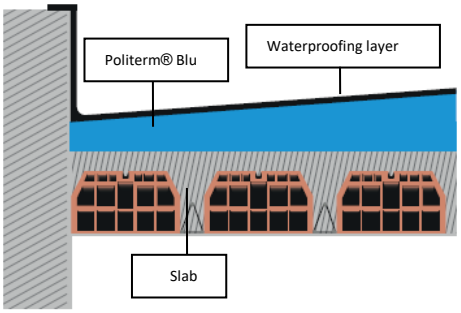
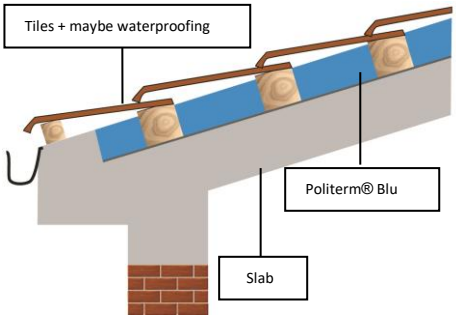
FOR USE IN FLAT OR INCLINED ROOF

Directly beneath an applied waterproofing layer

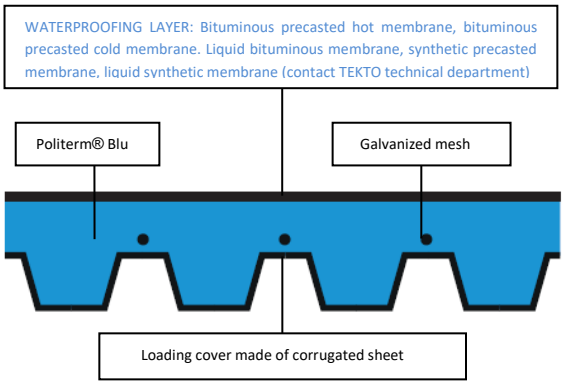
FLAT ROOF: LIGHTWEIGHT THERMAL INSULATING SCREED WITH SIMULTANEOUS GRADIENT FORMATION



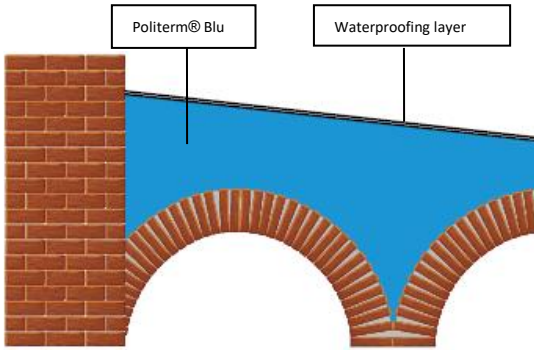
PITCHED ROOF: THERMAL INSULATING LAYER



THERMAL INSULATION AND LEVELING: LIGHTWEIGHT THERMAL INSULATING LEVELING ON CORRUGATED DECK



SPECIAL APPLICATION: VAULTED ROOF LEVELING



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ROOF THERMAL INSULATION

Flat or inclined roof with or without gradient formation

Beneath sand-cement screed and waterproofing layer

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (420lt or 170lt bag) installed by competent applicators using the base layer method for beneath sand-cement screeds to be followed by a waterproofing layer either liquid, bituminous (hot or cold) and/or synthetic.
INTENDED USE: flat roofs and non-traffic terraces (with or without slopes), covering of corrugated roofing sheets etc.
MINIMUM THICKNESS ON ABSORBENT SURFACES: 50 mm.
For thicknesses less than 50 mm proceed as follows:

- Thicknesses between 30 mm and 50 mm on well consolidated surfaces (e.g. electrical conduits and/or pipes securely anchored and fully covered with cement mortar): the application thickness may be considered acceptable.
- For thicknesses between 10 mm and 30 mm: add to the mix of Politerm® Blu about 200 Kg/m^3 of aggregate with a maximum grain size of 0,6 mm (mixed manually) and include an electro-welded mesh (Ø2mm).
- For gradient formation, the minimum thickness mist is not less than 50 mm.

MINIMUM THICKNESS ON NON-ABSORBENT SURFACES: 50 mm with galvanized mesh (minimum size: wire Ø 3mm – mesh 50x50mm) at a due distance from the laying surface.
TEKTO's technical department is available for any question.

ITEM SPECIFICATION: Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 200 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration. The prepared lightweight screed is suitable for subsequent screeding with sand and cement mortar or sand and anhydrite mortar. TEKTO's technology suggests also the new highly insulating screed with a density of 180 Kg/m^3.

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The prepared screed will have the following characteristics:

CHARACTERISTICS	TYPE				
	180	200	250	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	200	225	275	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,059	0,067	0,074	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,054	0,064	0,072	0,079	0,123
Compression strength, **MPa (N/mm²)**	-	0,55	0,84	1,32	1,94
Compression strength, **kPa**	-	550	840	1.320	1.940
Flexural strength, **MPa (N/mm²)**	-	0,33	0,48	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	210	289	487	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	238	382	512	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0				
Water vapour permeability, **μ** (ELOT EN 12086)	5-20				
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0				
Specific heat, **J/kgK**	1000				
Shrinkage, **mm/m**	n.a.	0,427	n.a.	0,352	0,270
Resistance to moisture	Rotproof				
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)				

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When laying Politerm® Blu on existing concrete roof, concrete beam decks, it can be done without using an electro welded mesh in the pour. If the receiving surface has insulation boards, bituminous and/or synthetic waterproofing layers, or corrugated steel sheets etc, before applying Politerm® Blu install an electro-welded mesh (minimum dimensions: wire Ø 3mm – mesh 50x50mm) needs to be included, which should be appropriately tied and spaced from the application surface.

WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu screed any existing structural joints and/or expansion joints of the surface must be maintained and extended up through the Politerm® Blu
- Before laying the Politerm® Blu screed, clean the application surface thoroughly.
- When laying the Politerm® Blu screed on porous or cementitious existing floor, after cleaning the surface and before laying the screed, wet the surface well without leaving and puddles. Do not wet the surface when laying on non-porous or waterproof surfaces like plastic sheets, insulation boards, waterproof layers, or tiles.
- When required the day joints of the Politerm® Blu screed must be cast vertically.
- When continuing the laying after a day joint, treat the joint surface with the Edilstik latex adhesive and continue the laying with a “fresh on fresh” method.
- The maximum gradient depends on the strength of the dosage and is between 30% and 40%.
- Politerm® Blu screeds must be protected from rainfall for the first 48 after the application.
- The application of heavy screeds on top of Politerm® Blu is possible after a period of at least 7 days. This time period needs to be extended depending on the maximum application thickness of Politerm® Blu and the weather conditions. The application of waterproofing membranes must be done strictly in accordance to the manufacturer’s specifications. The application of liquid waterproofing must be done strictly in accordance with the manufacturer’s specifications.
- Avoid mixing and laying the Politerm® Blu screed when the temperatures are less than +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should evaluate the costs and the benefits of using antifreeze on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and the methods indicated in the technical sheets, the product packaging and in this manual.
- In case of high traffic floors, appropriately protect the screed.
- *It is essential that you contact our Engineering Department when considering any application that differs from that described in our technical data sheets and our manuals*.

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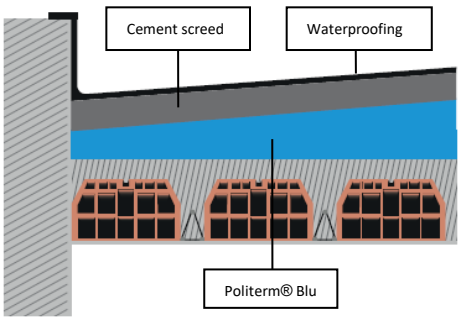
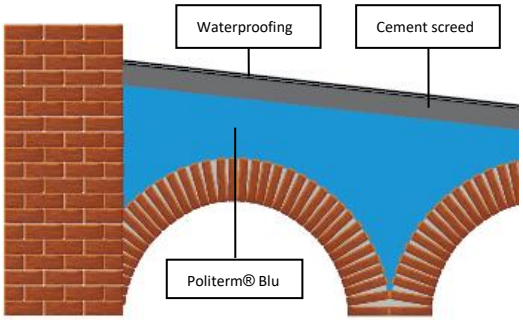
FLAT, INCLINED, VAULTED ROOFS/WITH OR WITHOUT SIMULTANEOUS GRADIENT FORMATION with the application of a sand-cement base screed prior to waterproofing application

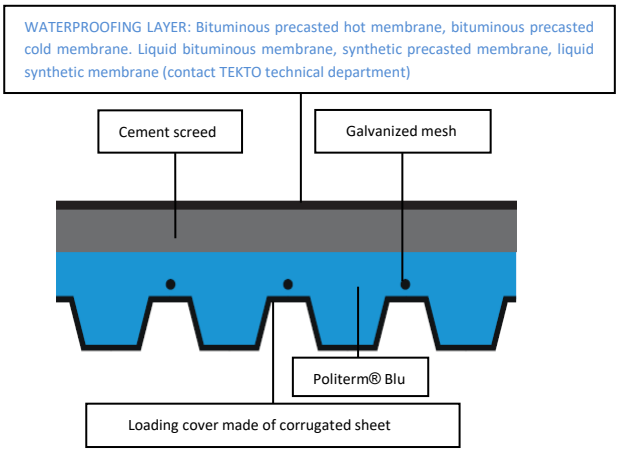
FLAT ROOF: SINGLE LAYER LIGHTWEIGHT THERMAL INSULATING INCLINED SCREED



SPECIAL APPLICATION: VAULTED ROOF LEVELLING



CORRUGATED SHEET: LIGHTWEIGHT THERMAL INSULATING LEVELLING ON CORRUGATED SHEET



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LIGHTWEIGHT NON-ABSORBENT THERMAL INSULATING SYSTEM FOR ROOFING AT FLAT, INCLINED AND VAULTED ROOFS WITH OR WITHOUT SIMULTANEOUS GRADIENT FORMATION

NEW SYSTEM POLITERM® RAIN DEFENCE

New
Politerm Blu
+
B.R.D. Blu Rain defense
a unique NON-
ABSORBENT SYSTEM

TYPOLOGY: Creation of a superlight non-absorbent base screed for thermal insulation prepared with Politerm® Blu (supplied in bags of 500lt or 200lt yield), mixed with the specific powdered binder B.R.D. Blu Rain Defense (an additive that allows to leave Politerm under the rain, without slowing down the drying time) and cement. It is applied by a specialized team through the Roofing casting method.

INTENDED USES: Roofing flat/inclined roofs (see paragraph Roofing, p. 10). Encapsulation of asbestos fiber sheet (see paragraph Encapsulation, p. 22). Piano Zero single-layer application for exterior surfaces (see paragraph single layer flat screed, p. 26). Intermediate layer for the laying of asphalt (see paragraph special applications, p. 46)
MINIMUM THICKNESS ON ABSORBENT SURFACES: 50 mm.

