WHERE TO USE
Mapetherm Adhesive for EPS is used for outdoor and indoor bonding and skim coating when applying thermal insulation panels (made of expanded and extruded polystyrene foam – EPS and XPS, mineral wool, etc.) onto cement- or lime-cement-based renders, concrete, ceramic or concrete bricks.

Some application examples
Installation and skim coating of thermal insulation panels and external insulation systems onto:
• cement- or lime-cement-based renders;
• concrete;
• concrete and ceramic bricks.
It is also suitable for Installation and skim coating of systems for:
• insulation of radiator niches;
• insulation of loft areas;
• insulation of double floors;
• interior insulation of above-ground rooms;
• interior insulation of retaining walls in basements;
• interior insulation of loft areas;
• exterior insulation of ventilated facades.

TECHNICAL CHARACTERISTICS
Mapetherm Adhesive for EPS is grey powder, composed of cement, fine-grained sand, synthetic resins and special additives formulated in MAPEI’s Research and Development Laboratories. When mixed with water the resulting mortar has the following characteristics:
• medium viscosity and hence, good workability;
• very good thixotropic properties: Mapetherm Adhesive for EPS can be applied on vertical surfaces without sagging or slipping of the panels;
• excellent adhesion to all substrate materials, normally used in construction sector;
• cures without shrinking.

WARNING
• Do not use Mapetherm Adhesive for EPS for bonding of insulation panels onto metal surfaces or substrates, subjected to considerable movement (wood, fiber-cement, etc.).
• Do not use, if the panels have smooth surface; this could compromise the good adhesion: polyurethane foam or mineral.
fibres with surface cover of kraft-paper, fiberglass mesh, extruded polystyrene with smooth surface, high-density pressed polystyrene foam, etc. may need sanding and de-dusting prior to application.  
• Do not install thermal insulation panels onto compromised and disintegrated substrates.  

METHOD OF APPLICATION  
Substrate preparation  
The substrate must be sound, smooth and free from any dust, crumbling sections, grease, oils, adhesive, etc.  
Gypsum substrates (hand-applied or machine sprayed plaster, pre-manufactured panels, etc.) must be completely dry and treated with primers such as Primer G, Mapeprim SP or Mapeprim 1K before installation of the insulation panels using Mapetherm Adhesive for EPS.  
To level out large uneven sections on cement-based surfaces we recommend using Nivoplan or Planitop Fast 330.  
Preparation of the mix  
Mapetherm Adhesive for EPS is poured into a container with 15-17% (by weight) of clean water, to obtain an adhesive / 17%-19% (by weight) of clean water, to obtain thinning mortar (around 3,75/4,25 litres of water for adhesive / 4,25/4,75 litres of water for thinning mortar per 25 kg bag of the product), while continuously stirring.  
The mixture is stirred using a low-speed mixer, in order to prevent any entrainment of air into the mixture, until obtaining of homogenous, cream-like mixture free of lumps.  
The mixture is then left for 5 minutes and re-stirred for a short while before use.  
The obtained mixture remains workable for around 3 hours.  

Application of the mix  
Application as an adhesive  
Mapetherm Adhesive for EPS is applied directly onto the entire surface of the back of the panels using notched trowel or in several spots using plaster trowel. Large panels are installed by applying the adhesive onto the entire back surface.  
Small panels can be installed using the spot-bonding method and applying strips of adhesive alongside the edges of the panel.  
After installation, please, observe the instructions, provided by the manufacturer of the panels.  
After installation apply suitable pressure on the panels in order to ensure better adhesion to the substrate and verify the evenness using a spirit-level.  

Application as a skim coating on top of the insulation panels on the walls  
At least 24 hours after installation of the panels, apply the Mapetherm Adhesive for EPS mortar and install Mapenet 150.  
The fiberglass mesh, which is alkali-resistant is pressed into the freshly applied coat of the mixture using a smooth edged trowel and the ends are to be overlapped by at least 10 cm. If the above described procedure is followed, you will obtain a dense surface coat.  
The finish coating can only be applied once the skim coat is fully cured.  

