



POLIPLUS® FEIN

READY TO USE ULTRA-LIGHT WEIGHT & HIGHLY THERMAL
INSULATION BOUND EPS (BEPS) MORTAR

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Ready to use ultra-light weight and highly thermal insulating Bound EPS mortar for roofs & floors
certified according to ELOT EN 16025-1 and with RAL premium quality certification

COMPOSITION	Premixed ultra-lightweight thermal insulating Bound EPS (BEPS) mortar for extremely high thermal insulation and simultaneous gradient formation. It is made of virgin polystyrene EPS (N) beads, (Ø 2mm) grain size, premixed with special additives and cement 300 Kg/m ³ dry density.
PACKING & STORAGE	<ul style="list-style-type: none"> • Bag of 70 L yield • Pallets of 40 sacks (2,8m³ per pallet) • It is advised that you use the product within 6 months from its production date. The product maintains its technical characteristics for more than 12 months if stored properly (dry place protected from frost, water and direct exposure to sunlight).
FIELD OF APPLICATION	<ul style="list-style-type: none"> • Lightweight thermal insulating floors for direct application of tiles (see notes page 2). Not suitable for direct application of resilient floors. • Thermal insulation on roofs/terraces/verandas/balconies (with or without simultaneous slope formation). Suitable for direct application of hot applied bituminous membrane. • Lightweight thermal insulating substrate (with or without simultaneous slope formation), on pitched or flat roofs, domed roofs. • Intermediate substrate of very high thickness etc. • Floor thermal insulation between dwellings/floors above closed non heated spaces/floors above pilotis • Floor thermal insulating substrate or below under floor heating. • On ground thermal insulation/under industrial floor/beneath asphalt.
CONSUMPTION YIELED	<ul style="list-style-type: none"> • 13-14 sacks yield 1m³ of thermal insulating mortar (depending on the mixing equipment and the precision of the mixing). • Alternatively, 1 sack yields about 1m² of 7cm thick mortar.
SURFACE PREPARATION	<ul style="list-style-type: none"> • Thoroughly clean the surface. Completely remove dust and residue. • Prepare the leveling points. • Wet the surface (if it is absorbent) without creating puddles. • For highly absorbent surfaces: Proceed with the perfect cleaning of the surface. Completely remove the dust. Apply an adhesion promoter grout with reduced absorption abilities composed of cement/Edilstik/clean water (ratio Edilstik/water 1:1). Upon drying, wet the surface and continue with the application of Poliplus Fein. • Non-absorbent surfaces: Do not wet the surface. Apply a metal mesh appropriately anchored and at a distance from the surface.



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Παραγωγή – Εμπορία – Εφαρμογές δομικών μονωτικών υλικών

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<p>MIXING AND PUMPING</p>	<ul style="list-style-type: none"> • Can be mixed with: <ul style="list-style-type: none"> ✓ Drill with whisk ✓ Cement mixer. ✓ Mixer type “Turbomalt”. ✓ Politerm® Machine (see Tekto equipment). ✓ Poliplus Machine (see Tekto equipment). ✓ Plastering machine type PFT ✓ Truck mixer and concrete pump. ✓ Machine and pump of lightweight concretes with rotor and stator ✓ Pump type “Turbosol” or “Putzmeister” (contact with Tekto Technical department). <p>Hydrate with clean water with a ratio of 11-12L per bag. Mix for at least 5 minutes and not more than 10 minutes (except if you are using plastering machine)</p> <p>*Mixing & pumping with plastering machine type PFT</p> <ul style="list-style-type: none"> ✓ Fit the plastering machine with an expansion tank, a screw and a mixer specific for premixed products based on polystyrene beads. ✓ Keep the loading hopper always full. It is suggested to use the hopper extension. ✓ Do not use a compressor. ✓ Remove the end nozzle from the material pipe. <p>Adjust the flow meter to obtain a homogenous mortar with a creamy consistency.</p>
<p>WARNINGS</p>	<ul style="list-style-type: none"> • Do not apply with temperatures lower than +5°C or higher than +35°C. • It is advised to use edge strips for acoustic insulation with a height bigger than the substrate. • It is advised that you use the Piano Zero Guides. The guides assist in creating an improved leveling of the mortar especially when the application is performed by less experienced craftsmen. • Minimum thickness: <ul style="list-style-type: none"> a) <i>Absorbent surfaces: 5 cm from the highest point of floor pipes (if present).</i> b) <i>Non-absorbent surfaces: consult the “application manual” or contact TEKTO’s technical department.</i> <p>For detailed instructions, consult the “Application manual” (available on request) or contact TEKTO’s technical department.</p> <p>During the change of pallet, ensure the appropriate water mixing quantity. Do not wet the applied screed. Protect the screed from rain for the first 48 hours. Do not add any additive in the mixture. Mix only with clean water in the respective quantity and mixing time. Mix the whole bag at once. Do not separate the bag in to smaller mixing batches.</p>
<p>APPLICATION DETAILS</p>	<p>Consult the application manual. Special circumstances may be present in each particular project which exceed the purposes of this TDS and/or the application manual. Consult the engineer supervisor or consult TEKTO HELLAS S.A.</p>
<p>CERTIFICATIONS</p>	<p>Poliplus Fein is certified according to the Greek and European standard ELOT EN 16025-1 and with the German certification of higher quality, RAL, from the German notified body GSH (notification number in EU: No 0919).</p> <p>It is advised that the application of Poliplus Blu to be performed by certified applicators and according to the guidelines of TEKTO HELLAS S.A.</p>