For thicknesses less than 50 mm proceed as follows:

- Thicknesses between 30 mm and 50 mm on well consolidated surfaces (e.g. electrical conduits and/or pipes securely anchored and fully covered with cement mortar): the application thickness may be considered acceptable.
- For thicknesses between 10 mm and 30 mm: add to the mix of Politerm® Blu about 200 Kg/m^3 of aggregate with a maximum grain size of 0,6 mm (mixed manually) and include an electro-welded mesh (Ø2mm).
- For gradient formation, the minimum thickness must not be less than 50 mm.

SPECIFICATION: Creation of a lightweight non-absorbent thermal insulating base screed, prepared with Politerm® Blu, produced by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 200 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, and the specific powdered binder Blu Rain Defense. The quantity is 800 gr for each 50 Kg of cement binder, and there is no need to add sand and/or other additives. Therefore, every

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cubic meter is prepared with only 840lt Politerm Blu, B.R.D. Blu Rain Defense binder and Portland cement 32.5/42.5/52.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration. The resulting base screed will be suitable for application on roofs, respecting the relevant techniques of application.

The prepared screed will have the following characteristics:

CHARACTERISTICS	TYPE				
	180	200	250	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	200	225	275	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,059	0,067	0,074	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,054	0,064	0,072	0,079	0,123
Compression strength, **MPa (N/mm²)**	-	0,55	0,84	1,32	1,94
Compression strength, **kPa**	-	550	840	1.320	1.940
Flexural strength, **MPa (N/mm²)**	-	0,33	0,48	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	210	289	487	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	238	382	512	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0				
Water vapour permeability, **μ** (ELOT EN 12086)	5-20				
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0				
Specific heat, **J/kgK**	1000				
Shrinkage, **mm/m**	n.a.	0,427	n.a.	0,352	0,270
Resistance to moisture	Rotproof				
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)				

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ORDER OF INTRODUCTION IN THE MIX:

1. Water
2. Politerm® Blu
3. Cement: quantity dependent of application
4. Blu Rain Defense binder in a quantity of 0,800 Kg per 50 Kg of cement
5. Mix for 10 minutes (introduction time included).

For mixtures with sand (density greater than 350 Kg/m^3) add 400 gr of additive for each 50Kg of aggregate.
In case of application on surfaces composed of floors, cls castings, loose stone foundation etc., the application of the base screed prepared with Politerm® Blu does not require the insertion of galvanized mesh into the casting. In case of application on surfaces composed of insulating sheets, waterproofing synthetic layers, ceramic floors, linoleum floors, PVC, wood, moquette, corrugated sheets, etc, before laying the base screed prepared with Politerm® Blu it is necessary to lay the galvanized sheets (minimum size: wire Ø2mm – mesh 50x50mm) tied together and at a distance from the laying surface.

WARNINGS:

- During the screeding with Politerm® Blu the structural and/or the preexisting expansion joints on the application surface must be maintained Politerm® Blu.
- Before the application of the screed made with Politerm® Blu, clean the surface thoroughly.
- After the cleaning of the application surface and prior to the application of the Politerm® Blu base screed, it is necessary to moisten the surface without leaving puddles. Do not moisten the surface if it is composed of non-absorbing layers or wood boards.
- Any casting interruption or execution of leveling strips has to be done vertically in respect to the laying surface.
- Any casting interruption or execution of leveling strips must be previously treated with Edilstik latex and the application done with the “fresh on fresh” method.
- The application on pitched or vaulted roof with Politerm® Blu must be between 30% and 40% (also according to the laying surface’s nature).
- **The base screed will be therefore able to overcome the run-off caused by weak rain, even after 24hr from the application (climatic conditions +20°C and relative humidity 50%).**
- **The base screed will be able to eliminate the water absorption caused by weak rain, even after 48hr from the application (climatic conditions +20°C and relative humidity 50%).**
- The Politerm® Blu base screed must be protected from meteoric precipitation (e.g. rain)) for the first 48 hours from the execution of the casting.
- The laying of the heavy screed on the base screed prepared with Politerm® Blu is possible after approximately 7 days from the application of the screed. This time period may change according to the thickness and the climatic conditions. The application of the waterproofing layers must follow the instructions of the producer.
- The use of liquid membrane on the Politerm® Blu base screeds cannot ignore the test and approval of the membrane producers/supplier.
- Avoid mixing and screeding the Politerm® Blu substrate when the temperatures are less than +5°C. The possible use of ant-freeze additives must be compatible with the physic-chemical characteristics of Politerm® Blu. The contractor must evaluate the costs and benefits of using the anti-freeze on a case-by-case basis.

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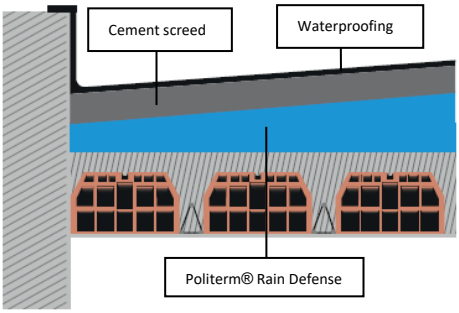
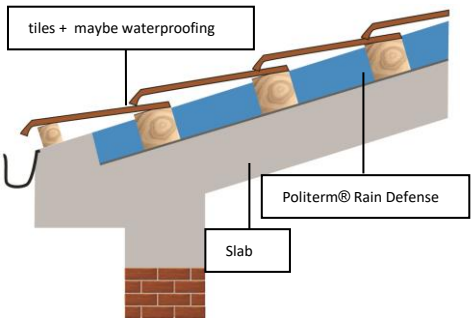
- During the preparation of the Politerm® Blu screed, it is necessary to carefully follow the dosages and the methodologies indicated on the technical data sheets, the packaging of the product and the present manual.

In order to evaluate every different application from what is described in our manuals, please contact our technical department.

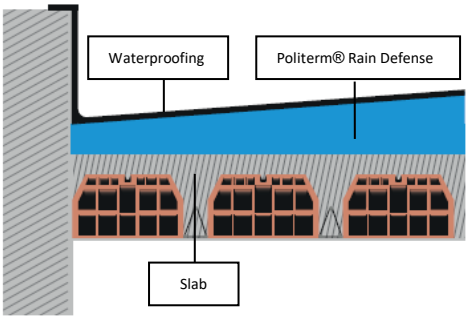
FLAT ROOF: LIGHT SLOPE THERMAL INSULATING SINGLE-LAYER SCREED



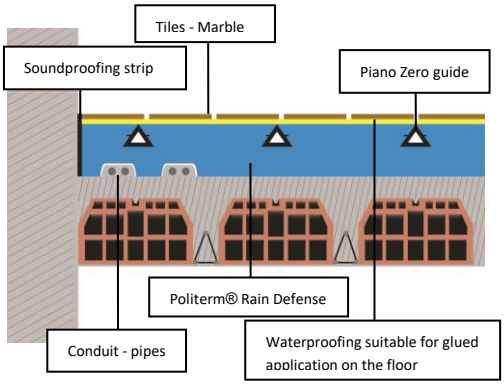
PITCHED ROOF: THERMAL INSULATION



FLAT ROOF: LIGHT SLOPE SINGLE LAYER THERMAL INSUATING SCREED



TERRACES AND BALCONIES: SINGLE LAYER THERMAL INSULATING SCREED



SOME PHASES OF THE NEW SYSTEM POLITERM® RAIN DEFENSE





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ASBESTOS FIBER CEMENT ENCAPSULATION

For the encapsulation of asbestos fiber cement boards

APPLICATION: Lightweight thermal insulating screed made of POLITERM® BLU (bags of 420lt or 170lt) installed by competent applicators using the asbestos fiber cement encapsulation method in order to avoid air pollution by asbestos fibers and to offer a surface to receive a waterproofing layer either liquid, bituminous (hot or cold) and/or synthetic.

Using this method, the encapsulation can be done without using the traditional hazardous, expensive and complex washing operation, as well as scraping and fixing of cracks and crazing. Furthermore, using the POLITERM® BLU encapsulation system there is no need to remove, cut or drill the asbestos fiber cement boards, thus avoiding the creation of hazardous dust.

INTENDED USE: pitched roofs and shelters.
MINIMUM LAYER: 50 mm thickness above the top of the asbestos fiber cement corrugated sheet roof profile. The average thickness obtained will thus be approximately 80 mm (depending on the corrugated profile).

ITEM SPECIFICATION:
Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 200 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration.

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The prepared screed will have the following characteristics:

CHARACTERISTICS	TYPE				
	180	200	250	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	200	225	275	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,059	0,067	0,074	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,054	0,064	0,072	0,079	0,123
Compression strength, **MPa (N/mm²)**	-	0,55	0,84	1,32	1,94
Compression strength, **kPa**	-	550	840	1.320	1.940
Flexural strength, **MPa (N/mm²)**	-	0,33	0,48	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	210	289	487	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	238	382	512	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0				
Water vapour permeability, **μ** (ELOT EN 12086)	5-20				
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0				
Specific heat, **J/kgK**	1000				
Shrinkage, **mm/m**	n.a.	0,427	n.a.	0,352	0,270
Resistance to moisture	Rotproof				
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)				

Prior to commencing the application, it is imperative to check all the regulation and legal obligations in relation to asbestos fiber cement. Also, prior to encapsulation, it is imperative to stabilize the surface of the asbestos fiber cement boards by using a coating of modified latex Edilstik F.C.A. applied using a low-pressure spray. Edilstik F.C.A. can be diluted with clean water (1-part Edilstik F.C.A. to 2 parts clean water).
Before laying the Politerm® Blu screed, it is necessary to install a galvanized mesh (minimum dimensions: wire Ø2 mm – mesh 50x50mm) appropriately tied and spaced from the surface of the roof. This system makes the application monolithic and assists the installer when working on sloped roofs.

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Before applying the waterproofing finish, it is necessary to prepare the surface using one of the two following methods:

a. Abrade the surface by using an electric sander fitted with an abrasive disk and dust extraction.
alternatively
b. Melt the surface polystyrene beads using an LPG roofing gas torch.

Neither method shall be employed until 7 days after the application of the screed have passed.

WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu screeds any existing structural joints and/or expansion joints in the receiving surface must be maintained and extended up through the Politerm® Blu screed.
- Any remedial actions involving asbestos fiber cement roofs must be performed strictly in accordance with any regulations in place.
- The encapsulation with Politerm® Blu screed on roofs constructed using boards spanning metal framed structures must only be undertaken have been fully assessed and sanctioned by a structural engineer to ensure the structural integrity and also the safety aspects of performing such an operation in the provision of personal protection equipment, safe access, working platforms if required and scaffolding.
- When required, day joints in the Politerm® Blu screed should be cast vertically.
- When continuing the pour the day joints need to be treated with Edilstik latex adhesive, to be used “fresh on fresh”.
- The maximum gradient depending on the mix strength of the Politerm® Blu is between 30% and 40%.
- The Politerm® Blu screeds must be protected from rain in the 48 hours after the application.
- The subsequent laying of heavy screeds over the Politerm® Blu screed may be possible after a period of at least 7 days. This time period may need to be extended depending on the thickness of the Politerm® Blu screed and the climatic conditions. The installation of waterproofing membranes on Politerm® Blu should be strictly in accordance with the instructions of the membrane’s manufacturer. The installation of liquid waterproofing on Politerm® Blu should be strictly in accordance with the instructions of their manufacturer.
- Avoid mixing and screeding the Politerm® Blu substrate when the temperatures are less than +5°C. The possible use of ant-freeze additives must be compatible with the physic-chemical characteristics of Politerm® Blu. The contractor must evaluate the costs and benefits of using the anti-freeze on a case-by-case basis.
- During the preparation of the Politerm® Blu screed, it is necessary to carefully follow the dosages and the methodologies indicated on the technical data sheets, the packaging of the product and the present manual.
- *We advise you to contact our technical department when you consider a different application from what is described in our manuals.*

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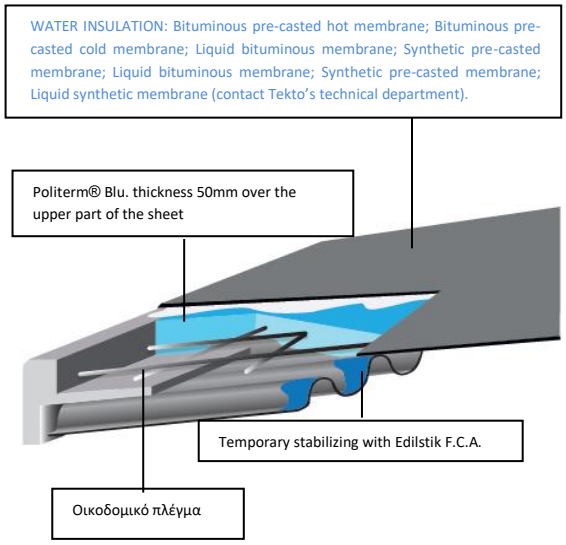
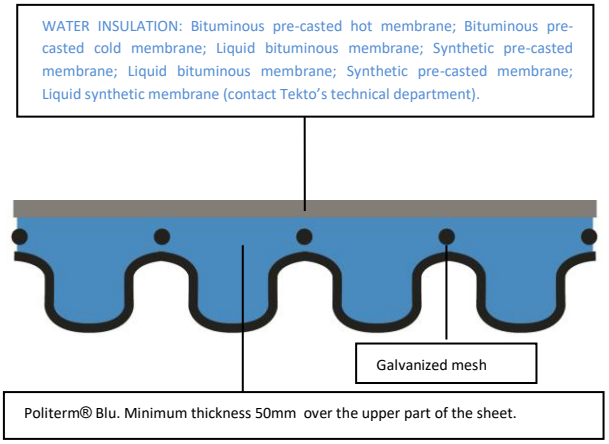
SPECIAL APPLICATION: ENCAPSULATION OF ASBESTOS FIBER CEMENT





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SINGLE LAYER FLAT SCREED

For direct adhesion of ceramic tiles, stone tiles, pre-polished marble (internal and external)

APPLICATION: Lightweight thermal insulating screed, made using POLITERM® BLU (420lt or 170lt bag) installed by competent applicators using the single layer method to create a flat surface of small tolerance, suitable for the direct laying and adhesion of ceramic tiles, stone tiles and pre-polished marble.
INTENDED USE: internal floors, external terraces.

MINIMUM THICKNESS OF POLITERM® SCREED ON ABSORBENT SURFACES: 50mm. If there are pipes or conduits present on the receiving surface, then the 50 mm minimum applies to the thickness above the highest level of those pipes or conduits. This thickness must be increased to 100mm when there are separating layers e.g. damp proof membranes (dpm), vapor control layers (VCL) or slip sheets that detached the POLITERM® BLU or POLITERM® BLU FEIN from the existing slab. Additionally, it will be necessary to place a galvanized reinforcing mesh (minimum dimensions: wire Ø2 mm, mesh 50 x 50 mm) properly tied together and spaced within the Politerm® screed. *For thicknesses less than those recommended please contact TEKTO's technical department.*

MINIMUM THICKNESS OF POLITERM® SCREED ON NON-ABSORBENT SURFACES: The minimum thickness of 50mm is suitable only for the following surfaces:
1) Existing floor finish comprising of ceramic tiles, marble or similar that have first being treated:
a) Clean the surface as to remove all loose parts, dust, particles and any other material that might prevent a good bond between the existing floor and the new screed.
b) Application of a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's instructions (indicative consumption on a flat surface: 300gr/m^2, one layer).
c) After the drying (min. 24 hours), the application of the thermal insulating screed made of POLITERM® BLU or POLITERM® BLU FEIN, follows with a minimum density of 300 Kg/m^3.

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2) Existing bituminous waterproofing coating having first been treated:
a) Clean the surface as to remove all loose parts, dust, particles and any other material that might prevent a good bond between the existing floor and the new screed.
b) Application of a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's instructions (indicative consumption on a flat surface: 300gr/m^2, one layer).
c) After the drying (min. 24 hours), the application of the thermal insulating screed made of POLITERM® BLU or POLITERM® BLU FEIN, follows with a minimum density of 300 Kg/m^3 and with a prior installation of a galvanized reinforcing mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the base.
Note: For any other nonabsorbent surface, the minimum thickness of the screed is 100mm. Prior to the application of the thermal insulating screed made of POLITERM® BLU or POLITERM® BLU FEIN, install a galvanized reinforcing mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the base.
Our technical department is available for any questions.

ITEM SPECIFICATION:
Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 300 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration.

In order to achieve the flat surface required for successfully laying the ceramic tiles or marble on the screed made from POLITERM® BLU or POLITERM® BLU FEIN it will be necessary to place screed rails before the mixing begins. These are made of PVC, are 50 mm in height and remain in the screed once it has cured and dried. The screed rails have to be set upon the existing floor surface and leveled, packed up with mortar as required to ensure that the top of the rail is at the desired finished level of the POLITERM® BLU or the POLITERM® BLU FEIN screed. It is recommended that the distance between screed rails should not exceed 2,5 meters. To discuss other suitable alternatives please contact TEKTO's technical department.
Once the screed rails are set in position, the screed made of POLITERM® BLU or POLITERM® BLU FEIN can be poured between them, spread and then leveled using a straight edge blade pulled over the top edge of the screed rails.

On average, once a period of 72 hours has elapsed since pouring and leveling the screed, the surface preparation for tiling can commence:

1. Surface abrasion, carried out with appropriate equipment in order to remove any imperfections caused by the straight edge.
2. On areas of the floor that the floor sander can't reach i.e. the perimeter, it will be necessary to prepare those areas with a scraping knife or tool.
3. Clean the surface as to remove loose parts, dust and/or any other particles that might prevent a good bonding between the screed and the surface.
4. Check the flatness of the finished level of the screed using one-meter straight edge.

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5. Additional preparation work that may be carried out by the contractor: melt the surface polystyrene beads using an LPG roofing gas torch and to remove swirls created as a consequence of the polishing. None of these methods to be employed until 7 days has passed after the screed has been laid.

If so desired, an initial protection of the POLITERM® BLU or POLITERM® BLU FEIN screed can be applied by using a thin (about 2 mm) protective smoothing mortar prepared as follows (suitable for interior):

Dosage for a cement mixer:
- Tile adhesive: 125 Kg
- Cement: 25 Kg
- Sand: About 90-120lt
- Hydration: Hydrate to a semi-fluid consistency with a mixture comprising of 4 parts of clean water to 1-part Edilstik latex.
- Application: with a smooth metal trowel

As an alternative, the smoothing coat can be made using premixed self-leveling smoothing mortar Autoliv, after being treated with Edilstik latex, applied “fresh on fresh”.
This coated base screed will be suitable for subsequent direct adhesion of ceramic, terracotta, stoneware, clinker and pre-polished marble floor coverings.

EXTERNAL SURFACES: In case of external surfaces, before the application of the final floor layer, apply a suitable waterproofing.

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The prepared screed will have the following characteristics:

CHARACTERISTICS	TYPE	
	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,079	0,123
Compression strength, **MPa (N/mm²)**	1,32	1,94
Compression strength, **kPa**	1.320	1.940
Flexural strength, **MPa (N/mm²)**	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0	
Water vapour permeability, **μ** (ELOT EN 12086)	5-20	
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0	
Specific heat, **J/kgK**	1000	
Shrinkage, **mm/m**	0,352	0,270
Resistance to moisture	Rotproof	
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)	

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WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu any existing structural joints and/or expansion joints in the receiving surface must be maintained and extended up through the Politerm® Blu screed.
- If acoustic mats or layers are to be incorporated into the construction beneath the Politerm® Blu screed laid using the single layer method then these acoustic layers should be installed beneath, not over, any pipes or conduits thereby avoiding the possibility of creating air pockets which could have the effects of lessening the acoustic performance and also the structural integrity of the Politerm® Blu screed.
- Before laying the Politerm® Blu screed, thoroughly clean the receiving surface.
- After cleaning of the screed surface and before applying the screed prepared with Politerm® Blu, wet the floor well but without leaving puddles. When laying on a non-porous or waterproof surface like plastic sheeting over insulation boards, waterproof layers or tiled floors, do not wet the surface.
- When required, day joints in the Politerm® Blu screed should be cast vertically.
- When continuing the pour the day joints need to be treated with Edilstik latex adhesive, to be used “fresh on fresh”.
- When adhering final finish surfaces like ceramic tiles or vinyl, if a smoothing layer is not applied then the consumption of adhesive may be 20% greater than normal. This is due to the open cells that remain after the surface beads have been removed. This does however provide a stronger mechanical bond between the layers.
- The adhesives must be used strictly in accordance with the instructions of the adhesive manufacturer.
- Installing plasterboard partitions: before installing plasterboard partitions directly on single layer screeds made with Politerm® Blu or with Politerm® Blu Fein, first apply a smoothing mortar (thickness 2mm). The smoothing mortar must cover an area equal to the width of the floor plates plus 50 mm on each side. Subsequently, the floor plates can be installed using special double-sided adhesive tape.
- Avoid mixing and screeding the Politerm® Blu substrate when the temperatures are less than +5°C. The possible use of ant-freeze additives must be compatible with the physic-chemical characteristics of Politerm® Blu. The contractor must evaluate the costs and benefits of using the anti-freeze on a case-by-case basis.
- During the preparation of the Politerm® Blu screed, it is necessary to carefully follow the dosages and the methodologies indicated on the technical data sheets, the packaging of the product and the present manual.
- *We advise you to contact our technical department when you consider a different application from what is described in our manuals.*

