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Kalekim – Dow – Mardav Cooperation

Kalekim A.S., established in 1973 by Dr. Ibrahim Bodur, who is the founder of Kale Group of Companies, continues its operations that were first started by manufacturing ceramic adhesives and joint sealants, by producing any and all kinds of construction chemicals that are one of the most important requirements of construction industry.

Kalekim with a total of 6 facilities located in Istanbul, Isparta, Mersin, Yozgat Central Anatolia and Moscow Serpukhov, manufactures ceramic adhesives, joint sealants, water and thermal insulation materials, mastic, foams, surface preparation materials, ceramic cleaning and maintenance materials, internal and external surface paints and decorative external surface plasters.

Kalekim, which has the capacity to manufacture in total 700 thousand tons of construction chemicals at its four chemical manufacturing plants in the country and at its Russian facilities, also can manufacture 60 thousand tons of paint and 40 thousand tons of plaster at Kale Paint and Plaster Facilities located in Istanbul.

Dow Chemical is a worldwide company, which continues to grow with its 52,000 employees and USD 60 billion Turnover. The STYROFOAM™ Products that are being manufactured at Gebze Dilovası Facilities since the year 1995 continue to maintain their leading position in the insulation sector. Dow Chemical; continues to work on its patented new products, oriented to final users in the field of thermal and sound insulation in the construction sector.

Mardav Yalitim A.S. is a sales and marketing firm that operates under the partnership of Ravago S.A. and Dow Chemical, the innovator of XPS materials and as such is a leader in its field.

Thanks to its specialized dealer network and technical, sales and marketing teams, Mardav is one of the leading and pioneering firms in the insulation sector. Furthermore, it targets to become the leading solution partner in the Turkish Construction sector by ensuring customer satisfaction by means of the superior quality of products and solutions it offers; particularly in the fields of insulation, decoration, roofs, external surfaces and infrastructure.
Blue’Safe Mavi Kale External Thermal Insulation Composite Systems

In the year 2004, for purposes of providing services in thermal insulation sector, Dow Chemical, innovator of XPS materials and a market leader in the world, joined forces with Mardav A.S., a specialist in thermal insulation systems, and Kalekim A.S., specialized in manufacturing of construction chemicals and surface coating materials. The subject matter cooperative effort is launched as “Blue’Safe Mavi Kale External Thermal Insulation Systems”.

Reliable
This system is Certified as per ETAG 004 (External Thermal Insulation Composite Systems Principles – Aging and Performance Tests), as published by the European Organization for technical Approvals (EOTA).

Economic
It is an investment that can be recovered in a very short period of time as it reduces the heating and cooling costs. The External Thermal Insulation system prevents humidity, mould, cracks and peeling resulting from heat transfers and thermal tension and as such reduces maintenance and repair costs.

Environmentalist
It ensures energy savings and consequently reduces gas, soot and dust emissions thus preventing contamination of environment.

Comfortable
A healthy and comfortable life style is only possible in environments in possession of suitable thermal and humidity conditions. The humid, mouldy areas and cracks in buildings can be prevented only by application of the appropriate thermal insulation solutions. According to the European Union Standards, the thermal comfort is defined as the maximum difference of 2-3°C between the internal temperature of the building and the warmth of the internal wall surface. The conditions of comfort can only be achieved by means of project compliant thermal insulation.

Aesthetic
The buildings take on a new appearance thanks to the decorative solutions offered for external surfaces. Inspired from anything that has the source of life from nature to fashion and culture, the style and pure beauty is reflected on external surfaces.

Warranty
Mavi Kale ETICS offers ten year warranty for the system including same special final coatings. Warranty period varies according to type of final coatings.

*BLUE’SAFE MAVI KALE External Surface Application Systems are ETAG 004 Certified
Thermal Insulation in Buildings

Thermal insulation in buildings provides savings from the energy used for heating cooling and consequently by reducing the gas, soot and dust emissions and achieves direct gains for the environment. Wall, thermal bridges, floor and ceiling surface temperatures have an impact on the internal comfort of the building as well as the structural frame. Proper insulation contributes to the quality of life and helps protect the fibre of the building. A healthy and comfortable life style is only possible in environments in possession of suitable thermal and humidity conditions. The condensation on thermal bridges or humid, mouldy areas and cracks in buildings can be prevented only by application of the appropriate thermal insulation solutions.

In implementing building insulation, the wide surfaces eligible for heat loss (walls, roof, floors) as well as thermal bridges (ground level, lintel, radiator casings, parapets, reinforced concrete columns, windowsills, bearings between windows, wall outer corners, wall joints) must be treated carefully. Failure to insulate thermal bridges may cause severe heat loss besides leading to the formation of condensation, moulding and cracking.

If a cost benefit analysis is conducted, it can be seen that thermal insulation is an investment that can be recovered in a very short period of time and is beneficial both ecologically and economically. However, the analysis of the physical and technical principles of a construction and using of appropriate and high quality insulation material is important.

Advantages of Shapemate™ Products
— Provide continuous high thermal insulation
— Do not absorb water
— Are resilient against frost-defrost
— Have high compression and bending resistance
— Have optimum resistance to vapour penetration
— Have dimensional consistency
— Light material
— Fast and easy application regardless of the weather conditions
— Visco-elastic/resilient behaviour
— Resistance against rot

To achieve effective thermal insulation in buildings it will be required to insulate;
— Thermal bridges
— Ground level
— Non-bearing face wall as a whole and in continuous form by using Shapemate IB™.
In this sensitive application, the Shapemate IB™ insulation panels from Styrofoam™ Series, which has a proven track record and experience thanks to the below indicated favourable properties, are used due to the suitable solutions they offer:

- Is not affected from humidity due to closed cell structure
- Has a dimensionally consistent structure
- Resistant to mechanical affects due to its highly resilient and visco-elastic material structure
- Achieves good adhesion with cement based and solvent free adhesives and plasters due to its rough and grooved surface structure.

The points to be careful about in designing the project

The thermal insulation achieved externally is the most appropriate application in terms of the physics of the building. In this application, thermal bridges are not allowed and the construction materials making up the structural frame are left on the warm side. The thermal insulation material used on the external surface must be special, resilient against external factors, durable, and able to provide an effective solution.

