



POLITERM[®] BLU FEIN READY MIX

**SUPERLIGHT FINE BEAD AGGREGATE FOR THE PREPARATION
OF LIGHTWEIGHT THERMAL INSULATING CEMENT MORTARS**

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Superlight fine bead aggregate for the preparation of lightweight thermal insulating cement mortars

PRODUCT	Superlight fine bead aggregate for the preparation of lightweight thermal insulating cement mortars. Specific to be mixed in concrete mixer and pumped with concrete pump.
COMPOSITION	Expanded virgin close-cell polystyrene beads with fine grain size (\varnothing 2 mm), perfectly spherical, controlled density, non-toxic, non-absorbent, rotproof, dimensionally stable over time, free of chlorofluorocarbon (CFC, HCFC and HFC) and nutritional values able to sustain the growth of fungi and bacteria. In the production phase, the beads are mixed with the special E.I.A. additive which allows a perfect mixing with the water binder, eliminates the bead floating phenomenon and guarantees their homogeneous distribution in the mix.
PACKAGING AND STORAGE	<ul style="list-style-type: none"> · Bag of 500 L (n° 2 bags = 1 m³ of finished mortar). · Store away from frost and direct sunlight.
FIELDS OF APPLICATION	<ul style="list-style-type: none"> · Base screeds for basements and pilotis floors, space between floors, roofs and wooden floors. · Single-layer screeds for direct gluing of floor finishings, basements, pilotis floors, space between floors, roofs and wooden floors (consult the "Politerm[®] Blu - Piano Zero - Application Manual"). · Formation of gradients on terraces and flat roofs, also with following direct laying of waterproofing membrane (prefabricated: hot or cold, synthetic bituminous - liquids: provided that solvents are not present). · Insulation of unwalkable attics. · Insulation of pitched roofs, also with following direct laying of waterproofing membrane (prefabricated: hot or cold, synthetic bituminous - liquids: provided that solvents are not present). · Filling of vaults, even highly thick. · Encapsulation of asbestos cement fibre sheets roofs, also with following direct laying of waterproofing membrane (prefabricated: hot or cold, synthetic bituminous - liquids: provided that solvents are not present). · Filling beneath trafficable asphalt pavements. · Beneath industrial flooring.
CONSUMPTION / YIELD	<p>1 m³ of finished mortar is obtained with: N° 2 bags of 500 L of Politerm[®] Blu Fein Ready Mix + water + cement + sand (if necessary)*. * see prescribed dosage.</p>
PREPARATION OF THE LAYING SURFACE	<p>The laying surface must always be clean, free from dust and fragments of any kind.</p> <ul style="list-style-type: none"> · Absorbent laying surfaces in concrete or concrete and masonry: abundantly wet the surface but do not leave puddles. · Low absorbent surfaces (cement supports): treat the base layer before applying Politerm[®] Blu Fein Ready Mix with the specific adhesion promoter (Edilstik) and proceed wet on wet, or realize an adherence bridge with cement grout with water and Edilstik, or use an adhesive primer. · Non-absorbent laying surfaces (sheaths, metal, ceramic, insulating sheets, etc.): before pour the mortar prepared with Politerm[®] Blu Fein Ready Mix, lay a galvanized mesh \varnothing 2 - 3 mm, mesh 50 x 50 mm, at a due distance from the laying surface (positioned at least at a third of the final thickness of the casting to be carried out). · Single-layer screeds for direct gluing of floor coverings: it is recommended to lay some special PVC guides called Piano Zero beforehand.



Thermal Insulation & Chemicals Division



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Use only CEM I or CEM II concrete and in perfect conservation conditions, according to the law. Different types or poor-quality concrete may affect the functionality of E.I.A. which is added to Politerm® Blu Fein Ready Mix beads. It would make the mixing difficult and the final properties of the mortar not compliant.

Dosage to obtain 1 m³ (1000 L) of lightweight thermal insulating mortar:

DENSITY kg/m ³	WATER L	CEMENT PORTLAND 32.5 or CEM I or CEM II kg	POLITERM® BLU FEIN READY MIX BAG approx. 500 L	SAND kg
approx. 215	80 - 100	200	2	-
approx. 265	100 - 125	250		
approx. 315	125 - 150	300		
approx. 365	140 - 175	350		
approx. 400	140 - 150 *	300		
approx. 500	140 - 150 *	300		
approx. 900	155 *	300	<2 (640 L)	550

* more hydrated sand (depending on the sand's remaining moisture).