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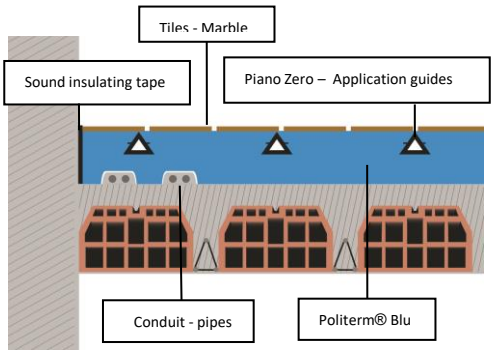
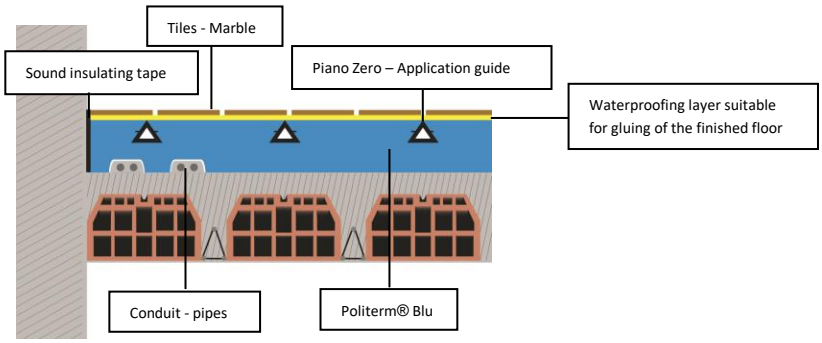
INTERNAL FLOOR: LIGHTWEIGHT THERMAL INSULATING SINGLE LAYER SCREED FOR CERAMIC TILE FLOOR



TERRACE AND BALCONY: LIGHTWEIGHT THERMAL INSULATING SINGLE LAYER SCREED



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SINGLE LAYER FLAT SCREED

For direct adhesion of ceramic tiles, stone tiles, pre-polished marble on thin-bed cement smoothing mortar

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (bags of 420lt or 170lt) laid by skilled installers using the single layer method to create a flat close tolerance surface suitable for the direct laying and adhesion of ceramic tiles, stone tiles and pre-polished marble.
INTENDED USE: Internal floors, external terraces, filling of volumes, corrugated sheet, etc.

MINIMUM THICKNESS OF POLITERM® SCREED ON ABSORBENT SURFACES: 50mm. If there are pipes of conduits present on the receiving surface, then the 50mm minimum applies to the thickness above the highest level of those pipes or conduits. This thickness must be increased to 100mm where there are separating layers e.g. damp proof membranes (dpm), vapor control layers (vcl) or slip sheet that debond POLITERM® BLU or POLITERM® BLU FEIN screed from the existing slab. Additionally, it will be necessary to place a galvanized reinforcing metal mesh (minimum dimensions: wire Ø2 mm, mesh 50 x 50 mm) properly tied together and appropriately spaced within the lightweight screed.
For thicknesses less than those recommended above, please contact our technical department.

MINIMUM THICKNESS OF POLITERM® SCREED ON NON-ABSORBENT SURFACES: 50mm. The minimum thickness of 50 mm is acceptable only for the following surfaces:
1) Existing floor comprising of ceramic tiles, marble or similar, having been treated first:
a) Clean the surface as to remove all loose parts, dust, particles and any other material that might prevent a good bond between the existing floor surface and the new screed.
b) Apply a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's provisions: (indicative consumption on a flat surface 300gr/m^2, only one coat).
c) While the adhesive is still tacky, pour the lightweight screed made of Politerm® Blu or of Politerm® Blu Fein, with a minimum density of 300 Kg/m^3.

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2) Existing floor coated with a bituminous waterproofing layer:
a) Clean the surface as to remove all loose parts, dust, particles and any other material that might prevent a good bond between the existing floor surface and the new screed.
b) Apply a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's provisions: (indicative consumption on a flat surface 300gr/m^2, only one coat).
c) After drying (minimum 24 hours), lay the lightweight screed made of POLITERM® BLU or POLITERM® BLU FEIN, with a minimum density of 300 Kg/m^3, while having incorporated a galvanized metal mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the existing floor.

Note: For any other nonabsorbent surface, the minimum thickness of the screed is 100 mm. Prior to laying the lightweight thermal insulating screed made of POLITERM® BLU or POLITERM® BLU FEIN, install a galvanized reinforcing metal mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the existing surface.
Our technical department is available for any questions.

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To achieve a flat surface suitable for gluing ceramic tiles or marble on the POLITERM® BLU or POLITERM® BLU FEIN screed it is necessary to install specific guides for the screeding prodedure. Those guides named **Piano Zero** are made of PVC, they have a height of 50 mm and they remain inside the screed once it cures. The guides must be placed inside the screed according to the dimensions and space of the application area taking into consideration the final floor thickness, the relative glue, and the plant placement. It is recommended that the distance between the guides does not exceed 2,5 meters. To discuss other suitable alternatives please contact TEKTO's technical department. These guides must be placed at the required height allowing for:

1. The thickness of the cementitious smoothing layer at low thickness
2. The thickness of the final floor finish layer and the adhesive layer that secures it.

Upon installing the guides, the POLITERM® BLU or POLITERM® BLU FEIN screed can be poured between them and leveled using a cutting trowel.

On average, once a period of 72 hours has elapsed since pouring and leveling of the screed, the surface preparation for tiling can commence:

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1. Proceed with the abrasion of the surface using appropriate equipment as to remove any imperfections caused by the leveling of the trowel.
2. On areas of the floor where the floor sander can't reach i.e. the perimeter it will be necessary to prepare those areas with a scraping knife or tool.
3. Clean the surface as to remove loose parts, dust, particles or any other material that might prevent a good bond between the new screed and the next layer.
4. Check the flatness of the screed using one-meter straight edge.
5. Additional preparation works that may be carried out by the contractor: melt the surface polystyrene beads using an LPG roofing gas torch, and to remove swirls created because of the polishing. None of these methods to be employed until 7 days after the laying of the screed has passed.
6. The thin-bed cement smoothing mortar (2 mm) may be applied using one of the two following methods:

a. Self-leveling premixed mortar Autoliv (see specific technical data sheets), after treating the surface using "fresh on fresh" method with Edilstik.
b. Mortar mixed on site.

Dosage for one cement mixer:

- Tile adhesive: 125 Kg
- Cement: 25 Kg
- Sand: About 90-120lt
- Hydration: Hydrate to a semi-fluid consistency with a mixture comprising of 4 parts of clean water and 1 part of Edilstik latex.
- Application: With a smooth metal trowel.

As an alternative, the smoothing coat can be made using the premixed self-leveled mortar Autoliv. This coated base screed will be suitable for subsequent direct adhesion of ceramic, terracotta, stoneware, clinker, and pre-polished marble floor coverings. Wait at least 7 days from laying the base screed before laying the floor covering. Check that it is cured and dry.

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Το υπόστρωμα θα έχει τα ακόλουθα χαρακτηριστικά:

CHARACTERISTICS	TYPE	
	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,079	0,123
Compression strength, **MPa (N/mm²)**	1,32	1,94
Compression strength, **kPa**	1.320	1.940
Flexural strength, **MPa (N/mm²)**	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0	
Water vapour permeability, **μ** (ELOT EN 12086)	5-20	
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0	
Specific heat, **J/kgK**	1000	
Shrinkage, **mm/m**	0,352	0,270
Resistance to moisture	Rotproof	
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)	

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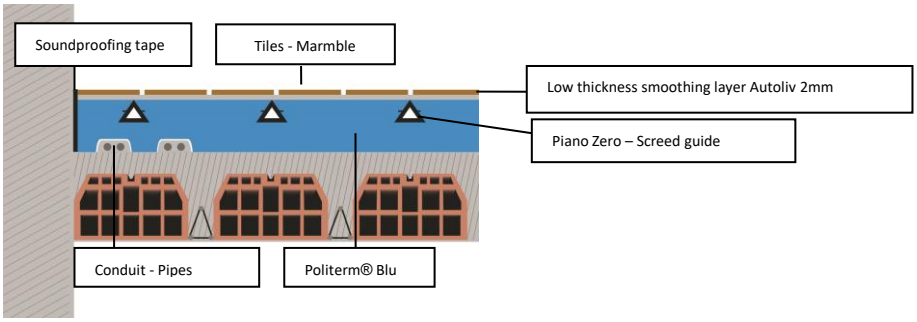
WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu any existing structural joints and/or expansion joints in the receiving surface must be maintained and extended up through the Politerm® Blu screed.
- If acoustic mats or layers are to be incorporated into the construction beneath the Politerm® Blu screed laid using the single layer method then these acoustic layers should be installed beneath, not over, any pipes or conduits thereby avoiding the possibility of creating air pockets which could have the effects of lessening the acoustic performance and the structural integrity of the Politerm® Blu screed.
- Before laying the Politerm® Blu screed, thoroughly clean the receiving surface.
- After cleaning of the surface and before applying the Politerm® Blu screed, wet the floor well but without leaving puddles. When laying on a non-porous or waterproof surface like insulation boards, waterproof layers or tiled floors, do not wet the surface.
- When required, day joints in the Politerm® Blu screed should be cast vertically.
- When continuing the pour the day joints need to be treated with Edilstik latex adhesive, to be used “fresh on fresh”.
- When adhering final finish surfaces like ceramic tiles or vinyl, if a smoothing layer is not applied then the consumption of adhesive may be 20% greater than normal. This is due to the open cells that remain after the surface beads have been removed. This does however provide a stronger mechanical bond between the layers.
- Adhesives must be used strictly in accordance with the instructions of the manufacturer.
- Installing plasterboard partitions: before installing plasterboard partitions directly on single layer screeds made with Politerm® Blu or with Politerm® Blu Fein, first apply a smoothing mortar (thickness 2mm). The smoothing mortar must cover an area equal to the width of the floor plates plus 50 mm on each side. Subsequently, the floor plates can be installed using special double-sided adhesive tape.
- Avoid mixing and screeding the Politerm® Blu substrate when the temperatures are less than +5°C. The possible use of ant-freeze additives must be compatible with the physic-chemical characteristics of Politerm® Blu. The contractor must evaluate the costs and benefits of using the anti-freeze on a case-by-case basis.
- During the preparation of the Politerm® Blu screed, it is necessary to carefully follow the dosages and the methodologies indicated on the technical data sheets, the packaging of the product and the present manual.
- *We advise you to contact our technical department when you consider a different application from what is described in our manuals.*

INTERNAL FLOOR: SINGLE LAYER THERMAL INSULATING SCREED WITH A PROTECTIVE LOW THICKNESS SMOOTHING LAYER



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SINGLE LAYER FLAT SCREED

PARQUET FLOORING AND MARBLE TO BE POLISHED ON SITE, LAID ON A THIN BED COATING

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (bags of 420lt or 170lt) laid by skilled installers using the single layer method to create a flat close tolerance surface suitable for the direct laying and adhesion of ceramic tiles, stone tiles, and pre-polished marble.
INTENDED USE: Internal floors, external terraces (with or without falls).

