

M21 Insulation with rendered finish

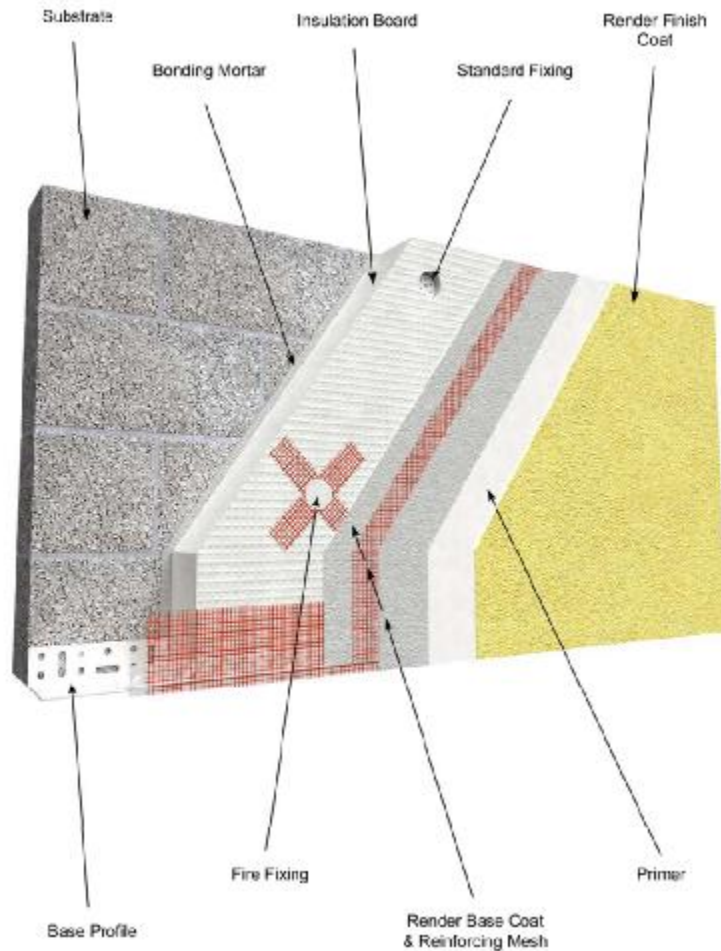
## SPECIFICATION OF MATERIALS

### EXTERNAL WALL INSULATION SYSTEM (Adhesively Fixed).

For system application details, refer to the corresponding Baumit Method Statement before submitting a tender.

Baumit Ltd provide a range of external wall insulating systems comprising insulation boards, reinforcing render and decorative finishes.

Baumit EWI EPS System – A façade insulation system for using adhesively fixed externally insulated EPS boards with rendered finishes, or with brick slip or tiled finishes.  
Baumit EWI System Mineral has been awarded NSAI Agrément Certificate No: 09-0336



**Baumit EWI System – EPS**

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## **Baunit EWI System – EPS**

### **Materials and Components**

Base profile: Baunit Therm or Baunit Aluminium  
Insulant: Baunit EPS (White / Graphite) insulation board  
Adhesive: Baunit StarContact  
Fixing: Baunit Fixing Anchors  
Base coat: Baunit StarContact / Baunit StarContact  
Reinforcement: Baunit StarTex glass fibre reinforcing mesh  
Primer: Baunit UniPrimer  
Top coat: Baunit Granopor Top, Silikon Top, Nanopor Top and Baunit Mineral finishes decorative render 1.5mm, 2 mm, 3 mm.

Ancillaries: Baunit MontageSet for fixing base profiles(includes drive fixings, spacers and packers)

Ancillaries: Baunit Clip on Drip Bead for Base Profile Aluminium

Ancillaries: Baunit PVC Mesh Corner Beads

Ancillaries: Baunit PVC Mesh Stop Beads

Ancillaries: Baunit Joint Seal Band 2D 15/2-6 or 2D 15/5-12

Ancillaries: Baunit Movement Joint Beads

Note: The above are standard products and accessories used with this system. Refer to construction issue drawings for information regarding the requirement for other beads / trims in specific locations.