Non-insulated wall section
- Wall – Beam – Ceiling joint forms a thermal bridge
- Wall – Beam – Ceiling joint has the risk of condensation formation
- There is corrosion risk at the wall section, beams and columns, on the cold side and reinforced concrete.
- When the heat source is closed, heat loss is fast.

Wall section insulated from outside
- Thermal bridges are completely eliminated
- The structure’s frame is protected against thermal tensioning
- The entire building is on the warm side and there is no risk of corrosion
- The conditions of comfort are available.
Warranty Service
BLUE’SAFE MAVİ KALE:
10-year product warranty in external thermal insulation systems

Blue’Safe Mavi Kale, the leading brand in thermal insulation sector, is now offering a 10-year product warranty for the whole package system including Shape-Mate IB XPS panel, Mavi Kale Kalefiks, Kaleplast, Mavi Kale Mesh and corner profile and Mavi Kale plugs with certain final coatings branded as Kale

10-year product warranty
Blue’Safe Mavi Kale package system products with finish coating are covered under a 10-year product warranty.

Kale External Surface Paints and Decorative Plasters included within the scope of the 10-year warranty:
— Dekor
— Dekor Plus
— Grenart
— Minart & Performa+
— Silikonatex
— Silastar

Kalekim ID:
Is a patented raw material developed by Kalekim A.S. to be able to distinguish its products after application. Kalefiks and Kaleplast are the first and only Kalekim-ID products in Turkey.
Blue’Safe Mavi Kale System Components
Blue’Safe Mavi Kale System Components

The components making up the Blue’Safe Mavi Kale Package System are as follows:

1. System accessories that are manufactured under Blue’Safe Mavi Kale assurance
2. Kalekim-ID containing Blue’Safe Mavi Kale Adhesive mixture Kalefiks
3. Blue’Safe Mavi Kale wall plugs
4. Shapemate IB™ thermal insulation panels with CE certification and perfect thermal conductivity values.
6. Kalekim-ID containing Blue’Safe Mavi Kale plaster mixture Kaleplast
7. Blue’Safe Mavi Kale glass fiber mesh (160 gr/m²)
8. Kalekim-ID containing Blue’Safe Mavi Kale plaster mixture Kaleplast
9. Kale Primer
10. Finish coating and painting solutions manufactured under assurance from Kale Paints and Plasters.
**Shapemate IB™ Thermal Insulation Panels**

<table>
<thead>
<tr>
<th>Technical Specifications</th>
<th>(23 oC and 50% Relative Humidity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface specifications</td>
<td>Both sides rough and adhesion face is grooved</td>
</tr>
<tr>
<td>Side profile</td>
<td>Overlaid</td>
</tr>
<tr>
<td>Standard</td>
<td>TS 11989 EN 13164</td>
</tr>
<tr>
<td>Thermal conductivity value</td>
<td>0,033 W/mK</td>
</tr>
<tr>
<td>Fire resistance</td>
<td>According to EN 13501-1 Class E</td>
</tr>
<tr>
<td>Density</td>
<td>Min. 30 kg/m³</td>
</tr>
<tr>
<td>Compression resistance (min.) (10% deformation)</td>
<td>CS (10/Y) 200 kPa</td>
</tr>
<tr>
<td>Tensile strength perpendicular to the surface</td>
<td>TR200</td>
</tr>
<tr>
<td>Long term water absorption under total immersion</td>
<td>WL (T) 1,5</td>
</tr>
<tr>
<td>Vapour diffusion resistance coefficient (μ)</td>
<td>80</td>
</tr>
<tr>
<td>Linear elongation coefficient</td>
<td>0,07 mm/mK</td>
</tr>
<tr>
<td>Capillarity</td>
<td>None</td>
</tr>
</tbody>
</table>

**Dimensions**

| Length | 1250 mm |
| Width  | 600 mm  |
| Thickness | 30, 40, 50, 60 mm |

The rough but non-grooved surface achieves a homogeneous and strong adhesive contact of even thickness with the plaster on the entire surface.

The rough and grooved surface on the other hand will provide contact of strong adhesion as the adhesive mixture globs penetrate the surface and the channels.
Blue’Safe Mavi Kale System Components

**KALEFİKS thermal insulation panel adhesive mixture**

**Description**
Cementitious thermal insulation panel adhesive with excellent bonding strength.

**Application**
— Substrate must be sound free from oil, grease and sufficiently dry. Use TamirArt in case of uneven substrates to get a sound and flat surface.
— Pour 25 kg of powder component into 5,5-6,5 lt of clean water slowly and mix to obtain a homogeneous paste free form lumps. Allow to stand for 5-10 minutes to mature. After remixing, the paste is ready for application.
— If there are some level differences on the surface apply the mortar to the back side of the panel continuously on all sides, and apply by spotting on the center of the panel and then stick onto the wall by pressure.
— If the surface is smooth the adhesive can be applied back side of the panel with combing method.
— During installation check the level of the panels with a gauge or level.
— Consume the prepared mortar within 3 hours, do not attempt to re-use it by adding water or dry mortar powder.
— Carry out the mechanical fixing operation minimum 24 hours later depending on the climatic conditions

**Safety Advices**
— Since contains cement, irritating to eyes, respiratory system and skin. For further information refer to safety data sheet.

**Storage**
— Store in a dry medium. Do not stack more than 10 bags on top of each other.

**Packaging**
— 25 kg. multiply paper bags.

* Kalekim ID: Is a patented raw material developed by Kalekim A.S. to be able to distinguish its products after application. Kalefikş and Kaleplast are the first and only Kalekim-ID products in Turkey.

