



# Politerm BLU

superlight fine-bead aggregate to prepare  
lightweight thermal insulating cement mixes

|                                 |  |
|---------------------------------|--|
| <b>+ packaging:</b>             | > bags of 420 l (2bags for 1cum of finished mortar)  |
| <b>+ composition:</b>           | closed-cell virgin expanded polystyrene beads with uniform grain in curve ( 3-6 mm diam.) perfectly spherical, controlled density, non-toxic, non-absorbent, rot proof, dimensional stable over time chlorofluorocarbon <b>free</b> production (CFC, HCFC and HFC), free of nutritional values able to sustain growth of fungi and bacteria. During production the beads are mixed with a special E.I.A. additive which allows perfect mixing with the water binder, eliminates the bead floating and guarantees their homogenous distribution in the mix  |
| <b>+ fields of application:</b> | <ul style="list-style-type: none"><li>&gt; <b>substrates</b> for basements and pilot floors, space between floors, roofs and wooden floors</li><li>&gt; <b>single layer screeds</b> for direct gluing of floor coverings, basements and pilot floors, space between floors, roofs and wooden floors.</li><li>&gt; <b>formation of gradients</b> on terraces and flat roofs, also with subsequent direct laying of waterproofing materials (prefabricated: hot or cold bituminous and synthetic-liquids: provided that they are solvent free).</li><li>&gt; <b>insulation of unwalkable attics.</b></li><li>&gt; <b>insulation of pitched roofs</b>, also with subsequent direct laying of waterproofing materials (prefabricated: hot or cold bituminous and synthetic-liquids: provided that they are solvent-free)</li><li>&gt; <b>filling of faults</b>, also very thick</li><li>&gt; <b>confinement of roofs</b> in asbestos cement fiber sheets, also with subsequent direct laying of waterproofing materials (prefabricated: hot or cold bituminous and synthetic-liquids: <b>provided they are solvent-free</b>)</li><li>&gt; <b>filling of asphalt undercoat</b></li><li>&gt; <b>substrates for industrial flooring</b></li></ul> |
| <b>+ consumption/ yield:</b>    | <b>to obtain 1 cu.m of lightweight thermal insulating mortar you need:</b> <ul style="list-style-type: none"><li>&gt; two 420-litre bags of Politerm BLU + water + cement (*)</li><li>(*) see dosages on page 2</li></ul>  |
| <b>+ surface preparation:</b>   | <b>The laying surface must always be clean and free of dust and fragments of any kind.</b> <ul style="list-style-type: none"><li>&gt; <b>cement and cement-brick laying surfaces or in any case absorbent surfaces</b> must be wetted prior to application, avoid puddles</li><li>&gt; <b>laying surfaces with poor absorption</b> (very dense cement surfaces,etc.) must be treated with an adhesion promoter before laying the mortar prepared with Politerm BLU. The laying of the mortar should be done while the adhesion promoter is still wet (wet on wet).<br/>Alternative you can apply cement mortar mixed with an adhesion promoter; again the mortar prepared with Politerm BLU should be applied wet on wet.</li></ul>  |

- > **non-absorbing laying surfaces** (metal, ceramic, insulating sheets, etc.):  
before laying the mortar prepared with Politerm BLU, install an electro welded lath in a reasonable distance from the laying-surface (positioned at least at a third of the final laying-thickness)
- > **single-layer screeds for direct gluing of floor coverings:** it is recommended to place PVC zero-guides before application of the lightweight mortar.

Use only good quality Portland 32.5R cement for the mixing of the lightweight mortar. Different types of cement or cement of poor quality may cause problems because they affect the function of the E.I.A. additive negative (the Politerm BLU beads are coated with the E.I.A. additive), making mixing difficult and the final properties of the mortar not conform.

Dosage for 1 cu.m of lightweight insulating mortar:

| Density<br>kg/cum | Bags<br>Politerm BLU    | Water<br>Liters | Cement<br>kg | Sand<br>(*)      |
|-------------------|-------------------------|-----------------|--------------|------------------|
| 200               | 2 Bags of<br>420 Liters | 80 - 100        | 200          | not<br>necessary |
| 250               |                         | 100 - 125       | 250          |                  |
| 300               |                         | 120 - 150       | 300          |                  |
| 350               |                         | 140 - 175       | 350          |                  |

(\*) Sand is not required because of the excellent mixing properties of Politerm BLU. Sand may however be being aware of the fact that it reduces performance in terms of density, thermal insulation and water retention. If you are using sand the amount of water will vary depending on the amount of sand used and its residual moisture. Sand may have to be added when using trucks equipped with blade exchangers or when using pumps of the type "Turbosol" for sand and cement screeds.

- + **Mixing:** the mortars prepared with Politerm BLU can be mixed with:
  - > cement mixers
  - > horizontal mixers
- + **Mixing and Pumping:** the mortars prepared with Politerm BLU can be mixed and pumped on site with:
  - > batch plant pump trucks
  - > pumps type "Turbosol" for sand and cement screeds (adding sand to the mix)
- + **Mixing of lightweight mortar; order of components**
  - > water
  - > Politerm BLU
  - > cement
  - > mix for approx. ten minutes before pumping
- + **Using antifreeze:** at temperatures below + 5 degrees C, it is recommended to add liquid antifreeze to the dosage recommended by the manufacturer. Any antifreeze can be used that is compatible with the physical chemical properties of Politerm BLU

### + Main technical characteristics:

| Density<br>kg/cum           | 200                          | 250     | 300     | 350     |
|-----------------------------|------------------------------|---------|---------|---------|
|                             | Spec. weight after           | ca. 215 | ca. 265 | ca. 315 |
| Thermal conductivity        | 0.065                        | 0.067   | 0.08    | 0.103   |
| Compressive strength        | 0.69                         | 0.83    | 1.48    | 1.69    |
| Flexural strength           | 0.37                         | 0.46    | 0.6     | 0.59    |
| Cohesion <b>kPa</b>         | 82.62                        | 82.62   | 127.17  | n. a.   |
| Hot sealed membrane         | 57                           | n. a.   | 62      | 21.28   |
| Cold sealed membrane        | 35                           | n. a.   | 47      | 13      |
| Elasticity module           | 235.3                        | n. a.   | 489.5   | n. a.   |
| Permeability to water       | 10.11                        | 11.5    | 12      | 21.04   |
| Shrinkage (NBN)             | 0.427                        | n. a.   | 0.352   | 0.27    |
| Fire reactivity             | M0 UBAtc - Class B2 DIN 4101 |         |         |         |
| Flammability ASTM D 1692-68 | Inflammable                  |         |         |         |

All the indications provided in this technical data sheet are purely approximate and not binding for legal purposes. 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 application.

The user must always check suitability of the product for its specific use, undertaking all liability in and deriving from the use of the product as well as to comply with all the methods and instructions for use generally referable to "workmanlike" execution.

Poliplus fein 01/2007