POLITERM®
BLU FEIN READY MIX

PRE-ADDITIVATED THERMAL INSULATING ULTRA-LIGHTWEIGHT AGGREGATE. BEAD Ø ≤ 2 MM

POLITERM® BLU FEIN READY MIX
Pre-additivated thermal insulating ultra-lightweight aggregate. Bead Ø ≤ 2 mm

PRODUCT	Superlight pre-additivated aggregate for the preparation of lightweight thermal insulating cement mortars. **Specific to be mixed in a concrete mixer and pumped with a concrete pump.**
COMPOSITION	Expanded virgin close-cell polystyrene beads with fine grain size (Ø ≤ 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	· Bag of 440 L. · Store away from frost and direct sunlight.
FIELDS OF APPLICATION	· Subfloors 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 application manual - Piano Zero"*). · Formation of gradients on terraces and flat roofs, also with following direct laying of waterproofing membrane (bituminous sheets: hot- or cold-applied, and synthetic or liquid types, provided they are solvent-free). · Insulation of unwalkable attics. · Insulation of pitched roofs, also with following direct laying of waterproofing membrane (bituminous sheets: hot- or cold-applied, and synthetic or liquid types, provided they are solvent-free). · Vault infill, even at very high thicknesses. · Encapsulation of asbestos cement fibre sheets roofs, also with following direct laying of waterproofing membrane (bituminous sheets: hot- or cold-applied, and synthetic or liquid types, provided they are solvent-free). · Filling beneath trafficable asphalt pavements. · Subfloors for industrial flooring.
CONSUMPTION / YIELD	To obtain 1 m^3 of finished mortar, refer to the dosage table on the next page.
PREPARATION OF THE LAYING SURFACE	The laying surface must always be clean, free from dust and fragments of any kind. · **Absorbent laying surfaces in concrete or concrete and masonry:** abundantly wet the surface but do not leave puddles. Gradually wet the surface when laying the lightweight screed. · **Very absorbent surfaces (hollow clay bricks, hollow tile, etc.):** thoroughly clean and remove dust from the laying surface. Apply grout used as adhesive and absorbency reducer. It is based on concrete / Edilstik / clean water (ratio Edilstik / water 1:1). When dry, wet the surface and gradually proceed with the laying of lightweight screed. The dampening must be carried out gradually as the lightweight screed is being laid. · **Low absorbent surfaces (cement supports):** treat the base layer before applying Politerm® Blu Fein Ready Mix with the specific adhesion promoter (Edilstik type) 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, panels, etc.):** before pour the mortar prepared with Politerm® Blu Fein Ready Mix, lay a galvanized mesh Ø 2 - 3 mm, mesh 50x50 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 Piano Zero Guides beforehand.

EDILTECO® group | THERMAL Insulation & Chemicals Division

Edilteco S.p.A. Via dell'Industria, 710 . 41038 San Felice sul Panaro (MO) Italy . Ph. +39 0535 82161 . Fax +39 0535 82970
www.edilteco.com | export@edilteco.it

MIXING AND APPLICATION

Use only CEM I or CEM II limestone cement, compliant with UNI standards, and in perfect conservation conditions. Different types of cement or poor-quality cement may affect the functionality of the E.I.A. additive with which Politerm® Blu Fein Ready Mix beads are treated, and could make mixing difficult, affecting the conformity of the final properties of the mortar.

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

FORMULA	WATER * L	CEMENT PORTLAND 32.5 CEM I or CEM II kg	POLITERM® BLU FEIN READY MIX	SAND kg
110	50	110	880 L	-
150	68	150	880 L	-
200	90	200	880 L	-
250	110	250	880 L	-
300	140	300	880 L	-
350	160	350	880 L	-
500	140 **	300	800 L	160
800	140 **	300	680 L	475
1000	140 **	300	600 L	675
1200	140 **	300	510 L	875
1500	150 **	300	420 L	1175
1800	160 **	300	280 L	1475

* The water dosage has to be adapted to the quality of the lot of cement to be used.
** Adjust according to the sand moisture content. Please contact us for further formulas.

