



# POLIPLUS® BLU

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

## POLIPLUS® BLU

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

|                              |   |
|------------------------------|---|
| <b>COMPOSITION</b>           | 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 200 Kg/m <sup>3</sup> dry density.  |
| <b>PACKING &amp; STORAGE</b> | <ul style="list-style-type: none"> <li>• Bag of 70 L yield</li> <li>• Pallets of 40 sacks (2,8m<sup>3</sup> per pallet)</li> <li>• 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).</li> </ul>  |
| <b>FIELD OF APPLICATION</b>  | <ul style="list-style-type: none"> <li>• Thermal insulation on roofs/terraces/verandas/balconies (with or without simultaneous slope formation. Suitable for direct application of hot applied bituminous membrane.</li> <li>• Lightweight thermal insulating substrate (with or without simultaneous slope formation), on pitched or flat roofs, domed roofs.</li> <li>• Intermediate substrate of very high thickness etc.</li> <li>• Floor thermal insulation between dwellings/floors above closed non heated spaces/floors above pilotis</li> <li>• Floor thermal insulating substrate or below under floor heating.</li> <li>• On ground thermal insulation/under industrial floor/beneath asphalt.</li> </ul>            |
| <b>CONSUMPTION YIELED</b>    | <ul style="list-style-type: none"> <li>• 13-14 sacks yield 1m<sup>3</sup> of thermal insulating mortar (depending on the mixing equipment and the precision of the mixing).</li> <li>• Alternatively, 1 sack yields about 1m<sup>2</sup> of 7cm thick mortar.</li> </ul>  |
| <b>SURFACE PREPARATION</b>   | <ul style="list-style-type: none"> <li>• Thoroughly clean the surface. Completely remove dust and residue.</li> <li>• Prepare the leveling points.</li> <li>• Wet the surface (if it is absorbent) without creating puddles.</li> <li>• 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 Blu.</li> <li>• Non-absorbent surfaces: Do not wet the surface. Apply a metal mesh appropriately anchored and at a distance from the surface.</li> </ul> |
| <b>MIXING AND PUMPING</b>    | <ul style="list-style-type: none"> <li>• <b>Can be mixed with:</b> <ul style="list-style-type: none"> <li>✓ Drill with whisk</li> <li>✓ Cement mixer.</li> <li>✓ Mixer type "Turbomalt".</li> <li>✓ Politerm® Machine (see Tekto equipment).</li> <li>✓ Poliplus Machine (see Tekto equipment).</li> <li>✓ Plastering machine type PFT</li> <li>✓ Truck mixer and concrete pump.</li> <li>✓ Machine and pump of lightweight concretes with rotor and stator</li> <li>✓ Pump type "Turbozol" or "Putzmeister" (contact with Tekto Technical department).</li> </ul> </li> </ul>  |