MIXING AND APPLICATION

Preparation in concrete mixer (order of preparation):

1. Water: all the necessary water for the mix, less of 20 - 30 L (see point 7);
2. Politerm® Blu Fein Ready Mix;
3. Mix for 10 minutes at the maximum speed;
4. Cement;
5. Sand (if necessary);
6. Mix for 10 minutes at the maximum speed;
7. Clean the cup load with approx. 20 - 30 L of water (therefore completing the water dosage of the mix - see point 1);
8. Add additional water according to the residual moisture of the inserted sand;
9. During the way concrete batching plant-building site, the mixer has to rotate at the maintenance speed. Once arrived on site, after any further addition of water, the rotation time of the mixer at maximum speed is of 1 minute per m³ of mix.
10. For the correct pumping consult the "Politerm® Blu Application Manual" or contact the *Edilteco Technical Department*.

- **Use of antifreeze:** at temperatures under +5 °C it is recommended to add liquid antifreeze to the dosage recommended by the manufacturer. Any use of antifreeze additives is compatible with the physical-chemical properties of Politerm® Blu Fein Ready Mix.
- **Single-layer screeds for direct gluing of floor coverings:** consult the "Politerm® Blu - Piano Zero Application Manual" or contact the *Edilteco Technical Department*.

WARNINGS

- **Minimum pumping density: 250 kg/m³.**
- Do not apply with temperatures inferior than +5 °C or under the direct sunlight or with temperatures higher than +35 °C. If the application is made under the direct sunlight, necessary precautions must be taken (e.g. mesh or similar that covers the scaffolding).
- It is recommended to lay edge strips of acoustic insulation wider than the floor covering.
- **Minimum thickness:**
 - a) *Absorbent surface:* minimum 5 cm. In case of sub-thickness consult the "Politerm® Blu Application Manual" or contact the *Edilteco Technical Department*.
 - b) *Non-absorbent surface:* consult the "Politerm® Blu Application Manual" or contact the *Edilteco Technical Department*.



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	CHARACTERISTIC	FORMULA				
		110	200	250	300	350
TECHNICAL CHARACTERISTICS	Density after 28 days kg/m ³ :	apx. 130 ^(a)	apx. 215	apx. 265	apx. 315	apx. 365
	Thermal conductivity λ_D W/mK:	0,043	0,065	0,067	0,080	0,103
	Compressive strength N/mm ² ^(b) :	0,528	0,69	0,83	1,61	1,69
	Flexural strength N/mm ² ^(b) :	0,12	0,37	0,46	0,95	0,59
	Cohesion kPa:	n.a.	82,62	n.a.	127,17	n.a.
	Hot-sealed membrane rupture N/50 mm:	n.a.	57	n.a.	62	21,28
	Cold-sealed membrane rupture N/50 mm:	n.a.	35	n.a.	47	13,00
	Elasticity module N/mm ² :	n.a.	235,3	n.a.	551,1	n.a.
	Permeability to water vapour μ :	5,1	5,9	6,9	7,2	9,2
	Specific heat kJ/kgK:	1,4	1,4	1,4	1,4	1,4
	Shrinkage (NBN) mm/m:	n.a.	0,427	n.a.	0,352	0,270
	Acoustic performance ΔL_w :	n.a.	n.a.	14 dB *	26 dB **	n.a.
	Impact noise insulation $L'_{nT,W}$:	n.a.	n.a.	61 dB thick. 11 cm	n.a.	n.a.
	Fire reactivity class:	A2-s1,d0				

All the indications provided in this technical data sheet are purely approximate and not binding for legal purpose. The data listed has been gathered from laboratory tests and it hence follows that in practical applications on building sites the final characteristics of the products may be subject to substantial variations depending on the meteorological conditions and the installation. The user must always check suitability of the product for its specific use, undertaking all liability implicit in and deriving from use of the product, as well as comply with all methods and instructions for use generally referable to "workmanlike" execution. Edilteco S.p.A. reserves the right to change the contents of this mechanical data sheet on its final judgements. The spreading of this data sheet through any media, supersedes and cancels the validity of any other technical data sheet previously published.

^(a) Only with Politerm® Blu Fein Ready Mix. For methods and application contact the Edilteco Technical Department.

^(b) IMPORTANT: for methods of use and application consult the "Politerm® Blu - Application Manual".

* Value obtained in laboratory with 5 cm of Politerm® Blu Fein Ready Mix + 5 cm of screed / ** Value obtained in laboratory with 7 cm of Politerm® Blu Fein Ready Mix + Fonotech 5.



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