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TECHNICAL CHARACTERISTICS

Dry density	290Kg/m ³	ΕΛΟΤ EN 1097-3
Bound EPS density	320Kg/m ³	ΕΛΟΤ EN 1602
Thermal conductivity λ _D (ΕΛΟΤ EN 16025-1)	0,084W/m ² K	ΕΛΟΤ EN 12667
Average thermal conductivity λ _{mean} (ΕΛΟΤ EN 16025-1)	0,079W/m ² K	ΕΛΟΤ EN 12667
Compression strength at N/mm²	1,32MPa	ΕΛΟΤ EN 722
Compression strength at kPa	1.320kPa	ΕΛΟΤ EN 722
Flexural strength MPa	0,51MPa	ΕΛΟΤ EN 739
Average compressive strength at 10% deformation sample of 5cm	789kPa	ΕΛΟΤ EN 826
Average compressive strength at 10% deformation sample of 30cm	714kPa	ΕΛΟΤ EN 826
Reaction to fire	A2-s1, d0	ΕΛΟΤ EN 13501-1
Water vapour permeability, μ	5-20	ΕΛΟΤ EN 12086
EPS granulometry – Amount of dust	PS5(N) - D0	ΕΛΟΤ EN 933-1
Specific heat	1000J/kgK	-
Shrinkage	0,352mm/m	-
Moisture resistance	Rotproof	-
Residual moisture after 28 days	<2% (thickness 5 cm, absorbent surface)	

AFTER THE APPLICATION OF POLIPLUS FEIN

Single-layer screed can be applied:

SPECIAL OPERATIONS	LAYING/FLOOR COVERING	
	Laying with glue: all the ceramic types. Floating laying: parquet	Laying with glue of: parquet
Application with Piano zero guides:	yes	yes
Application with a “blade” float:	yes	yes
Surface sanding with electrical brush fitted with sandpaper:	recommended	recommended
Thin bed surface smoothing with a mixture of cement and glue:	recommended <i>When there is heavy foot traffic before laying the floor covering</i>	no
Surface smoothing with Ariete Liv – minimum thickness 5mm and according to the type o the wooden strips.	no	mandatory

Drying time for direct laying of floor coverings (screed thickness πάχος 5cm, absorbent surface and ambient conditions +20 °C - R.H. 50%) according to the laying surface, the environmental and weather conditions:

- ✓ Ceramic tiles: after about 96 hours.
- ✓ Floating parquet: after about 7 days.

Floors can be applied:

- ✓ After sanding the mortar, the application of a self-leveling screed with a thickness 1-10mm or a smoothing mortar with a thickness of 3-30mm depending on the requirements. Alternatively, other screeds with higher mechanical performances can be used. At the discretion of the applicator, the superficial EPS beads can be melted off with a blow torch. This will increase the consumption but it will increase the mechanical performances.



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Roofs and terraces can be applied:

- ✓ TPO, FPO, anchored and/or torched asphaltic membranes etc can be directly applied in accordance to the guidelines of the manufacturer.
- ✓ For application of brushable water insulating products and cementitious brushable products, after sanding the surface of Poliplus, apply a thin bed smoothing mortar with a fiberglass reinforcement. At the discretion of the applicator, you can burn off the surface EPS beads with a blow torch. This will increase the consumption of the smoothing layer but this will also increase the mechanical performances of the smoothing layer. For torched applied asphaltic membranes, the application can be made with or without the application of a smoothing layer, at the discretion of the applicator and the supervising engineer.

Verandas and balconies can be applied:

- ✓ After sanding the surface of the mortar, apply a smoothing screed with thickness of 3-30mm or other screed with suitable mechanical performances depending on the project's requirements and the requirements of the final floor layer. At the applicator's discretion, the surface EPS beads can be burned off with a blow torch. This will increase the consumption of the smoothing screed but this will also improve the screed's mechanical performances.
- ✓ Depending on the desired final layer follow the technical instructions or contact TEKTO's technical department.

ECOLOGY – INVIROMENTAL FOOTPRINT

- ✓ Very high thermal insulating abilities ➔ Less material thickness to achieve the thermal requirements of a building structure
- ✓ Positive environmental footprint ➔ The energy savings the product offers exceed the energy required for its production.
- ✓ Reduced water needs ➔ Its special composition has significantly reduced mixing water needs. It does not absorb, nor retains water like other mortars.
- ✓ Extremely lightweight for transport ➔ Reduced environmental footprint of transport.
- ✓ Extremely lightweight ➔ Significantly contributes in the reduction of "dead" loads of a construction, increasing in that way the anticipated lifetime of old structures/renovations.

All the indications provided in this technical data sheet are purely approximate and are not binding for legal purposes. The data listed herein have been gathered from laboratory tests meaning that in practical applications on building sites the final characteristics of the product may be subject to substantial variations depending on the meteorological conditions and the installation. The user must always check the suitability of the product for its specific use, undertaking all liability implicit in and deriving from the use of the product, as well as comply with all methods and instructions for use generally referred to as "workmanlike" execution. TEKTO HELLAS S.A. reserves the right to change the contents of this technical data sheet on its final judgement without any notification. The distribution of this data sheet supersedes and cancels the validity of any other data sheet published previously.



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