### Technical Properties
(at 23°C and 50% RH)

<table>
<thead>
<tr>
<th><strong>General Data:</strong></th>
<th>Grey Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Grey Powder</td>
</tr>
<tr>
<td>Application Tool</td>
<td>Notched Trowel - Trowel</td>
</tr>
<tr>
<td>Shelf Life</td>
<td>12 months when stored in the original sealed packing in dry place</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Application Data:</strong></th>
<th>(+5°C) - (+35°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Temperature Range</td>
<td>25 kg. powder / 5,5 – 6,5 lt. water</td>
</tr>
<tr>
<td>Pot Life</td>
<td>3 hours</td>
</tr>
<tr>
<td>Open Time (EN 1346)</td>
<td>After 15 minutes ≥ 0.5 N/mm²</td>
</tr>
<tr>
<td>Consumption</td>
<td>4 - 5 kg./m²</td>
</tr>
</tbody>
</table>

| **Performance Data:** |
|-----------------------|------------------|
| Adhesion to the Thermal Insulation Board | ≥0.08 N/mm² |
| Water Absorption after 30 min./4 hours | ≤5 gr./≤10 gr |
| Flexural Strength (TS EN 196-1) | ≥1 N/mm² |
| Compressive Strength (TS EN 196-1) | ≥7 N/mm² |
| Tensile Adhesion Strength (EN1348) |
| - initial               | ≥0.5 N/mm² |
| - after immersion in water | ≥0.5 N/mm² |
| - after heat exposure   | ≥0.5 N/mm² |
| - after freeze/thaw cycles | ≥0.5 N/mm² |

* Standard Package Products
**KALEPLAST thermal insulation panel plaster mixture**

**Description**
Cementitious, flexible thermal insulation panel plaster with high bonding strength, excellent breathing capability, high impact and water resistance and resistance to all climatic conditions.

**Application**
- The surfaces of thermal insulation panels should be clean and dust free.
- Pour 25 kg. of powder component into 6 – 6.5 lt. of clean water slowly and mix to obtain a homogeneous paste free from lumps. Allow to stand for 5-10 minutes to mature. After remixing, the paste is ready for application.
- Apply the plaster onto the thermal insulation panels by steel trowel. Spread the plaster onto the panels with a notch sized 4x4 mm in order to form a homogeneous thickness on the panel. Fix the mesh onto the plaster gently with steel trowel before it dries.
- Make overlaps for about 10 cm at the joints of the plaster mesh.
- The second plaster layer is applied after the first layer loses the water slightly.
- After application of second layer, smooth with steel trowel before it dries.
- Consume the prepared mortar within 3 hours. Dispose of the mortar exceeding the pot life. Apply final layer mineral or acrylic based decorative coatings of Kaleterasit and Kalecolor.

**Safety Advices**
- Since contains cement, irritating to eyes, respiratory system and skin. For further information refer to safety data sheet.

**Storage**
- Store in a dry medium. Do not stack more than 10 bags on top of each other.

**Packaging**
- 25 kg. multiple paper bags.

* Kalekim ID: Is a patented raw material developed by Kalekim A.S. to be able to distinguish its products after application. Kalefiks and Kaleplast are the first and only Kalekim-ID products in Turkey.

### Technical Properties

<table>
<thead>
<tr>
<th>General Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
</tr>
<tr>
<td><strong>Application Tool</strong></td>
</tr>
<tr>
<td><strong>Shelf Life</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Application Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mixing Ratio</strong></td>
</tr>
<tr>
<td><strong>Pot Life</strong></td>
</tr>
<tr>
<td><strong>Application Temperature Range</strong></td>
</tr>
<tr>
<td><strong>Open Time</strong></td>
</tr>
<tr>
<td><strong>Consumption</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Performance Data:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adhesion to the Thermal Insulation Board</strong></td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
</tr>
<tr>
<td><strong>Water Absorption after 30 min./4 hours (EN 12808-5)</strong></td>
</tr>
<tr>
<td><strong>Flexural Strength (TS EN 196-1)</strong></td>
</tr>
<tr>
<td><strong>Compressive Strength (TS EN 196-1)</strong></td>
</tr>
<tr>
<td><strong>Water-Vapour Porosity (TS EN 7847)</strong></td>
</tr>
<tr>
<td><strong>Adhesion Strength (TS6433)</strong></td>
</tr>
</tbody>
</table>

* Standard Package Products
Blue’Safe Mavi Kale System Components

Mavi Kale Glass Fiber Mesh*
Fibre glass material whose fibre layers are impregnated against alkaline and chemicals.

- Density: 160 gr/m²
- Mesh interval: 4x4 mm
- Tension resistance: Min. 1900 N/5 cm (in 5% NaOH Solution test)
- Tension Resistance: Min 1250 N/5 cm (in the test)

Mavi Kale Windowsill profile
This is the aluminium profile used in place of the dysfunctional old windowsill in application of external thermal insulation on erected buildings.

Mavi Kale Corner Profile
This is a component used on building corners as manufactured from STYROFOAM™ Panels by means of a special cut for purposes of achieving a smooth and cross finish at building corners.

Mavi Kale Corner Profile With Mesh K-PVC*
This is a mesh reinforced PVC Profile that is used to add strength to the weaker points (edges, corners, etc.) that are most easily affected from external factors.

Mavi Kale Window Central Profile
This is a central element that is manufactured from STYROFOAM™ Panels by means of a special cut, to create a smooth and seemly finish at window centres.

Mavi Kale Corner Profile K-AL
This is an aluminium Profile that is used to add strength to the weaker points (edges, corners, etc.) that are most easily affected from external factors.

* Standard Package Products
Mavi Kale Support Profile, Profile-S
Besides being a reference plane, this is an aluminium profile that protects the system from external factors making their effect known from the bottom (water, etc.)

Mavi Kale Support Profile Wedge
This is a component made of plastic and used to correct any curvatures on the surface and fastening of support profiles.

Mavi Kale Drip Stone Profile D-AL
This is an aluminium profile that is used to protect the facade from water where protrusions are concerned.

Mavi Kale Mesh Reinforced Drip StoneProfile D-PVC
This is a mesh reinforced PVC profile that is used to protect the facade from water where protrusions are concerned.

Mavi Kale Joint Profile
This is a profile that is used to form horizontal and vertical joints on the facade.

Mavi Kale Dilatation Profile
This profile is used for purposes of closing the dilatation gap and ensuring the functioning of the external thermal insulation system at dilatation points.
Blue’Safe Mavi Kale System Components

**Mavi Kale Counterbore**
This is an apparatus that is used for purposes of placing the plug head fully on SHAPEMATE IB™ panels.

**Gas Concrete Wall Plug**
This is a mechanical connection element that is used to fasten the SHAPEMATE IB™ panels on reinforced concrete and hard surfaces.

**Steel Screwed Wall Plug**
This is a mechanical connection element that is used to fasten SHAPEMATE IB™ panels on the facade.

**Screwed Wooden OSB Wall Plug**
This is a mechanical connection element that is used to fasten SHAPEMATE IB™ panels on and wooden surfaces.