MINIMUM THICKNESS OF POLITERM® SCREED ON ABSORBENT SURFACES: 55mm. If there are pipes or conduits present on the receiving surface, then the 55 mm minimum applies to the thickness above the highest level of those pipes or conduits. This thickness must be increased to 105mm where there are separating layers e.g. damp proof membrane (dpm), vapor control layers (vcl) or slip sheets that debond POLITERM® BLU or the POLITERM® BLU FEIN screed from the existing slab. Additionally, it will be necessary to place a galvanized reinforcing mesh (minimum dimensions: wire Ø2 mm, mesh 50 x 50 mm) properly tied together and appropriately spaced from the surface, within the Politerm® screed. *For advice on thicknesses less than those recommended above, please contact TEKTO's technical department.*

MINIMUM THICKNESS OF POLITERM® SCREED ON NON-ABSORBENT SURFACES: The minimum thickness of 55mm, including the cement section (minimum 5 mm), is suitable only for the following surfaces:

1) Existing floor finish comprising of ceramic tiles, marble or similar, having being treated first:
a) Clean the surface as to remove all loose parts, dust, particles and any other material that might prevent a good bond between the existing floor surface and the new screed.
b) Apply a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's provisions: (indicative consumption on a flat surface 300gr/m^2, only one coat).
c) While the adhesive is still tacky, pour the lightweight screed made of Politerm® Blu or of Politerm® Blu Fein, with a minimum density of 300Kg/m^3.

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2) Existing floor coated with a bituminous waterproofing layer having first been treated:
a) Clean the surface as to remove all loose parts, dust, particles and any other material that might prevent a good bond between the existing floor surface and the new screed.
b) Apply a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's provisions: (indicative consumption on a flat surface 300gr/m^2, only one coat).
c) After drying (minimum 24 hours), lay the lightweight screed made of POLITERM® BLU or POLITERM® BLU FEIN, with a minimum density of 300 Kg/m^3, while having incorporated a galvanized metal mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the existing floor.

Note: For any other nonabsorbent surface the minimum thickness of the screed is 100 mm. Prior to laying the lightweight thermal insulating screed made of POLITERM® BLU or POLITERM® BLU FEIN, install a galvanized reinforcing metal mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the existing surface.
Our technical department is available for any questions.

ITEM SPECIFICATION:
Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 300 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration.

To achieve a flat surface suitable for gluing ceramic tiles or marble on the POLITERM® BLU or POLITERM® BLU FEIN screed it is necessary to install specific guides for the screeding procedure. Those guides named **Piano Zero** are made of PVC, they have a height of 50 mm and they remain inside the screed once it cures. The guides must be placed inside the screed according to the dimensions and space of the application area taking into consideration the final floor thickness, the relative glue and the plant placement. It is recommended that the distance between the guides does not exceed 2,5 meters. To discuss other suitable alternatives please contact TEKTO's technical department. These guides must be placed at the required height allowing for:

1. The thickness of the cementitious coating layer (minimum 5 mm)
2. The thickness of the final floor finish layer and the adhesive layer that secures it.

Upon installing the guides, the POLITERM® BLU or POLITERM® BLU FEIN screed can be poured between them and leveled using a cutting trowel.

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On average, once a period of 72 hours has elapsed since pouring and leveling of the screed, the surface preparation for tiling can commence:

1. Proceed with the abrasion of the surface using appropriate equipment as to remove any imperfections caused by the leveling of the trowel.
2. On areas of the floor where the floor sander can't reach i.e. the perimeter it will be necessary to prepare those areas with a scraping knife or tool.
3. Clean the surface as to remove loose parts, dust, particles or any other material that might prevent a good bond between the new screed and the next layer.
4. Check the flatness of the screed using one-meter straight edge.
5. Additional preparation works that may be carried out by the contractor: melt the surface polystyrene beads using an LPG roofing gas torch, and to remove swirls created as a consequence of the polishing. None of these methods to be employed until 7 days after the laying of the screed has passed.
6. The thin-bed mortar can be prepared, with a minimum thickness of 5 mm using the self-leveling premix mortar Autoliv (see the specific technical data sheet).

Note: The application of Autoliv is possible only on a base with a moisture content not exceeding 2% in volume (measured with a calcium carbide instrument, see also the technical specification) and also after the treatment of the surface with Edilstik using the "fresh on fresh" method.

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The prepared substrate will have the following characteristics:

CHARACTERISTICS	TYPE	
	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,079	0,123
Compression strength, **MPa (N/mm²)**	1,32	1,94
Compression strength, **kPa**	1.320	1.940
Flexural strength, **MPa (N/mm²)**	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0	
Water vapour permeability, **μ** (ELOT EN 12086)	5-20	
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0	
Specific heat, **J/kgK**	1000	
Shrinkage, **mm/m**	0,352	0,270
Resistance to moisture	Rotproof	
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)	

WARNINGS AND PRECAUTIONS:

- Screeds made with Politerm® Blu and "Piano Zero" system are not comparable to the traditional sand-cement screeds. In particular, the water absorption is particularly reduced. Because of this, it is necessary to be extremely careful in selecting adhesives for parquet or marble. Water based adhesives are not recommended, since such water won't be absorbed by the screed and the risk of bulges and/or delamination is high.
- If acoustic mats or layers are to be incorporated into the construction beneath the Politerm® Blu screed laid using the single layer method, then these acoustic layers should be installed beneath, not over, any pipes or conduits thereby avoiding the possibility of creating air pockets which could have the effects of lessening the acoustic performance and also the structural integrity of the Politerm® Blu screed.
- When required, day joints in the Politerm® Blu screed should be cast vertically.
- When continuing the pour the day joints need to be treated with Edilstik latex adhesive, to be used "fresh on fresh".
- The normal laying of parquet flooring requires skill with great care and attention to detail. It is exactly the same when laying parquet flooring on a prepared Politerm® Blu screed. *Following is a list of important instructions; these are guide and the list in not exhaustive:*

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- Take care to condition the parquet tiles, room by room, starting at least 8 days before their installation begins.
- Protect the rooms and floors from adverse conditions, at least 30 days before the installation begins.
- Turn on the heating system at least 8 days before the installation of the parquet flooring.
- Check the moisture content of the substrate and also of the internal environment immediately before the starting of the installation, in order to establish the ideal condition for laying the parquet flooring (see also the "measurement of the moisture content of a light base made with Politerm® Blu").
- Water based adhesives must not be used.
- Install the parquet at the minimum distance of 8 mm from walls and any other parts which may obstruct the natural deformation of the wood. Allow an expansion gap of 8 mm between the parquet floor tiles and the walls and any other fixed element that may obstruct movement.
  Besides considering what is mentioned above, also consider any other precaution which is derived be good construction practices.
- When laying the Politerm® Blu screed any existing structural joints and/or expansion joints in the receiving surface must be maintained and extended up through the Politerm® Blu screed.
- Prior to applying the Politerm® Blu screed, thoroughly clean the surface.
- After cleaning the surface and before applying the Politerm® Blu screed, wet the floor well but without leaving puddles. When applying on a non-porous or waterproof surface like plastic sheeting over insulation boards, waterproofing layers or tiled floors, do not wet the surface.
- The adhesives must be used strictly in accordance with the instructions of the adhesive manufacturer.
- Avoid mixing and laying the Politerm® Blu screed when temperatures are below +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should however evaluate the costs and benefits of using antifreeze additives on a case-by-case basis.
- When mixing the Politerm® Blu, strictly follow the dosages and methods indicated in the technical sheets, on the product packaging and in this manual. Only then can TEKTO guarantee the results and performance claimed.
- *It is essential that you contact our Engineering Department when considering any application different from that described in our technical data sheets and our manuals.*

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MEASURING THE MOISTURE CONTENT OF LIGHTWEIGHT SCREEDS MADE USING POLITERM® BLU

In order to establish the moisture content of the screed it will be necessary to measure the amount of water present in selected sample. The method employed is the HOECHST system. This method is based on the use of a calcium carbide hygrometer on site. Before proceeding with the measurements, it is necessary to identify the areas from where to take samples. For each sample taken it is necessary to note the means of taking the sample (the type of instruments used, and the quantity of material taken) plus any other king of information such as date the sample was taken, the environmental conditions, temperature and humidity. By carefully noting all these conditions, it allows a proper comparison between different tests conducted at different times by different operators.

The Hoechst system for measuring of moisture content uses a calcium carbide hygrometer, generally sold as a kit, comprising: a bottle shaped container with a built-in gas pressure gauge, a box with vials of calcium carbide, steel pulverizing balls, a set of precision testing scales for weighing the sample and other accessories such as a brush to clean the container and chisels for breaking out the sample from the screed surface.

The process is simple: measure the pressure exerted by the gas developed by the reaction between calcium carbide and the water contained in the sample. According to a particular chemical reaction calcium carbide (CaC2) and water produce a certain amount of acetylene (C2H2) while developing a certain pressure measured by the pressure gauge in the top of the container. Based on the pressure exerted and the weight of the material it is possible to calculate the percentage of moisture contained in the sample. The tool is easy to use, and the measurements obtained are considered reliable. However, the most critical issue is that the sampling is carried out carefully. The sample screed material must be taken and finely crushed using the mortar supplied. The sample is then weight using testing scales supplied, and then inserted into the bottle together with the pulverizing steel balls and the vial of calcium carbide. Shaking the container, closed with the cap pressure gauge, the steel balls break the ampoule of calcium carbide. Then the reaction starts with ends at the moment when one reads a constant pressure on the pressure gauge (usually after about ten minutes).

Because the reaction occurs in a closed environment, as more gas is formed, the higher the pressure, which is measured with the pressure gauge, becomes.

The reaction of calcium carbide in contact with water produces an explosive mixture of air/acetylene inside the cylinder. Therefore, all possible sources of ignition should be removed before emptying the cylinder. If possible, the cylinder should be opened outdoors. The instruments used for measuring the temperature and relative humidity of the environment at the time of sampling and testing is a psychometric bulb. Thie instrument must be placed, laid flat, in the area where toy want to determine the aforementioned parameters. The pan at the base must be filled with distilled water which has to be in contact with one of the two thermometers (via a sock made of absorbent material). By reading the thermometer dry and then reading the wet thermometer the difference between the two measurements can be used to obtain a value from which, using an appropriate graduated scale can be determined the relative humidity of the air.

It is important to note that when performing these measurements on a base screed made from the lightweight mortar prepared with Politerm® Blu or Politerm® Blu Fein, or a base screed made using a product from the lightweight premixed Poliplus range value obtained by using the calcium carbide method has to be divided by 5 or 6 depending on the amount of cement binder used in the preparation of the screed. This is because the volumetric mass of the Politerm® Blu is one-fifth or one sixth of the mass of a normal sand-cement screed.

-If the amount of the cement binder is 300 Kg/m^3 the measurement read on the manometer must be divided by 6.