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|   |  |                 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
|---|--|-----------------|----------------------|----------------|-------------------|----------------------|--------------|--|-------------------------|---------------|---|-------------------------|---------------|---|---------|-------------|------------------------------------|--------|-------------|-----------------------------|---------|-------------|---|--------|-------------|--|--------|-------------|------------------|-----------|-----------------|----------------------------------|------|---------------|-----------------------------------|-------------|---------------|--------------------------|-----------|---|------------|-----------|---|---------------------|---------|---|---------------------------------|--|--|
|   | Hydrate with clean water with a ratio of 8-10L per bag. Mix for at least 5 minutes and not more than 10 minutes (except if you are using plastering machine)   |                 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| <b>WARNINGS</b>   | <ul style="list-style-type: none"> <li>Do not apply with temperatures lower than +5°C or higher than +35°C.</li> <li>It is advised to use edge strips for acoustic insulation with a height bigger than the substrate.</li> <li>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.</li> <li><b>Minimum thickness:</b> <ol style="list-style-type: none"> <li>Absorbent surfaces: 5 cm from the highest point of floor pipes (if present).</li> <li>Non-absorbent surfaces: consult the “application manual” or contact TEKTO’s technical department.</li> </ol> </li> </ul> <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>  |                 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| <b>APPLICATION DETAILS</b>                                      | 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.  |                 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| <b>CERTIFICATIONS</b>   | <p>Poliplus Blu 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>  |                 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| <b>TECHNICAL CHARACTERISTICS</b>                                | <table border="1"> <tr> <td>Dry density</td> <td>200Kg/m<sup>3</sup></td> <td>ELOT EN 1097-3</td> </tr> <tr> <td>Bound EPS density</td> <td>225Kg/m<sup>3</sup></td> <td>ELOT EN 1602</td> </tr> <tr> <td>Thermal conductivity <math>\lambda_D</math> (ELOT EN 16025-1)</td> <td>0,067W/m<sup>2</sup>K</td> <td>ELOT EN 12667</td> </tr> <tr> <td>Average thermal conductivity <math>\lambda_{mean}</math> (ELOT EN 16025-1)</td> <td>0,064W/m<sup>2</sup>K</td> <td>ELOT EN 12667</td> </tr> <tr> <td>Compression strength at <b>N/mm<sup>2</sup></b></td> <td>0,55MPa</td> <td>ELOT EN 722</td> </tr> <tr> <td>Compression strength at <b>kPa</b></td> <td>550kPa</td> <td>ELOT EN 722</td> </tr> <tr> <td>Αντοχή κάμψης σε <b>MPa</b></td> <td>0,33MPa</td> <td>ELOT EN 739</td> </tr> <tr> <td>Average compressive strength at 10% deformation sample of 5cm</td> <td>289kPa</td> <td>ELOT EN 826</td> </tr> <tr> <td>Average compressive strength at 10% deformation sample of 30cm</td> <td>382kPa</td> <td>ELOT EN 826</td> </tr> <tr> <td>Reaction to fire</td> <td>A2-s1, d0</td> <td>ELOT EN 13501-1</td> </tr> <tr> <td>Water vapour permeability, <math>\mu</math></td> <td>5-20</td> <td>ELOT EN 12086</td> </tr> <tr> <td>EPS granulometry – Amount of dust</td> <td>PS5(N) - D0</td> <td>ELOT EN 933-1</td> </tr> <tr> <td>Ειδική θερμοχωρητικότητα</td> <td>1000J/kgK</td> <td>-</td> </tr> <tr> <td>Συρρίκνωση</td> <td>0,427mm/m</td> <td>-</td> </tr> <tr> <td>Moisture resistance</td> <td>Άφθαρτο</td> <td>-</td> </tr> <tr> <td>Residual moisture after 28 days</td> <td colspan="2">&lt;2% (πάχος 5 cm σε απορροφητική επιφάνεια)</td> </tr> </table> | Dry density     | 200Kg/m <sup>3</sup> | ELOT EN 1097-3 | Bound EPS density | 225Kg/m <sup>3</sup> | ELOT EN 1602 | Thermal conductivity $\lambda_D$ (ELOT EN 16025-1) | 0,067W/m <sup>2</sup> K | ELOT EN 12667 | Average thermal conductivity $\lambda_{mean}$ (ELOT EN 16025-1) | 0,064W/m <sup>2</sup> K | ELOT EN 12667 | Compression strength at <b>N/mm<sup>2</sup></b> | 0,55MPa | ELOT EN 722 | Compression strength at <b>kPa</b> | 550kPa | ELOT EN 722 | Αντοχή κάμψης σε <b>MPa</b> | 0,33MPa | ELOT EN 739 | Average compressive strength at 10% deformation sample of 5cm | 289kPa | ELOT EN 826 | Average compressive strength at 10% deformation sample of 30cm | 382kPa | ELOT EN 826 | Reaction to fire | A2-s1, d0 | ELOT EN 13501-1 | Water vapour permeability, $\mu$ | 5-20 | ELOT EN 12086 | EPS granulometry – Amount of dust | PS5(N) - D0 | ELOT EN 933-1 | Ειδική θερμοχωρητικότητα | 1000J/kgK | - | Συρρίκνωση | 0,427mm/m | - | Moisture resistance | Άφθαρτο | - | Residual moisture after 28 days | <2% (πάχος 5 cm σε απορροφητική επιφάνεια) |  |
| Dry density   | 200Kg/m <sup>3</sup>   | ELOT EN 1097-3  |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Bound EPS density   | 225Kg/m <sup>3</sup>   | ELOT EN 1602    |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Thermal conductivity $\lambda_D$ (ELOT EN 16025-1)              | 0,067W/m <sup>2</sup> K  | ELOT EN 12667   |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Average thermal conductivity $\lambda_{mean}$ (ELOT EN 16025-1) | 0,064W/m <sup>2</sup> K  | ELOT EN 12667   |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Compression strength at <b>N/mm<sup>2</sup></b>                 | 0,55MPa  | ELOT EN 722     |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Compression strength at <b>kPa</b>                              | 550kPa   | ELOT EN 722     |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Αντοχή κάμψης σε <b>MPa</b>                                     | 0,33MPa  | ELOT EN 739     |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Average compressive strength at 10% deformation sample of 5cm   | 289kPa   | ELOT EN 826     |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Average compressive strength at 10% deformation sample of 30cm  | 382kPa   | ELOT EN 826     |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Reaction to fire  | A2-s1, d0  | ELOT EN 13501-1 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Water vapour permeability, $\mu$                                | 5-20   | ELOT EN 12086   |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| EPS granulometry – Amount of dust                               | PS5(N) - D0  | ELOT EN 933-1   |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Ειδική θερμοχωρητικότητα  | 1000J/kgK  | -               |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Συρρίκνωση  | 0,427mm/m  | -               |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Moisture resistance   | Άφθαρτο  | -               |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |
| Residual moisture after 28 days                                 | <2% (πάχος 5 cm σε απορροφητική επιφάνεια)   |                 |                      |                |                   |                      |              |  |                         |               |   |                         |               |   |         |             |                                    |        |             |                             |         |             |   |        |             |  |        |             |                  |           |                 |                                  |      |               |                                   |             |               |                          |           |   |            |           |   |                     |         |   |                                 |  |  |



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## AFTER THE APPLICATION OF POLIPLUS BLU

### Roofs and terraces with small workability 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.

### Roofs and terraces with high workability 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.

### 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. For direct application of ceramic tiles, use POLIPLUS FEIN or POLIPLUS XXLIGHT.

## 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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