**Gas Concrete Wall Plug**
This is a mechanical connection element that is used to fasten SHAPEMATE IB™ panels on surfaces such as Gas Concrete.

**Polyurethane Based**
Thermal insulation panel adhesive that expands in a controlled manner, and cured by humidity.

- Application Tool: Gun
- Curing Period: 30-120 minutes
- Appearance: Yellow coloured polyurethane foam
- Consumption: 150-175 ml/m²
- Packaging: 750 ml/tube

* Standard Package Products
Kale Exterior Paints and Surface Preparation Materials
Kale Exterior Paints and Surface Preparation Materials

Kale DEKOR
Line Textured Ready Mixed Plaster

Description
Polymer emulsion based, line textured, trowel applied, coarse, ready mixed interior and exterior plaster.

Properties
— High water vapour permeability allowing building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— Alkali resistant.
— Horizontal, vertical or circular line textures can be obtained by movements of trowel.
— Water resistant.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

Kale DEKOR PLUS
Silicone Enhanced, Elastic, Line Textured, Ready Mixed Plaster

Description
Acrylic emulsion based, elastic, line textured, trowel applied, silicone enhanced, coarse, ready mixed interior and exterior plaster.

Properties
— Elastic; covers the hair cracks on the surface and resists to movements of the building.
— Water repellent; provides rain to slide away without wetting the wall.
— High water vapour permeability allowing the building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— Alkali resistant.
— Horizontal, vertical or circular line textures can be obtained by movements of trowel.
— Water resistant
— Solvent free and practically odourless,
— Water thinnable and ecologically compatible

Kale GRENArt
Elastic, Rough Patterned, Premixed, Coloured Plaster with Silicon

Description
Acrylic emulsion based, silicone enhanced, elastic, trowel applied, coarse, ready mixed exterior and interior plaster with sprayed texture.

Properties
— Elastic; covers the hair cracks on the surface and resists to movements of the building.
— Water repellent; provides rain to slide away without wetting the wall.
— High water vapour permeability allowing the building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— Water resistant.
— Alkali resistant.
— Solvent free and practically odourless,
— Water thinnable and ecologically compatible.
Blue Safe Maxi Kale — Kale Exterior Paints and Surface Preparation Materials

25 kg Multi-ply Paper Bags

Kale GRENART MICRO
Silicone Enhanced, Elastic, Ready Mixed Plaster

Description
Acrylic emulsion based, sprayed texture, trowel applied, fine, ready mixed exterior and interior plaster.

Properties
— Elastic; covers the hair cracks on the surface and resists to movements of the building.
— Fiber enhanced; easily applicable.
— Water repellent; provides rain to slide away without wetting the wall.
— High water vapour permeability allowing the building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— Water resistant.
— Alkali resistant.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

Application Tools
Steel and plastic trowel
Consumption 2.2-2.8 kg/m²

Complies with TS 7847

Kale MINART
Mineral Based Decorative Exterior Coating

Description
Cement based decorative exterior coating material.

Properties
— Specially manufactured for ETICS and resilient to extreme climatic conditions with its superior performance.
— Forms a natural and decorative textured surface with its characteristic filling.
— High water vapour permeability allowing the building to breathe.

Application Tools
Steel and plastic trowel
Consumption 2.4-2.9 kg/m²

Kale GRENART MIDI
Silicone and Fiber Enhanced, Elastic, Ready Mixed Plaster

Description
Acrylic emulsion based, silicone and fiber enhanced, elastic, trowel applied, coarse, ready mixed exterior and interior plaster with sprayed texture.

Properties
— Elastic; covers the hair cracks on the surface and resists to movements of the building.
— Fiber enhanced; easily applicable.
— Water repellent; provides rain to slide away without wetting the wall.
— High water vapour permeability allowing the building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— Water resistant.
— Alkali resistant.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

Application Tools
Steel and plastic trowel
Consumption 2.4-2.9 kg/m²

Complies with TS 7847
**Kale Exterior Paints and Surface Preparation Materials**

**Kale RENOTEX**
Roller Applied Ready Mixed Plaster

**Description**
Acrylic emulsion based, silicone enhanced, roller applied, fine, exterior and interior ready mixed plaster that can be applied in different thicknesses and textures.

**Properties**
- High water vapour permeability allowing the building to breathe.
- Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
- Water resistant
- Alkali resistant.
- Various decorative textures obtained by the use of different thinning ratios and different rollers.
- Solvent free and practically odourless.
- Water thinnable and ecologically compatible.

**Application Tools**
Roller or spray gun

<table>
<thead>
<tr>
<th>Consumption</th>
<th>Flat Textures:</th>
<th>Fine Textures:</th>
<th>Coarse Textures:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,0-1,2 kg/m²</td>
<td>1,2-1,7 kg/m²</td>
<td>1,7-2,0 kg/m²</td>
</tr>
</tbody>
</table>


**Kale RENOTEX PLUS**
Silicone Enhanced, Roller Applied Ready Mixed Plaster

**Description**
Acrylic emulsion based, roller applied, fine, silicone enhanced, exterior and interior ready mixed plaster that can be applied in different thicknesses and textures by the use of a trowel or roller.

**Properties**
- Water repellent; causes rain to slide away without wetting the wall.
- High water vapour permeability allowing the building to breathe.
- Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
- Alkali resistant.
- Various decorative textures obtained by the use of different thinning ratios and different rollers.
- Solvent free and practically odourless.
- Water thinnable and ecologically compatible.

**Application Tools**
Roller or spray gun

<table>
<thead>
<tr>
<th>Consumption</th>
<th>Flat Textures:</th>
<th>Fine Textures:</th>
<th>Coarse Textures:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,0-1,2 kg/m²</td>
<td>1,2-1,7 kg/m²</td>
<td>1,7-2,0 kg/m²</td>
</tr>
</tbody>
</table>


**Kale SILIKONATEX**
Silicone Enhanced, Elastic, Water Based Textured Coating

**Description**
Acrylic emulsion based, water repellent, elastic, non cracking, silicone enhanced, covering the surface defects with its texture and thickness, long lasting, exterior and interior textured coating.

**Properties**
- Elastic; covers hair cracks on the surface and resists to movements of the building and keeps its elasticity in low temperatures.
- Water repellent; provides rain to slide away without wetting the wall.
- High water vapour permeability, allowing the building to breathe.
- Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
- Covers the surface defects with its texture and thickness.
- Alkali resistant.
- Superior hiding power.
- Solvent free and practically odourless.
- Water thinnable and ecologically compatible.

