



INSULATION RENDER, PLASTER, SCREED



BAUWER products are CE marked and conform to the standards EN 998 – 1:2010

METHOD STATEMENT

BAUWER LIGHT, External and Internal application

Eco-friendly thermal, acoustic and dehumidifying Render

PRODUCT DESCRIPTION: Natural eco-friendly Bauwer Light is a highly breathable ready to mix thermal insulation render for both internal & external use. It's based on naturally occurring volcanic glass perlite. Bauwer Light is used for thermal insulation, sound-absorbing as well as fire protection. Along with the insulating and sound absorbent properties, Bauwer Light is light weight and highly breathable, which prevents condensation as well as protects the walls from fungus and mould growth. It is designed for insulation of solid stone and brick walls of traditionally built breathable or vapour permeable homes.

BAUWER LIGHT insulation render is used for:

- external and internal thermal walls insulation of solid walls;
- dehumidification thanks to breathability;
- thermal insulation of inner and outer slopes;
- formation of a sound absorbing layer on wall structure;
- formation of sound absorbing layer between floor joists;
- thermal insulation of ceilings and floors.

TECHNICAL DATA

Yield of mortar from 1 bag.....	25L
Spread rate	1bag covers 1m ² at 25 mm thickness
Bag weight.....	7,00kg
Pot life.....	up to 4 hours
Density of dry material.....	280 kg/m ³
Perlite (basic filler) thermal conductivity.....	0,034W/(m·K)
Thermal conductivity in dry condition.....	0,068 W/(m·K)
Average sound absorption coefficient at frequency of 0.8-8 kHz.....	0.72-0.75
Vapour permeability coefficient μ	4
Bond strength.....	0,1 N/mm ²
Compressive strength.....	0,7 N/mm ²
Declared strength value.....	after 28 days

CLIMATIC CONDITIONS: During preparation and application of the mortar mix, and within further 24 hours, the temperature of the substrate and ambient air should not fall below +5 °C. Do not apply the mortar mix to the sun heated surface. Protect the mortar from direct exposure to rain or direct sunlight especially within the first 24 hours after the application.

SURFACE PRE-TREATMENT: Bauwer Light can be applied to sound substrates like stone and brick walls, concrete and light weight thermal blocks. Paint, old render or plaster need to be removed before Bauwer Light application. The substrate must be clean, free from dust, grease or loose materials and 80% of a substrate surface need to be covered with a key coat as shown below:



The key coat should be applied to a pre-wetted substrate. A breathable key coat is recommended for Bauwer Light. Vapour permeable Vimark Beton Rinzafo or sand cement mix with addition of NHL lime mortar mix could be used as a key coat for Bauwer Light. The key coat is applied as shown on the pictures above to achieve rough surface. This is rough surface is critical for Bauwer Light to “lock” into the substrate.

MIXING: One bag of dry Bauwer mortar mix yields nearly 25 litres of the thermal and sound insulation mortar. To prepare the mortar you need a clean tub of at least 30 litres capacity. Pour 10-11 litres of water into the tub, empty the content of the bag into it. Do not use the content of a bag in parts. Mix the mortar intensively with an electric mixing drill until a homogeneous binding mixture is obtained.

After the first mixing it is recommended to increase the mixing time and intensity. Avoid adding too much water to yield over 25-26 litres of the mortar mix as this will weaken the mix and affect the mechanical properties of the thermal insulation mortar.

When applied over vertical surfaces, the mortar consistency should not be liquid or flowing. To test for readiness, pick up a small amount of mortar with a trowel, then turn the trowel upside down. If the mortar is of a proper consistency, it will adhere to the blade of the trowel. No admixtures are permitted.

APPLICATION METHOD:

Bauwer insulation is similar in a way with mineral wool insulation system. Bauwer Light is insulation layer, key coat is an equivalent to mechanical fixings of mineral insulation, while Bauwer Finish is a base coat with mesh in.

Bauwer is applied in several coats using standard plastering tools and techniques. The recommended thickness of Bauwer Light in one application should not exceed 40mm to 50mm. Every layer applied thereafter should be done at least after 4 hours.