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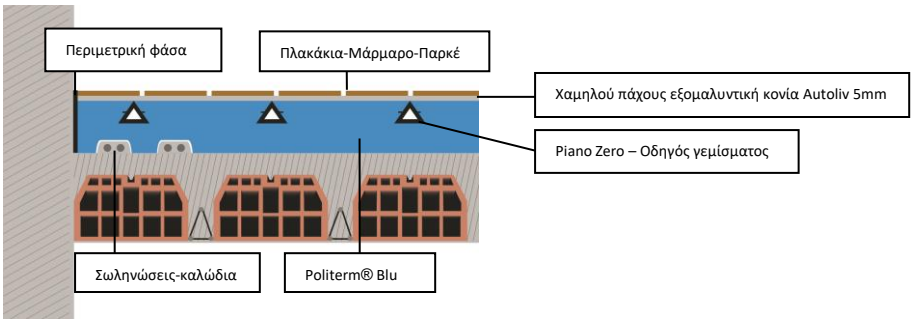
-If the amount of cement binder is 350 Kg/m^3 the measurement read on the manometer must be divided by 6.
-The optimum measure is obtained with a sample of 20 gr.

Moisture content measured using the carbide method is valid only if you are using a product made exclusively with virgin polystyrene beads (which is the case for Politerm® Blu and Poliplus, in its various types). Conducting this test on screeds made using fround or recycled polystyrene granules, makes the measurement unreliable since water remains insige granules of the milled polystyrene, thereby distorting the final measure. If you apply other screeds (sand and cement, self-leveling, etc) on top of the base prepared from Politerm® Blu or Politerm® Blu Fein, or on a base screed made from the Poliplus range, the measurement is performed at the part being the two materials different in composition and characteristics.

ΕΣΩΤΕΡΙΚΟ ΔΑΠΕΔΟ: ΕΛΑΦΡΥ ΘΕΡΜΟΜΟΝΩΤΙΚΟ ΔΑΠΕΔΟ ΜΙΑΣ ΣΤΡΩΣΗΣ ΜΕ ΕΞΟΜΑΛΥΝΤΙΚΗ ΠΡΟΣΤΑΤΕΥΤΙΚΗ ΣΤΡΩΣΗ ΧΑΜΗΛΟΥ ΠΑΧΟΥΣ



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SINGLE LAYER FLAT SCREED

FOR LAYING FLEXIBLE COVERINGS ON A MEDIUM THICKNESS SUBSTRATE

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (bags of 420lt or 170lt) laid by skilled installers using the single layer method for medium thickness screeds to create a flat close tolerance surface suitable for the direct laying and adhesion of flexible flooring such as linoleum, PVC, rubber, moquette etc.
INTENDED USE: internal floors, external terraces (with or without falls).

MINIMUM THICKNESS OF POLITERM® SCREED ON ABSORBENT SURFACES: 70mm including the thickness of the cement section (minimum 20 mm). If there are pipes or conduits present on the receiving surface then the 70mm minimum applies to the thickness above the highest level of those pipes or conduits. This thickness must be increased to 120 mm including the thickness of the cement section (minimum 20 mm) where there are separating layers, e.g. damp proof membranes (dpm), vapor control layers (VCL) or slip sheets that debond the POLITERM® BLU or POLITERM® BLU FEIN screed from the existing slab. Additionally, it will be necessary to place a galvanized reinforcing mesh (minimum dimensions: wire Ø2 mm, mesh 50 x 50 mm) properly tied together and appropriately spaced within the Politerm® screed.
For advice on thicknesses less than those recommended above, please contact TEKTO's technical department.

MINIMUM THICKNESS OF POLITERM® SCREED ON NON-ABSORBENT SURFACES: the minimum thickness of 70mm, is suitable only for the following surfaces:
1) Existing floor finish comprising of ceramic tiles, marble or similar having first been treated:
a) Clean the surface as to remove all wax, dust, particles and any other material that might prevent a good bonding between the existing floor surface and the new screed.
b) Apply a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's provisions (indicative use on flat surfaces: 300gr/m^2, one layer).
c) After drying (minimum 24 hours) apply the lightweight thermal insulating screed made of Politerm® Blu or Politerm® Blu Fein, with a minimum density of 300 Kg/m^3.

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2) Existing bituminous waterproof coating having first been treated:
a) Clean the surface as to remove all wax, dust, particles and any other material that might prevent a good bonding between the existing floor surface and the new screed.
b) Apply a suitable adhesion promoter (e.g. Wingrip Evo) according to the manufacturer's provisions (indicative use on flat surfaces: 300gr/m^2, one layer).
c) After drying (minimum 24 hours) apply the lightweight thermal insulating screed made of Politerm® Blu or Politerm® Blu Fein, with a minimum density of 300 Kg/m^3, install a galvalized mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the base. *Our technical department is available for any questions.*

Note: For any other non-absorbent surfaces the minimum thickness of the screed is 100 mm. Prior to applying the lightweight thermal insulating screed made from POLITERM® BLU or POLITERM® BLU FEIN, install a galvanized reinforcing mesh (minimum dimensions: wire Ø3 mm, mesh 50 x 50 mm) tied together and spaced from the base.
Our technical department is available for any questions.

ITEM SPECIFICATION:
Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 300 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration.

To achieve a flat surface suitable for gluing ceramic tiles or marble on the POLITERM® BLU or POLITERM® BLU FEIN screed it is necessary to install specific guides for the screeding procedure. Those guides named **Piano Zero** are made of PVC, they have a height of 50 mm and they remain inside the screed once it cures. The guides must be placed inside the screed according to the dimensions and space of the application area taking into consideration the final floor thickness, the relative glue and the plant placement. It is recommended that the distance between the guides does not exceed 2,5 meters. To discuss other suitable alternatives please contact TEKTO's technical department. These guides must be placed at the required height allowing for:

1. **The thickness of the cementitious coating layer (minimum 5 mm)**
2. The thickness of the final floor finish layer and the adhesive layer that secures it.

Upon installing the guides, the POLITERM® BLU or POLITERM® BLU FEIN screed can be poured between them and leveled using a cutting trowel.
Note: The application of Autoliv is possible only on a base with a moisture content not exceeding 2% in volume (measured with a calcium carbide instrument, see also the technical specification) and also after the treatment of the surface with Edilstik using the "fresh on fresh" method. The lightweight screed surface produced is suitable to receive the direct laying of flexible flooring such as linoleum, PVC, rubber, moquette, etc installing them directly with adhesive. The installation of the final layer is only possible after the adequate curing and the correct moisture content of the base.

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The prepared substrate will have the following characteristics:

CHARACTERISTICS	TYPE	
	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,079	0,123
Compression strength, **MPa (N/mm²)**	1,32	1,94
Compression strength, **kPa**	1.320	1.940
Flexural strength, **MPa (N/mm²)**	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0	
Water vapour permeability, **μ** (ELOT EN 12086)	5-20	
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0	
Specific heat, **J/kgK**	1000	
Shrinkage, **mm/m**	0,352	0,270
Resistance to moisture	Rotproof	
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)	

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WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu screed any existing structural joints and/or expansion joints in the receiving surface must be maintained and extended up through the Politerm® Blu screed.
- If acoustic mats or layers are to be incorporated into the construction beneath the Politerm® Blu screed laid using the single layer method then these acoustic layers should be installed beneath, not over, any pipes or conduits thereby avoiding the possibility of creating air pockets which could lessen the acoustic performance and also the structural integrity of the Politerm® Blu screed.
- Before laying the Politerm® Blu screed, thoroughly clean the receiving surface.
- When required, day joints in the Politerm® Blu should be cast vertically.
- When continuing the application, the day joints need to be treated with Edilstik latex, adhesive, to be used “fresh on fresh”.
- Adhesives must be used strictly in accordance with the instructions of the adhesive manufacturers.
- Avoid mixing and laying the Politerm® Blu screed when the temperatures are below +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should evaluate the costs and benefits of using antifreeze additives on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and methods indicated in the technical sheets, the product packaging and in this manual.
- *It is essential that you contact our engineering department when considering any application different from that described in our technical data sheets and our manuals.*

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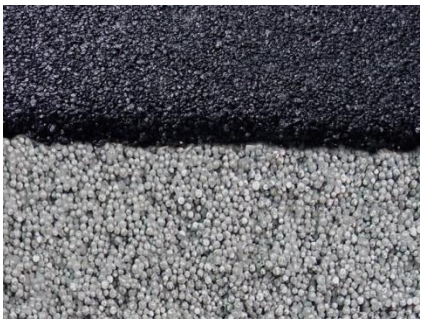

SPECIAL APPLICATIONS

BENEATH TRAFFICABLE ASPHALT PAVEMENTS

APPLICATION: lightweight thermal insulating screed, made using POLITERM® BLU (bags of 420lt or 170lt) laid by skilled installers using the intermediate layer method: i.e. suitable for subsequent laying of an asphalt pavement for motor vehicle traffic.

INTENDED USE: space between floors-basements (on loose stone foundations well consolidated) etc.

MINIMUM APPLICATION THICKNESS: 100 mm
For advice on thicknesses less than 100 mm please contact our technical department.

ITEM SPECIFICATION:
Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 300 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration.

The base is suitable for the subsequent laying of:
a. Flooring with waterproofing layer: Waterproofing layer + non-woven fabric layer + asphalt layer with a minimum thickness of 50 mm.
b. Basement flooring without waterproofing: non-woven fabric layer + asphalt layer with a minimum thickness of 50 mm.
Note: When installing a waterproofing layer and/or vapor barrier below the Politerm® Blu screed, the layer has to be covered with a reinforced concrete slab, with a minimum thickness of 100 mm. Types, laying methods and characteristics must be determined by the designer responsible or the customer according to the specific intended uses.

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The prepared substrate will have the following characteristics:

CHARACTERISTICS	TYPE	
	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,079	0,123
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Reaction to fire (ELOT EN 13501-1)	A2-s1, d0	
Water vapour permeability, **μ** (ELOT EN 12086)	5-20	
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0	
Specific heat, **J/kgK**	1000	
Shrinkage, **mm/m**	0,352	0,270
Resistance to moisture	Rotproof	
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)	

In case of crawl space subbase, concreting, honeycomb etc, the laying of the Politerm® Blu screed may be done without installing a galvanized mesh. In case that the subbase is made by insulating sheets, bituminous and/or synthetic waterproofing mats, ceramic or linoleum pavements, PVC, wood, moquette, corrugated sheet etc, before laying the Politerm® Blu screed it is necessary to install a galvanized mesh (minimum dimensions: wire Ø 2 mm, mesh 50 x 50 mm) properly tied together and spaced from the base.

TECHNICAL EVALUATION: Below a loading calculation example is given with a subbase made of Politerm® Blu when used in the construction of car parks and parking areas considering the loads imposed by a motor vehicle not exceeding a tare weight of 3.5 tons when fully loaded.