**Application Tools**
Roller or spray gun

<table>
<thead>
<tr>
<th>Consumption</th>
<th>0,400-0,660 l/m² (700-1000 gr/m²)</th>
</tr>
</thead>
</table>
**Kale SİLİKONA GRENLİ**
Silicone Enhanced, Water Based Textured Coating

**Description**
Acrylic emulsion based, silicone enhanced, water repellent, exterior and interior textured wall coating capable of covering the surface defects with its thickness and texture.

**Properties**
— Water repellent; provides rain to slide away without wetting the wall
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— High water vapour permeability, allowing the building to breathe.
— Alkali resistant.
— Covers the surface defects by its thickness and texture.
— Superior hiding power.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

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**Kale PROTEKTA**
Ceramic Micro Spheres and Silicone Enhanced, Mildew and Algae Resistant, Water Based, Exterior Wall Paint

**Description**
Ceramic micro spheres and silicone enhanced, mildew and algae resistant, water impermeable, acrylic emulsion based, long lasting, matt, exterior wall paint.

**Properties**
— Contributes to heat insulation with its ceramic micro spheres.
— Water repellent; provides rain to slide away without wetting the wall.
— Resistant against mildew and algae growth on walls.
— Water resistant.
— Superior hiding power
— High water vapour permeability, allowing the building to breathe.
— Long lasting, resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— Alkali resistant.
— Water thinnable and ecologically compatible.
— Solvent free and practically odourless.

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**Kale PERFORMA+**
Extra Elastic, Water Based, Exterior Wall Paint

**Description**
Elastic acrylic emulsion based, extra elastic, long lasting, water impermeable, exterior matt wall paint.

**Properties**
— Extra elastic; covers the hair cracks on the surface and resists to movements of the building and keeps its elasticity in low temperatures.
— Waterproof; gives perfect protection against rain therefore prevents salt crystallization, frost cracks, algae and fungus formation, chemical corrosion.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— High water vapour permeability, allowing buildings to breathe.
— Superior hiding power.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

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**Application Tools**
- **Kale SİLİKONA GRENLİ**
  - Roller or spray gun
  - Consumption: 700 - 1000 gr/m²

- **Kale PROTEKTA**
  - Brush, roller or spray gun
  - Consumption: 0,130 lt/m²

- **Kale PERFORMA+**
  - Brush, roller or spray gun
  - Consumption: 0,130 lt/m²
Kale Exterior Paints and Surface Preparation Materials

Kale SİLİKONA
Silicone Enhanced, Water Based Exterior Wall Paint

Description
Acrylic emulsion based, water impermeable, long lasting, silicone enhanced exterior wall paint.

Properties
— Water repellent; provides rain to slide away without wetting the wall.
— High water vapour permeability, allowing the building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties without cracking, blistering or fading.
— Alkali resistant.
— Superior hiding power.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

Kale JOKER PLUS EXT
Silicone Enhanced, Water Based Exterior Wall Paint

Description
Acrylic emulsion based, silicone enhanced, water repellent, long lasting exterior wall paint.

Properties
— Water repellent; provides rain to slide away without wetting the wall.
— High water vapour permeability, allowing building to breathe.
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties without cracking, blistering or fading.
— Alkali resistant.
— Superior hiding power.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

Kale GRENA
Water Based Exterior Wall Paint

Description
Acrylic emulsion based, long lasting, matt, exterior wall paint.

Properties
— Long lasting; resists to UV rays, rain, heat and frost, thus retains its original properties for years without cracking, blistering and fading.
— High water vapour permeability, allowing building to breathe.
— Alkali resistant.
— Water resistant.
— Superior hiding power.
— Solvent free and practically odourless.
— Water thinnable and ecologically compatible.

Application Tools
Roller or spray gun
Consumption: 0,130 lt/m²

Application Tools
Brush, roller or spray gun
Consumption: 0,130 lt/m²

Application Tools
Brush, roller or spray gun
Consumption: 0,130 lt/m²
Kale SILASTAR
Silicone Enhanced Primer

Description
Silicone enhanced, acrylic emulsion based, pigmented primer with a high penetration and water proofing power for priming the surfaces on which any type of water based decorative coating will be applied.

Properties
— Silicone content enables deep penetration under the surface reducing water absorption.
— Pigmented; provides hiding.
— Reinforces the substrates, increases the adhesion of surface coating.
— Decreases paint consumption by decreasing the absorbency of the substrate.
— Solvent free and practically odourless,
— Water thinnable and ecologically compatible.

Kale MACUNART
Cement Based, Water Resistant, Fine, Surface Smoothening Putty

Description
Cement based, fine, white, surface smoothening putty formulated for smoothing the uneven concrete and mineral surfaces, filling up the hair cracks and for covering interior and exterior surface defects.

Properties
— Forms very strong, non-dusting and smooth surfaces, thus contributes to the appearance and the resistance of the top coat.
— Resistant to water and to moisture; when dampened, does not soften or does not weaken the adherence of the top coat to the substrate.
— Compared to gypsum panels and gypsum based materials, has higher durability and adherence strength therefore more resistant against cracking.
— Reduces paint consumption by decreasing the absorbency of the surface.
— Having high filling capacity, at most 2 layers will be sufficient to achieve a smooth surface.
— Easy to apply.
— Easy to sand, non-dusting.
— Does not prevent the water vapour permeability of the wall.

Application Tools
Brush, roller or spray gun
Consumption: 0,090 lt/m²

Application Tools
Steel trowel
Consumption: Approximately 0,5-1,0 kg/m² for 1 mm thickness

Complies with TSEK
Complies with TS EN 1504-3
Pre-Application Structural Conditions and in External Surface Thermal Insulation

During the planning stage of external surface thermal insulation, the following must be taken into consideration prior to starting the application:
- Construction method (reinforced concrete, steel, wooden, etc.)
- The adherence strength and structural conditions of the sub-layer
- Mechanical fastening conditions
- Suitable weather conditions for the application

Before starting the application, the horizontal and vertical scaling of all facades of the building must be performed. The surface on which thermal insulation panels are to be installed must be smooth and the curvature of this surface must not be more than 1-2 cm.