System Designer:

Baunit Ltd.

Tel: 03333 58 3434

Fax: 0843 55 77 666

Email: [info@baunit.co.uk](mailto:info@baunit.co.uk)

Web: [www.baunit.com](http://www.baunit.com)

Baunit Warranty

Baunit provide a 5 year materials warranty on all Baunit products and materials. (Detail available on request)

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### Survey of Existing Walls / Substrates

To assess the suitability of the substrate prior to commencement of installation, carry out a survey of each elevation of the existing structural substrate.

Include the following:

Condition of substrate.

Form of the substrate (with particular regard to line / straightness).

A schedule of repairs necessary to leave the substrate in a suitable condition to receive the system.

A schedule of services, fixtures and fittings to be either removed or installed to facilitate correct installation of the system.

A schedule of any extra adhesive / mechanical fixings required in addition to that included in the typical system construction.

Any other information considered relevant.

#### Substrate Condition:

Masonry Substrate - Existing substrate should be clean, dry and free of loose coatings or dirt etc. Make good as necessary.

#### Structural substrate:

Insitu-cast Concrete.

#### Substrate Preparation:

Thoroughly clean and remove separating agents (shuttering grease).

Existing substrate should be clean, dry and free of loose coatings, dirt, algae, fungus or deleterious materials etc. Make good as necessary.

Depending upon specific site conditions, there may be a requirement for additional surface pre-treatment(s). Please consult Baumit for further advice.

#### System installation:

Baumit BaseProfile therm

Size of base profile to suit thickness of insulation.

**NOTE:** Splash zone: The bottom edge of the insulation system must be sealed tight to the substrate. Baumit perimeter insulation board XPS TOP / Plinth and Perimeter must be used for areas within and below the splash zone (min. 300 mm above finished ground level). The base profile is installed where at or above the DPC line to protect and seal the bottom edge of the insulation system. The base profile may not be installed below the DPC line or at ground level.

The Baumit Base Profile Therm is fixed using Baumit MontageSet (includes drive fixing, expansion spacers and packing shims) on to masonry substrates in accordance with Baumit Ltd recommendations, and on-site pull out tests. Fixings to be installed at maximum 300mm centres. Packers shims to be used to overcome surface irregularities in the substrate. At least one packing shim shall be installed behind every base fail fixing!

The base profile may be additionally be set in a full mortar strip of StarContact against along its entire length.

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### Insulation boards:

Generally only full insulation boards should be used rising up from the bottom row, fitted tightly together with a staggered bond between rows. Board off-cuts (min. 150 mm lengths) may be used in the main wall areas but not at building corners or openings. Care must be taken to ensure that the board surfaces sit flush. The board joints must be free of gaps and adhesive. The corner of an insulation board must not meet the corner of an opening (cross joint). Each row of boards must form an overlap (toothed joint) to the board depth at building corners. Only full and half boards may be used here.

### Adhesive application:

Standard bonding methods are used; a 50mm wide strip of adhesive is applied around the surface perimeter of the insulation board and 3 equally spaced hand-sized adhesive dollops through the centre line. Enough adhesive must be used to ensure that the bonded board has a 10-20 mm thick adhesive layer with a bonding contact of at least 40% of board area. Tolerances of up to 10 mm in the background flatness can be accommodated in the adhesive layer.

### Fixing anchors:

Baumit facade insulation boards EPS, may require additional fixing anchors. These can be installed 24 hours after bonding the insulation boards. Refer to Baumit EWI Installation Guidelines for details of suitable fixing anchors and fixing patterns.