The base made with Politerm® Blu and batched with 350 Kg/m³ of cement, has a compressions strength of 1,69 N/mm². If for the purpose of this calculation we assign a compressive strength to the asphalt pavement no higher than that of the Politerm® base beneath it and also ignore the load spread caused by the 50mm layer of asphalt, then we obtain the following:

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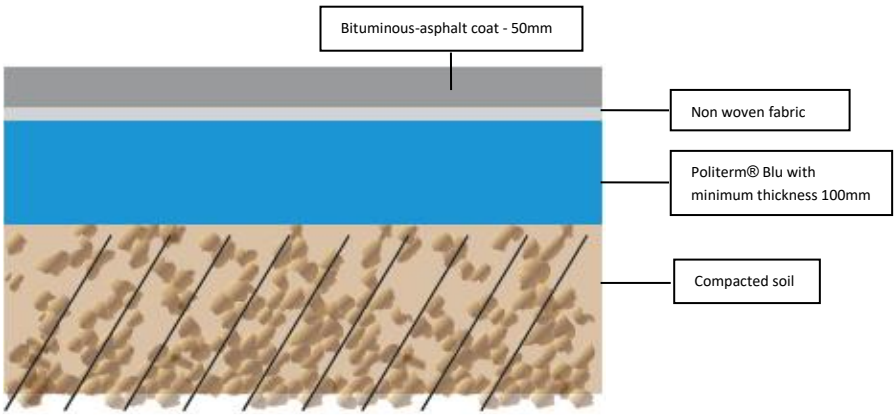
- Maximum load of the motor vehicle: 3.500 Kg
- Footprint (contact area) of each tire (20 x 10 cm): 200cm^2
- For 4 tires, the total area of support will be: 800cm^2
- The compressive strength of Politerm® Blu base is (cement dosage 350Kg/m^3 = 1.94 N/mm^2 = 19,78 Kg/cm^2): About 19,78 Kg/cm^2
- The compressive strength of Politerm® Blu base will be equal to 800cm^2 x 19,78 Kg/cm^2 = 15.824 Kg.

The above calculation shows that the compressive strength of the Politerm® Blu base is far greater than the maximum load applied by any 4-wheeled vehicle. Therefore, no difficulties are foreseen when using Politerm® Blu at that density for that application. In practice, Politerm® Blu has been used in this application in Spain (underground parking at the New Theatre of Catalunya in Barcelona – year 1995) and in Portugal (Municipal parking in the city of Porto – year 1996 as well as in the city of Braga).

WARNINGS AND PRECAUTIONS:

- When laying the Politerm® Blu screed any existing structural joints and/or expansion joints in the receiving surface must be maintained and extended up through the Politerm® Blu screed.
- Before laying the Politerm® Blu screed, thoroughly clean the receiving surface.
- After cleaning the surface and before applying the Politerm® Blu screed, wet the floor well but without leaving puddles. When laying on a non-porous or waterproofed surface like plastic sheeting over insulation boards, waterproof layers or tiled floors, do not wet the surface.
- Avoid mixing and laying the Politerm® Blu screed when the temperatures are below +5^{o}C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should evaluate the costs and benefits of using antifreeze additives on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and methods indicated in the technical sheets, the product packaging and in this manual.
- *It is essential that you contact our engineering department when considering any application different from that described in our technical data sheets and our manuals.*

SPECIAL APPLICATION: SUBSTRATE FOR BITUMINOUS-ASPHALT COAT



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SPECIAL APPLICATIONS

BENEATH INDUSTRIAL CONCRETE WITH TRAFFICABLE PAVEMENTS AND FLOORS

APPLICATION: Lightweight thermal insulating screed, made using POLITERM® BLU (bags of 420lt or 170lt) laid by skilled installers using the intermediate layer method: i.e. suitable for subsequent laying of concrete pavement for motor vehicle traffic.
INTENDED USE: space between floors-basements (on loose stone foundations well consolidated) etc.

MINIMUM APPLICATION THICKNESS: 100 mm
For advice on thicknesses less than 100 mm please contact our technical department.
ITEM SPECIFICATION:
Creation of a thermal insulating substrate made with Politerm® Blu manufactured by TEKTO HELLAS S.A.: superlight aggregates of virgin polystyrene beads of constant particle size (Politerm® Blu Ø3-6mm and Politerm® Blu Fein Ø2mm) and of controlled density. The beads are premixed one by one with special additives during their production, which allows for the perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogenous distribution in the mix. The mix can be made in densities of 300 to 350 Kg/m^3 using Portland cement 32.5 Cem I ή Cem II, without adding any sand or other additives. Therefore, every cubic meter is prepared with only 840lt Politerm Blu, Portland cement 32.5 Cem I ή Cem II, in the dosages prescribed and the relevant volume of water required for hydration.

MAIN CONSTRUCTION TYPES AND STRATIGRAPHY:
a. Floor with underlying waterproofing: Waterproofing layer + non-woven fabric layer + concrete industrial flooring designed and constructed to suit the specific intended use.
b. Basement flooring on waterproofing and/or vapor barrier: waterproofing layer and/or vapor barrier + non-woven fabric layer + concrete industrial flooring designed and constructed to suit the specific intended use.
c. Basement flooring without waterproofing and/or vapor barrier: non-woven fabric layer + concrete industrial flooring designed and constructed to suit the specific intended use.

Note: when laying a waterprroing and/or water vapor barrier beneath the Politerm® Blu screed, then this must be covered with a reinforcing concrete slab of 100 mm thickness. Typologies and methodologies, prescribed by the designer, depend on the particular application fields.

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The prepared substrate will have the following characteristics:

CHARACTERISTICS	TYPE	
	300	350
Bound EPS (BEPS) density, **Kg/m³** (ELOT EN 1602)	330	380
Thermal conductivity λ_D **W/m²K** (ELOT EN 12667 & 16025-1)	0,084	0,130
Average thermal conductivity λ_{mean} **W/m²K** (ELOT EN 12667)	0,079	0,123
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Compression strength, **kPa**	1.320	1.940
Flexural strength, **MPa (N/mm²)**	0,51	0,53
Average compression strength in 10% deformation, 5cm sample, **kPa** (ELOT EN 826)	789	-
Average compression strength in 10% deformation, 30cm sample, **kPa** (ELOT EN 826)	714	-
Reaction to fire (ELOT EN 13501-1)	A2-s1, d0	
Water vapour permeability, **μ** (ELOT EN 12086)	5-20	
EPS granulometry – Amount of dust (ELOT EN 933-1)	PS6(N) - D0	
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Resistance to moisture	Rotproof	
Residual moisture after 28 days	<2% (πάχος 5 cm σε απορροφητική επιφάνεια)	

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TECHNICAL EVALUATION: Below a loading calculation example is given with a subbase made of Politerm® Blu when used in the construction of car parks and parking areas considering the loads imposed by a motor vehicle not exceeding a tare weight of 3.5 tons when fully loaded.
The base made with Politerm® Blu and batched with 350 Kg/m^3 of cement, has a compressions strength of 1,94N/mm^2. If for the purpose of this calculation we assign a compressive strength to the asphalt pavement no higher than that of the Politerm® base beneath it and also ignore the load spread caused by the 50mm layer of asphalt, then we obtain the following:

- Maximum load of the motor vehicle: 3.500 Kg
- Footprint (contact area) of each tire (20 x 10 cm): 200cm^2
- For 4 tires, the total area of support will be: 800cm^2
- The compressive strength of Politerm® Blu base is (cement dosage 350Kg/m^3 = 1.94N/mm^2 = 19,78 Kg/cm^2): About 19,78 Kg/cm^2
- The compressive strength of Politerm® Blu base will be equal to 800cm^2 x 19,78 Kg/cm^2 = 15.824 Kg.
-

The above calculation shows that the compressive strength of the Politerm® Blu base is far greater than the maximum load applied by any 4-wheeled vehicle. Therefore, no difficulties are foreseen when using Politerm® Blu at that density for that application.

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WARNINGS AND PRECAUTIONS:

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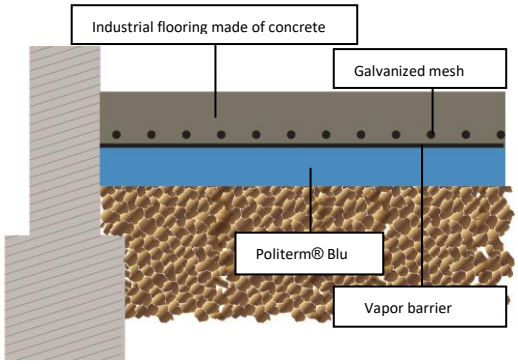
- Before laying the Politerm® Blu screed, thoroughly clean the receiving surface.
- After cleaning the surface and before applying the Politerm® Blu screed, wet the floor well but without leaving puddles. When laying on a non-porous or waterproofed surface like plastic sheeting over insulation boards, waterproof layers or tiled floors, do not wet the surface.
- Avoid mixing and laying the Politerm® Blu screed when the temperatures are below +5°C. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should evaluate the costs and benefits of using antifreeze additives on a case-by-case basis.
- When mixing Politerm® Blu, strictly follow the dosages and methods indicated in the technical sheets, the product packaging and in this manual. Only then can TEKTO guarantee the results and the performances claimed.
- *It is essential that you contact our engineering department when considering any application different from that described in our technical data sheets and our manuals.*

SPECIAL APPLICATION: Industrial flooring on top of on ground insulation



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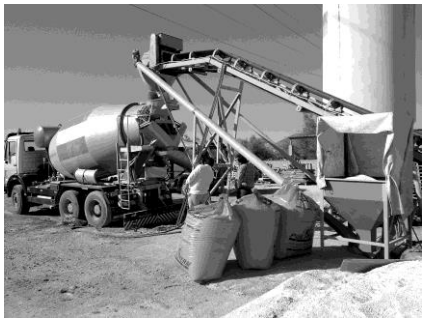

CONCRETE BATCHING PLANTS

DOSAGES AND METHODS FOR THE PREPARATION OF LIGHTWEIGHT THERMAL INSULATING MORTARS MADE WITH POLITERM® BLU READY MIX AND POLITERM® BLU FEIN READY MIX IN TRUCK MIXERS

Dosages for 1 m³ yield of lightweight thermal insulating Bound EPS (BEPS) mortar:

Type	Politerm bags	Water L	Cement Kg	Sand*
180	2 bags 500L	90-100	175	Not necessary
200		100-120	200	
250		120-140	250	
300		140-160	300	
350		160-180	350	
400		160-180*	300	125
500		160-180*	300	160
900	<2 (640L)	150-170*	300	550

*Sand is not required because of the mixing properties of Politerm Blu. Sand may however be used but be aware that the addition of sand will reduce the performances in terms of lightening, thermal insulation, and water retention. If you use sand, the water dosages will vary depending on the amount of sand and its residual moisture.