In case of a higher curvature value, the sub-layer must be levelled prior to the application by means of a rough plaster. This will ensure better adhesion and wall plug affixation.

Fastening of Thermal Insulation Panels

Prior to installing and plugging of the thermal insulation panels on the sub-layer, care must be taken to ensure that the sub-layer has sufficient adhesive properties. Before starting the application, any coating on the surface that would prevent adhesion must be removed. The most suitable adhesion solution must be preferred for different type of surfaces.

By taking into consideration climate conditions, the application must be performed by providing protection to the external surface, if necessary. To be able to achieve a successful result from thermal insulation, care must be taken to ensure that the external plaster layer is completely dry.
Mechanical Fastening (Plugging) of Thermal Insulation Panels

In fastening of the wall plugs, if rough cast application is not possible on surfaces and walls, which have been erected in materials that may cause problems, then the wall plugs must be affixed on the adhesive mixture on the wall. Following the adhesion, the following status determination and solution must be followed in plugging the panels on the sub-layer. For purposes of reinforcing edge finishes (corners, eaves, etc.) single line wall plug support is provided. In applications with instastick, plugging would not be required for buildings of up to 10 meter height.

![Diagram of mechanical fastening (plugging) of thermal insulation panels]

**Plugging Geometry**

On all Surfaces
6 units / m²

On edge finishes
≤ h 8 m → 6 units / m²
< h 20 m → 8 units / m²
≥ h 20 m → 10 units / m²

**Surfaces**

- Gas Concrete + Rendering
- Horizontal perforated brick + plaster
- Reinforced Concrete
- OSB & Wood

- Mavi Kale Plastic Screwed wall plug/ min. 6cm fastening
- Mavi Kale Plastic Screwed wall plug/ min. 6cm fastening
- Mavi Kale Steel Screw wall plug/plastic screw wall plug min.6cm fastening
- Mavi Kale Steel Screw OSB Wall Plug wooden Surface long fastening
Plastering of Thermal Insulation Panels

In the plastering job to be performed following plugging process the following status determination and solution method must be followed:

- Temperature between 5°C-35°C clear weather
  - First layer of plaster Mavi Kale plaster mixture Kaleplast
  - Correction 3-5 mm notched trowel 2.5 mm homogenous plaster thickness
  - Lightly imbedding of Mavi Kale Mesh
  - When nominal water is discharged
  - The 2nd layer of Mavi Kale plaster mixture Kaleplast is applied
  - Waiting period, 7 days
  - Kale Exterior Paints or Decorative ready & mixed plasters

- Temperature between 5°C-35°C Rainy
  - Scaffolding must be closed and necessary measures must be taken
**Kale Finishing Application**

In the finish coating application to be performed following the application of Mavi Kale Plaster Mix Kaleplast, the following status determination and solution method must be followed:

1. **Kale Finish Coating**
   - **Surface status**
     - Mavi Kale Plaster Mix – Kaleplast
       - 7 day waiting period
         - Kale Silastar
           - Kale Decorative Exterior Plasters
         - Kale Exterior Paints
       - Mavi Kale Plaster Mix – Kaleplast
         - 7 day waiting period
           - Kale Minart
             - Kale Silastar
               - Kale Exterior Paints
Application of Blue’Safe Mavi Kale Thermal Insulation Systems

Placement of Mavi Kale Support Profile, Profile-S

The support profile Mavi Kale Profile-S, which is chosen in dimensions suitable for the panel thickness of the Shapemate IB™ used, is fastened 20 cm beneath the first layer of flooring by using its special plug. In compliance with the curvature of the surface that has been scaled, the gaps between Mavi Kale Profile-S and the surface are supported by means of wedges of different thicknesses. Proper fastening of Mavi Kale Profile-S is important in terms of applying the panels in a balanced and solid way.

Balancing of the support profile with special plastic wedges.

Assembly by using the special wall plug and preparing the Shapemate IB™ panels for placing.

Shapemate IB™ panels are being placed.

Installing of Shapemate IB™ Panels

Before thermal insulation panels are installed and plugged on the sub-layer, care must be taken to ensure that the sub-layer is suitable for adhesion. Prior to the application, if there is any coating on the surface that would prevent adhesion then this must be removed. The most suitable adhesion solution must be preferred for different type of surfaces. The curvatures of the application surface must be eliminated by plaster application and an appropriate mineral, acrylic or polyurethane based adhesive must be chosen on the basis of the surface characteristics.

Adhesion at points and as a strip
Apply the Adhesive mix Mavi Kale Kalefixs on the grooved side of Shapemate IB™ Panel as a strip along all sides without any interruptions. Apply mortar on the centre of the panel at certain points. Care must be taken to ensure that the adhesive has contact with at least 40% of the back of Shapemate IB™ Panels.

Continuous adhesion by using notched trowel
On very smooth and level surfaces, application can be performed by means of the notched trowel of 10x10 mm. In this case apply the Adhesive mix Mavi Kale Kalefixs on the entire grooved side of Shapemate IB™ Panel by using the notched trowel in continuous formation.

Application of Insta Stik, the Polyurethane adhesive of Mavi Kale, on Shapemate IB™ Panel
Insta Stik, the Polyurethane adhesive of Mavi Kale is applied on Shapemate IB™ Panel on the grooved side along the sides in a continuous or stripe formation. The mix is applied in the form of letter “M” in the centre of the panel.

Note: In both application methods care must be taken to prevent excess adhesive mix settling on the sides of the panel and in spite of the care shown if it still happens than the sides of the panel must certainly be cleaned.
Placement of Shapemate IB™ Panels

The Shapemate IB™ Panels, on which either Kalefiks Adhesive Mix of Mavi Kale or Polyurethane Adhesive Insta Stik of again Mavi Kale is applied, are placed on round level and arranged in a manner that leaves no gaps in between. The overlapping seams are tightly joined and they are adhered on the wall by slightly shifting them. To prevent any levelling differences that may occur between the panels prior to the drying of the adhesive mix, they are lined up with the help of a floating rule. To prevent the risk of separation between the panels at the corners due to effects of wind and water in time and furthermore to ensure the formation of a proper corner, Mavi Kale Corner profiles are applied in cross formation.

Application of Mavi Kale Adhesive mix on corner profile.

Placement of profiles in cross formation.

Surface application of either Kalefiks Adhesive Mix or Polyurethane Adhesive Insta Stik of Mavi Kale is performed on the back of the Shapemate IB™ Panels.