### Base coat and reinforcement:

After sufficient hardening of the adhesive layer the insulation boards can be sanded down and the dust removed. Baumit StarContact / StarContact Forte is applied to the boards with a stainless steel notched trowel (10 mm notches). Continuous sheets of StarTex reinforcing mesh are placed onto the StarContact / StarContact Forte, free of creases and with 100 mm overlapping edges. A further 1-2mm of StarContact Forte is applied "wet on wet" over the embedded StarTex reinforcing mesh. The StarTex reinforcing mesh must be covered with at least 1 mm (0.5 – 3 mm max. at the overlapping edges) of StarContact / StarContact Forte. Excessive trowelling is to be avoided. Trowel lines are to be removed after hardening. The overall base coat thickness must be from 3 –4 mm for Baumit 30 (using StarContact) and 5 –6 mm for Baumit 60 (using StarContact Forte).

NOTE: In high traffic, vandal prone and anticipated impact areas additional reinforcement shall be provided with an additional layer of Baumit StarTex reinforcing mesh and StarContact.

The high impact areas shall be clearly defined either within the contract documentation or marked on construction drawings.

### Primer:

Apply Baumit UniPrimer in a full and even coat with a roller or brush. Two coats are recommended in hot weather. Two coat applications (e.g. for irregular background suction) require a min. 24 hours drying time between coats.

Do not mix with other paint materials. Apply systematically and continuously in complete sections.

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### Top coat render:

Apply Baunit Granopor Top, Silikon Top, Nanopor Top or Baunit Mineral finishes with a stainless steel trowel or a fine spray machine and over the whole surface area to the grain thickness and immediately texture using a plastic float for synthetic finishes and a rubber float for mineral finishes. , moving in tight circular motions.

Do not mix with other paint materials. Apply systematically and continuously in complete sections.

### Beads/ Trims:

Baunit PVC Mesh Corner Beads.

Baunit Joint Seal Band - compressible waterproof sealing band.

Baunit Movement joint Bead Type 'E'.

Baunit Movement Joint Bead Type 'V'.

Baunit Clip Drip Profile - A profile designed to clip onto the front edge of Baunit Aluminium Base Profile.

NOTE: The above are standard items used with this system. Refer to construction issue drawings for information regarding the requirement for other beads / trims in specific locations.

NOTE:Where the colour specified below is in the C2, C3 or C4 categories, it is advisable to have the preceding coat tinted to the same colour reference as the finish colour.

Colour/aggregate:

Consult with Baunit Ltd for details of colour options and to obtain samples.

The use of render colours with a light reflectancy value of less than 20% is restricted on Baunit ExternalWall Insulation Systems. Approval must be obtained from Baunit Ltd before orders are placed.

DESIGN: Complete the detailed design of the system and associated features shown on the drawings to meet the requirements of this specification.

### INTEGRITY:

The installation must be weathertight under all anticipated conditions. Consult with Baunit Ltd for specific details and relating to particular conditions.

The installation must be capable of resisting all dead loads and design live loads, including impact and wind loads, and accommodate all thermal movements without damage.

Render systems may not be applied to horizontal or near-horizontal surfaces. To enable the integrity of the system to be maintained at parapets / wall heads, it will be necessary to install copings or cappings. Render systems may not be continued over wall heads / parapets without the provision of suitable protection.

IMPACTLOADING: Resistance to hard body impact and perforation as categorised below shall be:

Category II - 10 Joules using a single layer of Baunit StarTex reinforcing mesh - and the render shall not be perforated using a 12mm indenter.

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(The standard ETA requirement for impact resistance is based upon impacts using energy of 3 Joules & 10 Joules).

The above categories are defined in the Guideline for European Technical Approval ETAG 004 and correspond to the degrees of exposure in use. They do not include an allowance for acts of vandalism.

### WIND LOADING:

Wind Loading should be calculated to BS 6399 Part 2. Loading patterns should be subdivided into zoned areas throughout the façade.

**TO ENABLE ECONOMIC DESIGN, ACCURATE CALCULATIONS INDICATING NEGATIVE WIND LOADS MUST BE PRESENTED TO BAUMIT LTD AT THE EARLIEST POSSIBLE OPPORTUNITY.**

Should it be necessary to provide additional mechanical fixings to accommodate wind loads, there will be an additional cost.

