



STONEWARE STUDIOS

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Opticlina Technical Datasheet

Cellulose-reinforced calcium silicate moisture protection board

Fields of application:

Redstone Opticlina is ideal for:

- Improving thermal performance of solid stone and brick walls.
- Facilitating breathability on solid wall construction.
- Preventing mould growth.
- Absorbing excessive room air humidity.
- Avoiding condensation build-up.
- Creating a healthy and comfortable indoor climate.

System components:

- Opticlina board made of calcium silicate.
- MCS Adhesive - Breathable and capillary active, for attaching board to substrate.
- OC Plaster – Vapour permeable, capillary active plaster finish.
- Redstone mesh – for reinforcement of OC Plaster.
- Silicate Primer – Breathable liquid primer to regulate absorbency of board prior to plastering.

Features:

- consists of cellulose-reinforced calcium silicate.
- reduced heating costs.
- high alkalinity prevents mould growth.
- high permeability.
- prevents condensation build-up.
- not flammable.
- easy to install.
- Improvement of air quality.
- Increases value of restored property.
- Opticlina has a higher calcium density compared to other calcium silicate boards giving better strength and resistance to damages and the higher alkalinity and capillarity leads to better mould prevention.

Technical data:

• Material	:	Calcium silicate
• Standard dimensions	:	1000mm x 500mm x 25 or 50 mm
• Building material class	:	A1, non-flammable according to DIN 4102
• Thermal Conductivity	:	0.0727 W/mk
• Gross density	:	approx. 270 kg/m ³
• Compressive strength	:	1.4 N/mm ²
• Vapour diffusion resistance	:	4.5
• Overall porosity	:	85 Vol%
• pH value	:	12
• Flexural strength (dry)	:	0.5 N/mm ²

The technical specifications and instructions included in this document are all correct to the best of our knowledge and are provided in good faith.. Since the operating conditions and the method of use of our materials are not subject to our control, we can only guarantee that these products conform to our quality standards. This is why the warranty can only cover the quality of our products in terms of our general terms and conditions, and cannot cover successful processing. The right to change all technical information without prior notice is reserved. This technical data sheet shall replace all previous ones.



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Additional ancillaries:

Redstone Opticlina board is a flat board 1m x 0.5m in size, with a thickness of either 25mm or 50mm. It is also available in a thinner version for window soffits and reveals where space is limited. A tapered board is also available to avoid loss of thermal bridging or where wall or ceiling space is limited due to the retention of decorative mouldings or cornicing. Should new cornicing be required, standard cornice profiles are available in Redstone calcium silicate preformed. Our technical team will advise on all requirements and installation techniques.

Installation instructions:

It is recommended to perform an exact damage analysis assessment before work commences. If issues, such as excess water ingress, are evident on the structure, these should be addressed in tandem with the installation of the Redstone Opticlina calcium silicate board system. The technical data sheets of the individual system components must be observed.

Substrate preparation:

The mineral substrate for the application of Redstone Opticlina must be clean, solid, dust-free, strain-free (eg. structure-damaging salts stains, bitumen, oil) and free from mould. Contaminated materials such as gypsum-based materials or wallpapers must be properly repaired or removed. Lime or lime/cement based substrates should be free of mould. Any mould present can be sterilised by an application of Redstone SuS Mould disinfectant spray.

As these are flat boards, they must be applied onto a flat background. Stone or Brick substrates should be plastered with Naturally Hydraulic lime (contact Stoneware Studios for advice) to provide a flat surface onto which to attach the boards.

Installation:

Redstone Opticlina should be cut to size. The edges of the board can be installed as supplied or can be chamfered if desired. Redstone MCS Adhesive should be mixed according to the manufacturer's specification and applied to the complete surface of the back of the board using the notched trowel method. Choose the height of the notched trowel in a way that guarantees a complete bond between the board and substrate (perform adhesion test if necessary). The trowel should be notched 10mm or greater. A thin layer of adhesive should be applied on the board edges for adhesion. This is preferable than butting the boards together with no joints.

The application and adjustment of the Redstone Opticlina should be carried out quickly (before the adhesive stiffens or forms a skin) by consistent pressing to form a complete substrate-to-board adhesion. The joints are closely butted (joint width approx. 1 mm) until the adhesive is slightly pushed/squeezed up. Protruding adhesive must be removed before it hardens and the joints should be finished flush with the board.

Mount each board in a staggered fashion to avoid long joints.

Ceilings and roof pitches require an additional anchoring with conventional stainless steel WDVS board anchors (3 per board).

The board edges should be protected against mechanical damage with corrosion-free corner beads (e.g. made of plastic, stainless steel or aluminium). These are fixed with Redstone OC Plaster.

After the adhesive hardens and the Opticlina board is secure, apply one coat of Redstone Silicate Primer to all areas. This can be applied with a brush or in most instances a roller will be more effective. Mix and apply one thin (2mm) coat of Redstone OC plaster. Bed in Redstone mesh while the plaster is still green and apply a further 2mm coat of the OC plaster. Allow the plaster to firm up before finishing with a steel trowel to a smooth finish. Redstone OC plaster can be sanded after fully hardening, if desired.

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Decorate with a fully breathable and diffusion-open paint such as Earthborn Claypaint.

Occupational safety

Special care when handling alkaline powdered materials, liquid materials and boards should be observed. Skin contact or inhalation of the materials can be dangerous. Safety glasses should be always worn and protective gloves and a dust mask should be used.

EC Safety Data Sheet:

We are happy to provide you with the EC Safety Data Sheet upon request.