Lining up of the panels with the help of the floating rule.

Joining of Shapemate IB™ Panels applied on the wall surface in an overlapping formation

In circumstances where corner profiles are not used, the panels are placed in cross formation.

*Blue’Safe Mavi Kale corner profiles are manufactured in thicknesses of 30, 40 and 50 mm and they are used in complementary pairs.
Wall Plugging of Shapemate IB™ Panels

In addition to the adhesion of the panels, to ensure that the Shapemate IB™ Panels are durable in terms of their performance and continued functioning, mechanical connection elements are needed. Under the circumstances wall plugs must be applied:

- 24 hours after an adhesion process with Kalefiks Mavi Kale adhesive mix and 30 minutes to 2 hours after a process conducted with Insta Stik, the polyurethane adhesive of Mavi Kale. The wall plugging must be performed according to the height of the building, and in a depth, wall plug type and in numbers identified on the basis of the surface characteristics. For applications at structures with heights of 10 m or less, if polyurethane adhesive Insta Stik is preferred then using wall plugs would not be necessary.

1. The counterbore head is opened on the installed Shapemate IB™ Panel for the full placement of the wall plug.
2. A hole 1 cm deeper than the wall plug length to be fastened on the bottom surface is drilled in.
3. The wall plug is placed.
4. The wall plug pin is hammered in.
5. Mechanical fastening is completed.

Note: The diameter of the drill must be the same as the diameter of the wall plug to be used. On reinforced concrete floors, if plastic screw wall plug is used, the diameter of the drill could be 1 mm bigger than the wall plug. The wall plug must be fully hammered in and under no condition it should be half inserted and the protruding part cut off.
Establishment of Seams and Side Details

**Door – window centres**

The weakest points of the buildings, which are affected from external factors the most, are the seams and side details. The Shapemate IB™ Panels that are included in external surface thermal insulation system must be supported with various special profiles to reinforce these seams and side details so that durability and high performance can be achieved.

The slats for the inside edges of doors and windows are cut in appropriate dimensions and they are fastened to the casing of the window.

Ready-made window centre profiles suitable for window centre turns; these are sized in desired depth from the easy breakage channels according to the central depth. They are placed in the window centres by using Kalefiks Mavi Kale adhesive mix or Insta Stik Mavi Kale polyurethane adhesive.

On the corners corresponding to window centres, the first layer of plaster is applied and Corner Profile K-PVC with net is placed. The first layer of Mavi Kale Plaster mix on the external surface is completed as the reinforcement and profile net placed inside and an overlap of 10 cm is allowed.

Establishment of Building Edges and Corners

To be able to achieve smooth and durable edge and corner finishes, aluminium or K-PVC corner profile of Mavi Kale with the self-netting is placed in Kaleplast plaster mix.

Placement of Mavi Kale K-PVC corner profile with self-netting.

The glass fiber mesh is placed with an overlap of 10 cm.
Establishment of Dilatation Areas

At dilatation points in buildings, dilatation profiles are used to prevent the interruption of thermal insulation materials while the dilatation process is carried out properly.

The joint gap that the Shapemate IB™ Panels form on the dilatation, the first layer of plaster application is made regionally.

The profile and external surface reinforcement net are placed with an overlap of 10 cm. after the plaster work and decorative coating is completed the protective band is removed from the joint gap.

Establishment of the Dripstone at Protrusion Points

In protrusions such as the lintel, bay window, balcony and similar, for purposes of achieving protection from water, smooth finishes are obtained by placing dripstone profiles in the first layer of plaster.

After the first layer of plaster is applied at protrusion points, aluminium and dripstone profile with self-netting are placed in Mavi Kale D-PVC. If profile with self-netting is used, the mesh is lightly immersed in the first layer of plaster and overlapped 10 cm with the mesh coming from the facade.

If aluminium dripstone profile Mavi Kale D-PVC is used, the reinforcement mesh coming from the facade is finished on the profile.

The profile with self-netting is placed in the dilatation and the net is immersed in the first layer of Mavi Kale plaster mix Kaleplast. To be able to have constant dilatation width all along the line, a protective band in the same width as the joint gap is placed prior to the application of the first and final layer of plaster.

The second layer of Mavi Kale Plaster Mix Kaleplast is applied to complete the dripstone detail.
Application of Mavi Kale Plaster Mix Kaleplast

The first layer of Kaleplast, Mavi Kale Plaster Mix must be applied 24 hours after the adhesion process. The first layer of Kaleplast applied on the Shapemate IBT® Panels with the help of a steel trowel. To be able to achieve a homogenous thickness, the first layer of plaster is smoothed on the panel with the help of a 4x4 mm notched trowel. In the applications made with Insta Stik, Kaleplast application must be made minimum 2 hours after the adhesion.

With the help of the steel trowel the first layer of Mavi Kale Plaster Mix Kaleplast is applied.

A homogenous thickness is obtained with a notched trowel of 4x4 size.

Immediately after the application of the first layer of Kaleplast, Mavi Kale, reinforcement mesh is lightly immersed in Kaleplast either horizontally or vertically.

The door and window edges that are defined as weak points on the facade are applied additional support netting and by placing this net in the plaster the weak edges are reinforced.

Before the first layer of Kaleplast is dry the second layer is applied. When applying the second layer of Kaleplast care is taken not to move the netting or having it immersed in two layers of plaster and to achieve this, application is made while awaiting nominal discharge of water from the first layer of Kaleplast.
Sub-Layer Application with High Mechanic Endurance

In order to achieve an impact-resistant heat insulation system at the first floor level of structures (1 – 1.2 m), a self-covering, steel mesh reinforced and thick plastered system is applied. The Shapemate IB™ panels to be used at this level should be 1 cm thinner in comparison to other panels. Steel mesh reinforcement is placed on Shapemate IB™ panels, and it is plugged to the sub-layer mechanically. The thick plaster is applied on the steel mesh wire and top coating is completed in a manner ensuring it to be level with the Shapemate IB™ panels.

The entire facade is completed with the mesh and Kaleplast system applied on top layer Shapemate IB™ boards.

As an alternative solution, high mechanic endurance may be formed at the lower levels of structures with the help of panzer net of Blue’s Art brick coating system.
**Application of Kale Decorative Coatings**

**Points to Take into Consideration**

— Prior to application of decorative coatings as final layer, it should be made clear that Kaleplast is well-cured and the weather conditions are suitable for application.