Cleaning  
Tools and containers can be cleaned with water while Mapetherm Adhesive for EPS is still fresh.  

CONSUMPTION  
For installation of panels:  
– spot-bonding: 2-4 kg/m²  
– bonding of insulation panels with uniform coat applied on the back of the panel using notched trowel N*: 10: 4-6 kg/m²  
– for skim-coating: 1,4-1,6 kg/m² per mm of thickness (recommended thickness: 4 mm in 2 coats)  

PACKAGING  
Mapetherm Adhesive for EPS is available in bags of 25 kg.  

STORAGE  
12 months in its original packing. The product meets the requirements of Annex XVII to Regulation (EU) No 1907/2006 (REACH)*, item 47.  
*REACH – Registration, Evaluation, Authorization of Chemicals)  

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION  
Mapetherm Adhesive for EPS contains cement, which when in contact with sweat or other bodily fluids can cause allergic reaction in those predisposed.  
The product can cause harm to the eyes. We recommend using protection gloves and mask and taking the usual precautions when working with chemicals.  
In case the product comes in contact with eyes or skin, rinse immediately with plentiful of water and seek medical attention.  
Further and more complete information for the safe use of the product can be found in the latest version of the Material Safety Data Sheet.
### TECHNICAL DATA (typical values)

#### PRODUCT IDENTITY

<table>
<thead>
<tr>
<th>Consistency:</th>
<th>powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>grey</td>
</tr>
<tr>
<td>Apparent bulk density (kg/m³):</td>
<td>1.400</td>
</tr>
<tr>
<td>Dry solids contents (%):</td>
<td>100</td>
</tr>
</tbody>
</table>

#### APPLICATION DATA (at +23°C - 50% R.H.)

| Mixing ratio:                        | 100 parts of Mapetherm Adhesive for EPS  
|                                     | 15-17% of water for preparation of adhesive  
|                                     | (3.75-4.25 litres of water per 25 kg dry powder)  
|                                     | 17%-19% of water for preparation of skimming  
|                                     | mortar  
|                                     | (4.25-4.75 litres of water per 25 kg dry powder) |

| Consistency of the mix:                | Thick paste |
| Bulk density of the mix (g/cm³):       | 1.6         |
| Application temperature:               | from +5°C to +40°C |
| pH of the mix:                         | 13          |
| Pot life:                              | 3 hours     |
| Open time:                             | 20 min      |
| Adjustment time:                       | 20 min      |
| Waiting time before finishing treatment: | 7 days     |

#### FINAL PERFORMANCE

<table>
<thead>
<tr>
<th>Adhesion strength according to EN 12004 (N/mm²):</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>– after 24 hours:</td>
<td>0.5</td>
</tr>
<tr>
<td>– initial bond (after 28 days):</td>
<td>1.2</td>
</tr>
<tr>
<td>– adhesion after thermal effects(+70°C):</td>
<td>0.7</td>
</tr>
<tr>
<td>– after immersion in water:</td>
<td>0.7</td>
</tr>
</tbody>
</table>

| Flexural strength:                                       | 4.5  |
| after 28 days (N/mm²):                                   |      |

| Compressive strength:                                     | 9.0  |
| after 28 days (N/mm²):                                    |      |

| Service temperature:                                      | from -30°C to +90°C |

| Adhesion to Styrofoam Dow (N/mm²):                        | 0.17 |
| - in dry conditions:                                      |      |
| - 2 days after immersion + 2 hours at +23°C and 50% R.H.: | 0.15 |
| - 2 days after immersion + 7 days at +23°C and 50% R.H.:  | 0.17 |
WARNING

All data and recommendations contained in this technical data sheet correspond to the company’s knowledge and extensive experience and must be considered under all circumstances, only as indicative and subject to confirmation upon long-term, practical application. Therefore, anybody who is going to use this product must verify in advance that it is suitable for the intended application.

In all cases, the user shall bear the full responsibility for the consequences resulting from its use. The latest version of the Technical Data Sheet is available from our website www.mapei.com (GB) A.G. BETA.

Any reproduction of texts, photos and illustrations published here is prohibited and subject to prosecution.