### SAMPLE(S):

Provide colour and texture sample 0.5m<sup>2</sup>

Obtain approval before starting work.

Keep sample(s) available on site throughout the contract for inspection/comparison purposes.

**UNIFORMITY OF COLOUR AND TEXTURE:** Once samples of coatings have been approved do not change type or proportion of constituent materials. Ensure that supplies of materials are sufficient to give consistent and uniform colour and texture.

## INSTALLATION

INSTALLATION to be carried out by a contractor registered with Baumit Ltd.

Installation shall be made strictly in accordance with Baumit Ltd instructions. Reference should be made to the project specification, method statement, drawings and all other relevant literature. Consult with Baumit Ltd for latest literature.

**ADVERSE WEATHER:** Do not use materials that are or have been frozen. Do not apply materials to frost bound surfaces. Do not apply when the air or surface temperature is below 5 degrees Centigrade.

Maintain temperature of the work above freezing until material has fully hardened.

Protect newly rendered surfaces against rain and snow by covering when precipitation occurs.

Remove and replace coatings damaged by rain or frost.

**CONDITION OF BACKGROUNDS:** Refer above.

**PULL OUT TEST(S) ON FIXING PINS** to be carried out on site to prove the suitability of the structural background and determine the size and number of fixings required. Give advance notice of testing to allow CA the opportunity to be present.

**PREPARATION OF BACKGROUNDS:** Refer to Substrate Preparation / Pre-Treatment above.

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**CLEANLINESS:** Carefully protect all existing work and approaches using suitable boards, sheets, etc. Clean off any droppings from finished work immediately.

**RENDER THICKNESS GAUGES** or other suitable means must be used to ensure the specified coating thickness.

**CURING:** Allow all mortar / render coats and primer coats to dry out thoroughly before applying subsequent coats.

Take all necessary precautions to prevent newly rendered surfaces from drying out too rapidly.

**CONSTRUCTION / CONTRACTION JOINTS:** It may be possible – depending upon the degree and direction of movement expected - to extend the system over construction / contraction joints within the building structure.

**CONSULT WITH BAUMIT LTD TO VERIFY JOINT REQUIREMENT AND TYPE.**

Form joints accurately to detail and in locations shown on the drawings. If modifications to any joint location or design are necessary on site, agree revisions with CA before proceeding.

**MOVEMENT JOINTS:** Replicate all movement / expansion / deflection / structural joints within the building structure. Form joints accurately to detail and in locations shown on the drawings. If modifications to any joint location or design are necessary on site, agree revisions with CA before proceeding.

**CONSULT WITH BAUMIT LTD TO VERIFY JOINT REQUIREMENT AND TYPE.**

**FIRE BARRIERS:** Fire barriers may be required on EPS systems on a project specific designs.

**SUPPORTS FOR SERVICES/FITTINGS:** Provide secure supports within the insulation for soil and rainwater pipe brackets, aerials, cameras, lighting, signage and the like in locations shown on drawings. Consult with Baumit Ltd for fixing methods / details.

**SEALANT JOINTS:** Location(s): At all interfaces between insulation / render and dissimilar materials.

Sealant:

BaumitSeal Tape 2D 15/ 2-6, installed thickness 2 – 6mm

OR

BaumitSeal Tape 2D 15/ 5-12, installed thickness 5 – 12mm.

Baumit PVC Mesh Stop Beads in conjunction with mastic sealant.

**NOTE:** Mastic sealants are not generally supplied by Baumit Ltd and are not specified in this document. The performance requirements, specification and suitability of mastic sealants must therefore be determined by the contract administrator.

**INSPECTION OF COMPLETED INSTALLATION:** As soon as possible after completion of the work and before removing scaffolding, carry out an inspection with the CA to identify any defects.