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. possible first part of aggregate;
5. cement;
6. possible second part of aggregate;
7. clean the cup load with approx. 20 - 30 L of water (therefore completing the water dosage of the mix - *see point 1*);
8. mix for 10 minutes at the maximum speed;
9. add additional water according to the residual moisture of the inserted sand;
10. 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;
11. for the correct pumping consult the *"Politerm® Blu application manual"* or contact the *Edilteco Technical Department.*

· **Use of antifreeze:** at temperatures below +5 °C, the use of a liquid antifreeze admixture is recommended, at the manufacturer's prescribed dosage based on the cement content. Any use of antifreeze additives is compatible with the physicalchemical properties of Politerm® Blu Fein Ready Mix.
· **Single-layer screeds for direct gluing of floor coverings:** consult the *"Politerm® Blu application manual - Piano Zero"* 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.*

EDILTECO® group | THERMAL Insulation & Chemicals Division

Edilteco S.p.A. Via dell'Industria, 710 . 41038 San Felice sul Panaro (MO) Italy . Ph. +39 0535 82161 . Fax +39 0535 82970
www.edilteco.com | export@edilteco.it

TECHNICAL CHARACTERISTICS	FORMULA											
	110	150	200	250	300	350	500	800	1000	1200	1500	1800
Density after 28 days kg/m^3:	~ 130 [a]	~ 165	~ 215	~ 265	~ 315	~ 365	~ 515	~ 815	1000 ±10%	1200 ±10%	1500 ±10%	1800 ±10%
Thermal conductivity λ_D W/mK:	0,042	0,0489	0,058	0,065	0,079	0,096	0,104	0,176	0,191	n.a.	n.a.	n.a.
Compressive strength N/mm^2 *(kPa)* [b]:	*0,528 (528)*	0,59 *(590)*	0,69 *(690)*	0,83 *(830)*	1,61 *(1.610)*	1,69 *(1.690)*	2,24 *(2.240)*	≥ 5,0 *(≥ 5.000)*	≥ 9,0 *(≥ 9.000)*	≥ 12,0 *(≥ 12.000)*	≥ 20,0 *(≥ 20.000)*	≥ 25,0 *(≥ 25.000)*
Flexural strength N/mm^2 [b]:	0,12	0,51	0,37	0,46	0,95	0,59	0,78	≥ 1,0	≥ 1,0	≥ 1,0	≥ 1,0	≥ 2,0
Cohesion kPa:	n.a.	n.a.	82,62	n.a.	127,17	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hot-sealed membrane rupture N/50 mm:	n.a.	n.a.	57	n.a.	62	21,28	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cold-sealed membrane rupture N/50 mm:	n.a.	n.a.	35	n.a.	47	13,00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Elasticity module N/mm^2:	n.a.	n.a.	235,3	n.a.	551,1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Water vapour permeability coefficient μ:	5,1	5,9	5,9	6,9	7,2	9,2	10,2	14,0	n.a.	n.a.	n.a.	n.a.
Specific heat kJ/kgK:	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Shrinkage (NBN) mm/m:	n.a.	n.a.	0,427	n.a.	0,352	0,270	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Acoustic performance ΔL_w:	n.a.	n.a.	n.a.	14 dB *	26 dB **	n.a.	17 dB ***	19 dB ***	20 dB ***	21 dB ***	22 dB ***	22 dB ***
Impact noise insulation $L'_{nT,W}$:	n.a.	n.a.	n.a.	61 dB thick. 11 cm	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	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.
*** Calculated value with 5 cm of Politerm® Blu Fein Ready Mix + Fonotech 5.

Edilteco S.p.A. Via dell'Industria, 710 . 41038 San Felice sul Panaro (MO) Italy . Ph. +39 0535 82161 . Fax +39 0535 82970
www.edilteco.com | export@edilteco.it