1. The substrate with a key coat must be well moistened 2-3 hours before application of the Bauwer Light. It is critical that substrate is not dry or soaking wet at the time of Bauwer Light application, so it is essential to wait for 2-3 hours in order to allow substrate to absorb the water.

2. Apply the Bauwer Light by hand using a stainless-steel trowel or using a plaster spraying machine, such as PFT G4, 5 or Mtec m330. Recommended parameters for PFT machines: Rotor stator type PFT D6-3, Water setting 150, Back pressure reading 13bar, Spray cap 10mm, Mixing shaft PFT Bionik Klimasan for light weight mixes.

3. Run a straight edge up in an upward short left to right sawing motion to remove any excess Bauwer to achieve a flat even finish. The surface of previous layer does not need to be well finished; a rougher surface will in fact provide a good key on which to apply the next layer.

4. Ensure the current layer surface is well wet before applying the next layer. If the mortar consistency changes during the application, just re-mix the mortar with an electric mixing drill without adding water. Leave the final BAUWER LIGHT coat for a couple of days to strengthen prior BAUWER FINISH application.

5. The surface of BAUWER LIGHT should be well moistened before BAUWER FINISH application.

6. Prepare BAUWER FINISH mortar: pour not less than 5 litres of water into a clean tub of at least 15 litres capacity; empty the content of the BAUWER FINISH bag into it. The mortar is mixed with a high speed electric mixing drill until a homogeneous mixture is obtained. The mortar mix should then be left for 3-5 minutes for maturing. If required, add a small amount of water and re-mix the mass.

7. Apply a layer of BAUWER FINISH to the surface area by hand using a stainless steel trowel with pressure in an upward motion. Apply the alkali-resistant fibreglass mesh with every sheet of mesh overlapping the previous one. Apply the next layer of BAUWER FINISH to the mesh by hand using a stainless steel trowel with pressure in an upward motion. Run a stainless steel trowel over the area to finish. The BAUWER FINISH thickness should be 2.5 to 3.5mm with mesh in it.

8a. External application: BAUWER FINISH can be painted using a breathable paint for example silicate based masonry paint which is characterized by high vapour permeability or apply breathable thin coating Vimark ARENINO VK2 over Bauwer Finish.

8b. Internal application: BAUWER FINISH can be painted using a breathable water emulsion paint or skimmed with Vimark Plastex GB1 or alternative breathable finish.

CRITICAL INFORMATION: It is important to follow the method statement while applying Bauwer insulation. Do not use Bauwer Light as ordinary plaster, eg without key coat or without Bauwer Finish with mesh in it. Do not cover Bauwer Light with multi finish. Use an electric mixing drill (at least 1500 Watt and over 500 rev/min) to mix Bauwer Light. The mixing nozzle should be not less than 100 mm. To reinforce and level a Bauwer Light surface, it is critical to apply Bauwer Finish with mesh in it over Bauwer Light.

To avoid micro cracking on vertical mortar surfaces (in case of building subsidence and mechanic damage), such surfaces must be reinforced with alkali-resistant fibreglass mesh.

The outer thermal insulation layer is protected from exposure to adverse weather conditions with a coating of Bauwer Finish with mesh in it and ARENINO VK2 coloured breathable coating or a permeable façade paint.

The internal thermal insulation layer may be skimmed with Plastex GB1 or similar in order to achieve a smooth surface finish. It is critical to coat BAUWER FINISH surface with a deep penetration breathable primer Vimark Acrylic or similar in case of gypsum based finish application.

HEALTH AND SAFETY: The mix contains small amount of cement that in contact with water produces alkali. Avoid contacts of the mortar with the eyes or skin. Use rubber gloves when working with the material. In case of contact with eyes or skin, rinse or wash with plenty of water.

STORAGE TERM AND CONDITIONS: The BAUWER™ dry mortar mixes should be stored in their original unopened packaging. Bags should be protected from water penetration and direct sunlight. The guaranteed shelf life is 18 months from manufacture date indicated on the package.