— During application of decorative coatings, fast drying of the coating should be prevented caused by unfavourable weather conditions, such as strong winds or high temperatures. Light colors and coatings at appropriate thickness should be preferred for large areas. Application should not be done under direct sunlight or when rain is expected. Extremely hot surfaces should be dampened before application.

— At large areas, application should be done with enough number of workers and without giving pauses in order to prevent undesirable marks at merge points. At points that require endings such as between floors, borders should be covered with masking tape.

— Acrylic emulsion based Dekor, Dekor Plus, Grenart, Grenart Midi, Grenart Micro, Renotex, Renotex Plus, Silikonatex and Silikona Grenli are ready mixed, self colored decorative coatings which provide final finish with one coat application. Cement based decorative coating Minart must be painted with exterior wall paint after it is well-cured.

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After Mavi Kale Plaster Mortar Kaleplast has been dried and cured, surface should be primed with Kale Silastar in appropriate color. If cement based Minart will be used as decorative coating, there is no need to prime Kaleplast with Silastar.

Acrylic based Kale decorative coatings are applied with steel trowel (Dekor and Grenart series) or foam paint roller (Renotex series, Silikonatex or Silikona Grenli). Thickness depends on the type of the plaster. (Grenart, Grenart Midi, Grenart Micro (silicone enhanced, elastic ready mixed plaster)

For coatings applied with steel trowel, texture is formed by glazing the coatings with a plastic trowel before coating is totally dried.

Cement based decorative coating Kale Minart is applied with steel trowel.

Texture is formed by glazing with a plastic trowel before the coating is totally dried.

After Minart is well-cured, surface should be primed with Silastar and must be painted with exterior wall paint afterwards.
Blue’S Decor External Surface Decorative Profiles

Blue’S Decor External Surface Decorative Profiles

Blue’S Decor External surface Profiles are decorative structural components with core material made of Styrofoam™, which is resistant to water and mechanical effects that can be used in any old or new type of structures. The cement or acrylic based plaster layer on it, depending on your choice, provides protection against UV effect of the sun, and increases endurance against outdoor conditions. Various profiles are available such as moulding sections, weather boarding, corner profile, and door-widow frames. In case Blue’S Decor profiles are used in old buildings or structures with no exterior insulation, care should be taken to ensure that adherence surface is clean and cleared from any layers that may prevent bonding. The bonding surface of Blue’S Decor profiles should be plane. If this is not possible, then precautions should be taken to ensure bonding on the surface.

When Blue’Safe is being used with Mavi Kale system, reinforced plaster is applied on the layer.

Blue’S Decor profiles and window crown formation process are performed in accordance with the following order and with the help of necessary hand tools.

1. Left 45° corner dimensioning
2. Left 45° corner cutting
3. Right 45° corner cutting
4. Right 45° corner dimensioning
5. 45° corner cutting
6. Right 45° corner cutting
7. The corner of the crown is formed by gluing the part obtained from the right corner to the left corner.

The corner of the crown is formed by gluing the part obtained from the right corner to the left corner.
Blue’S Decor External Surface Decorative Profile Application

Mavi Kale Adhesive Mortar Kalefiks is applied with a notched trowel on the Blue’S Decor profile. It is stuck to the surface by lightly pushing and sliding, and is fixed for a temporary period with supports to ensure that it stays fixed.

Jointing mesh support is made to joints after the Blue’S Decor profiles are stuck and necessary repair jobs are performed with Mavi Kale Plaster Mortar Kaleplast.

Note: Blue’S Decor components, which can be cut with simple hand tools, may require mechanic connections depending on the wall surface during application. It is extremely economic compared to similar products. All materials are shipped in standard packages that are resistant to construction site environment and prevent damage. Please refer to the Blue’S Decor brochure for model options and detailed measurements of Blue’S Decor.
Warnings

General Application Information
Styrofoam™ boards are not recommended for use in case the surface temperature they will be directly and permanently contacting is above 75 °C. In case it is exposed to high temperatures, it can soften, followed by irreversible dimensional changes, and reduction in its mechanic endurance may be observed.

Styrofoam™ is resistant to bituminous compounds that do not contain solvents, water based wood siding, lime, cement, plaster, grout, cement mortal, alcohol, acid and alkali, Direct contact with Styrofoam™ of certain organic substances, solvent based wood sidings, coal-tar and its derivatives (aerosol, etc.), paint thinning solvent, and general solvents such as acetone, ethyl acetate, petroleum toluene, substances containing whitener extracts. Otherwise, in case such substances contact Styrofoam™ boards, they may cause them to soften, contract, and even to dissolve and thus lose its entire performance.

When an adhesive is being selected, especially adhesives, which do not contain solvents, should be preferred, and care should be taken to follow the instructions of adhesive producers with respect to their compliance with polystyrene foam adhesion. The boards should be protected from direct sunlight in order to avoid their surfaces from being deformed in case they need to be stored for long periods of time in open storage or need to stay outdoors for long periods after being removed from their packages. Their being covered with a dark coloured cover will provide sufficient protection. As dark coloured transparent covers will accumulate heat beneath them, these should not be used during application as well as for protection purposes.

Fire and flammable substances should be avoided in the storage and use of Styrofoam™ boards. Even though entire fire classifications may be performed based on laboratory tests, they do not reflect the behavior of the material under real fire conditions.

Styrofoam™ products enter the natural cycle by biologic decomposition way, and do not cause any soil and underground water pollution what so ever. The boards should be disposed of by storage in convenient waste sites or by burning in waste incineration facilities in accordance with legislative regulation. Styrofoam™ products may be used in recycling without being mixed with other plastic products.

Dow - Mardav – Kalekim Responsibility
The Blue'Safe Mavi Kale External Thermal Insulation Sistems, Blue’S group of products covered in this brochure and recommendations on their use in projects have been prepared based on the know-how and experience of Dow – Mardav – Kalekim, and have been provided as a service to planners and contractors. All detailed samples have been provided as principle detail to show different application options. Drawings should be reviewed and arranged during the project phase according to the specifications of each project by taking into consideration the relevant laws, regulations and standards. Products used together in these systems have been tested in the worst weather conditions by applying aging test, and have been place in the market after achieving successful results.