ORDER OF INTRODUCTION INTO THE TRUCK MIXER – MIXING AT FULL SPEED:

1. Water: as much as required for the mix reduced about 20-30 lt (see point 7). Note: water-cement ration 0,4:0,5 according to the cement's characteristics.
2. **Politerm® Blu Ready Mix – Politerm® Blu Fein Ready Mix**
3. Mix for about 10 minutes at top speed
4. Cement
5. Sand (if and when applicable)
6. Mix for about 10 minutes at top speed
7. Clean the loading bowl with about 20-30 lt of water (thus completing the dosage of the mixing water)
8. Depending on the residual moisture of the sand, add water.

WARNINGS AND PRECAUTIONS:

- **Minimum pumping density: 200 Kg/m³**
- IF the truck mixer has a volumetric capacity of 10 m³, prepare a load of 9m³
- During the trip from the batching plant to the site, the truck mixer must run at maintenance speed. Once on site, and after possibly adding water, the length of time spent mixing in the truck mixer is 1 minute for each m³ of mixture.
- The ambient temperature may affect the yield. In the summer this is not a problem but in the winter the mixing water temperature may drop close to "zero". Therefore, it is

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recommended to increase the mixing time in the truck mixer by 5-8 minutes after adding some cement.

- At temperatures below +5°C it is recommended to add liquid antifreeze to the dosages recommended by the manufacturer. Any antifreeze additives that may be used must be compatible with the physical and chemical properties of Politerm® Blu. The contractor should however evaluate the costs and benefits of using antifreeze on a case-by-case basis.
- Prior to starting to pump the mortar made with Politerm® Blu Ready Mix, it is important initially to pump just water or grout water/cement, in order to wet the entire pipe section. Then, before beginning to pump the mortar made with Politerm® Blu Ready Mix, introduce the "tube cleaner" sponge. This last action prevents the possible washing out of the beads, caused by standing water in the pipes, and so avoids the possible formation of plugs. For correct pumping, normally done using piston pumps, pour the mortar made with Politerm® Blu Ready Mix into the pump hopper and start pumping slowly, until the mortar flows out from the pump tube. Then continue pumping at the desired speed.
- If you add sand in the mixture, check the amount of residual moisture in the sand as not to add too much water in the mix.
- If you are using different mixing devices, please contact our technical department.
- For correct operation and optimum pumping, it is recommended to run tests with quantities no less than $5m^3$ at a time.
- Any restrictions/bottlenecks on the holding material pipe can cause a "cap" formation. It is therefore recommended to use pipes with the same diameter up to the discharge terminal.
- Always verify that the held hose connector is intact, avoiding any possible air suction that would cause the lack of pumping of the lightweight base screed made with Politerm® Blu Ready Mix.

ADVICE FOR THE WASHING OF THE CONCRETE MIXER:

- Discharge the leftover material into container which allows the water to run off and then recover the Politerm® Blu Ready Mix beads and the aggregate, which can then only be used for oversite concrete.
- The use of sand in the mixture the Politerm® Blu Ready Mix, reduces the wastage of beads, but DOES NOT mean that you can do away with the above-mentioned washing phase. The following rule must also be respected.

OBLIGATIONS:
When the truck mixer has been washed out in this way, the next mix MUST ONLY BE USED for oversite concrete and NOT for pouring final layer flooring or industrial flooring.

SPECIAL EQUIPMENT (see appendix 3 "Equipment and spare parts"):
TEKTO suggest using equipment specifically designed for batching plants, for preparation and pumping of lightweight thermal insulating mortars prepared with Politerm® Blu Ready Mix. The use of this specific equipment speeds up the loading, preparation and working time and guarantees a constant excellent result of the finished product.

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MAIN PRODUCTS

POLITERM® BLU

Superlight thermal insulating aggregate composed of virgin expanded polystyrene beads with grain size in curve (Ø 3-6 mm) and with controlled density. During production, the beads are mixed with special additives which allow the perfect mixing with water and binders, even at very low dosages. The homogenous distribution of the beads throughout the mix and the elimination of the bead floatation phenomenon creates a product that is perfect for pumping.
Packaging/Yield:

- Bag of 170 lt for a yield of 200 lt (1/5 m^3) of finished mortar.
- Bag of 420 lt for a yield of 500 lt (1/2 m^3) of finished mortar.

POLITERM® BLU FEIN

Superlight thermal insulating aggregate composed of virgin expanded polystyrene beads with grain size in curve (Ø 2 mm) and with controlled density. During production, the beads are mixed with special additives which allow the perfect mixing with water and binders, even at very low dosages. The homogenous distribution of the beads throughout the mix and the elimination of the bead floatation phenomenon creates a product that is perfect for pumping.
It is ideal for producing single layer level screeds using the Piano Zero system that once cured will accept the direct adhesion of tiles. There is no need for sand.
Packaging/Yield:

- Bag of 170 lt for a yield of 200 lt (1/5 m^3) of finished mortar.
- Bag of 420 lt for a yield of 500 lt (1/2 m^3) of finished mortar.

POLITERM® BLU READY MIX

Specific for concrete truck mixers and cls pumps.
Superlight thermal insulating aggregate composed of virgin expanded polystyrene beads with grain size in curve (Ø 3-6 mm) and with controlled density. During production, the beads are mixed with special additives which allow the perfect mixing with water and binders, even at very low dosages. The homogenous distribution of the beads throughout the mix and the elimination of the bead floatation phenomenon creates a product that is perfect for pumping.
Packaging/Yield:

- Bag of 500 lt (1/2 m^3) yield of finished mortar.

POLITERM® BLU FEIN READY MIX

Specific for concrete truck mixers and cls pumps.
Superlight thermal insulating aggregate composed of virgin expanded polystyrene beads with grain size in curve (Ø 2 mm) and with controlled density. During production, the beads are mixed with special additives which allow the perfect mixing with water and binders, even at very low dosages. The homogenous distribution of the beads throughout the mix and the elimination of the bead floatation phenomenon creates a product that is perfect for pumping.
Packaging/Yield:

- Bag of 500 lt (1/2 m^3) yield of finished mortar.

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Product with low environmental impact. Little energy used in production & transportation. Substantial energy conservation, thanks to its thermal characteristics and performances.

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COMPLEMENTARY PRODUCTS

SCREED RAILS

PVC profiles for assigning the appropriate height of the screed. They are particularly suitable for single layer lightweight screeds. Each profile is 2 m long and 5 cm in height.
Their special cross-section design allows them to be securely fixed and held within the screed, highly stable with excellent alignment. Piano Zero profiles can also be used in traditional sand and cement screeds; in this case, they act as the contraction or shrinkage joint.

ARIETE LIV (1-10mm)

Premixed self-levelling mineral mortar in powder, ready to use, for manual and mechanical application. Composition: homogeneous mixture of selected aggregates: pure quartz in grain size curve 0,1 - 0,6 mm (80% 0,3 mm), cement Portland 42.5 and special additives. Consumption: About 1,7 kg/m^2 for 1 mm of thickness.
Package

- 25Kg bags
- 48bags per pallet/1.200Kg

ARIETE LIV 30 (3-30mm)

Premixed self-levelling mineral mortar in powder, ready to use, for manual and mechanical application. Composition: homogeneous mixture of selected aggregates: pure quartz in grain size curve 0,1 - 0,6 mm (80% 0,3 mm), cement Portland 42.5 and special additives. Consumption: About 1,7 kg/m^2 for 1 mm of thickness.
Package

- 25Kg bags
- 48bags per pallet/1.200Kg

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EDILSTIK

Synthetic latex for surface preparation or to improve the properties of cement screeds (Piano Zero system) to promote adhesion to the receiving surface and for the preparation of very thin smoothing screeds for surface protection.
Packaging: Bottles 1 Kg/Can 5 Kg/Can 20 Kg/
Tank 1.000 Kg
For yield, refer to the technical data sheet.

EDILSTIK F.C.A.

Pigmented synthetic latex for the temporary stabilization of asbestos fiber cement sheets (type D certificates). To apply before the encapsulation work with lightweight thermal insulating mortars for screeds prepared with the Politerm® Blu product range.

Packaging: Can 5 Kg / Can 20 Kg / Tank 1.000 Kg
Color: yellow orange
Low-pressure application with spray nozzle
(see Edilstik Blow Machine) or airless.
Also available in the pre-diluted version.
For yield, refer to the technical data sheet.

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EQUIPMENT

POLITERM® MACHINE 1000 ECO

Entirely stainless-steel equipment for the preparation (mixture) and pumping of screeds and lightweight screeds composed of fine-grained materials such as virgin expanded polystyrene beads, perlite, vermiculite, and cork, also mixed with cellular foam produced by specific equipment (Foam Maker type).
Maximum pumping length 100 m. Maximum pump height 30 m.
Electrical power supply: 400V – 50 Hz.
Also available with diesel fuel: homologated diesel engine in accordance with regulations for noise pollution
Available with 1 m^3 tank.

* It is also available in the following version.
POLITERM® MACHINE 1000 H2O
Equipped with automatic water dosage system.
For the setup, please consult the technical sheet.

POLIPLUS MACHINE 400V H_2O

Entirely stainless-steel equipment for the preparation (mixture) and pumping of screeds and lightweight screeds (the Poliplus range) composed of fine-grained materials such as virgin expanded polystyrene beads, perlite, vermiculite and cork and self-leveling screeds.
Wight: 320 Kg. Tank capacity: about 220 lt
Electrical power supply: 2,2 kW. 400V
Maximum pumping pipe length: 30 m with maximum height of 15 m.
Equipped with automatic water dosage system

** It is also available in the following version:
POLIPLUS MACHINE 230 V H2O
For the setup, consult the technical data sheet.

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POLITERM® PUMP with or without hopper

Mixing machine with pumping system for lightweight screeds consisting of aggregates like expanded polystyrene beads, perlite, vermiculite, and cork even when mixed with cellular foam. Pumping capacity up to 120 m in length and up to 30 m in height.
Available in the following types:
- Electrical power supply 400V.
- With hydraulic engine provided by external supply (e.g. trucks) Customized fitting available on request.

POLITERM® MACHINE SCREW

Equipment for the mechanical addition of cement into the Politerm® machine tank.
Electrical power supply: 400 V
Customized fittings available on request.

ΠΗΧΗΣ ΔΙΑΣΤΡΩΣΗΣ

Aluminum straight edge rail with handle for the spreading of lightweight screeds.

EDILSTIK BLOW MACHINE

Equipment for atomizing latex.
Electrical power supply: 230 V / 50 Hz.

HIGH RESISTANCE RIGID METAL PIPE

This accessory improves the flowing of the mortar and avoids the risks of breaking and bursting the pipes while working. Essential for pumping to height greater than 10 m. 3m long pipes with flanges and rings for fixing to scaffolding.

METAL ELBOWS FOR PIPES

Available elbows:
45° and 90°

STEEL REINFORCED RUBBER PIPE

Pipes for pumping lightweight screeds with Politerm® Machine. 10 m pipes complete with flanges.

LIGHT PLASTIC PIPES

Pipes for pumping lightweight screeds (end length) with Politerm® Machine. 10 m long pipes complete with flanges.

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