SuperTherm Plaster

Product Data Sheet

An ultra lightweight and highly insulating plaster for internal applications.

ROUND
TOWER

Product Description

Dry ready mixed highly Insulating Lime Plaster designed for internal use to significantly reduce thermal losses in masonry.

Mix Ratio

Premixed to specific ratio, including fibres.

Binder

High Purity Calcium Hydroxide with Hydraulic Additives.

Aggregate

2mm down ultra lightweight foamed manufactured aggregate. The aggregate has a nanometre pore structure, at this size gas molecules collide more frequently within the web of the aggregate rather than with other gas molecules. This effect prevents the directional flow of heat via the enclosed cell glass. With specific gradings to replicate high performance sand, the aggregate is ground into multiple sizes and retains its full performance as even the finest particles still contain millions of pores and millions of webs.

The aggregate is free from halogens, free from VOCs and contains no toxic heavy metals.

Usage

SuperTherm is an extremely low density and highly insulating plaster designed to significantly improve the thermal performance of masonry.

SuperTherm excels as a remarkably low density, high insulation material, offering superior mechanical resistance relative to other products with similar density and thermal characteristics.

It delivers outstanding thermal insulation for masonry and can achieve this at much thinner layers, whilst also maintaining exceptional vapour permeability.

SuperTherm offers a viable solution for Part L legislation in that it meets the requirements for improving the thermal performance of a wall, whilst maintaining a permeable fabric which absorbs and readily allows for the evaporation of moisture.

With a measured K Value of 0.0395, a 50mm application of Insulating Render will improve the U value of a solid wall by 115% or more, significantly reducing heat loss.

Fibre additions improve the flexural strength of the render, distributing stresses across the render to help reduce point loading, and negate the need for any mesh to be applied to the wall or inserted within the render.

Due to its lightweight nature, SuperTherm can be applied at depths of up to 50mm per pass.

It can also be applied green on green through to the finish with

appropriate sucxtion, making the application significantly easier and faster than most available plasters

SuperTherm can also be used in sustainable construction and renovation projects as a basecoat onto building materials such as hemp, straw, rammed earth, Woodfibre boards (and plasterboard TBC). The insulating properties help reduce the thermal expansion differentials between the background and any subsequent coatings.

For internal applications it should be applied as backing coat/s and finished with SuperTherm Finishing Plaster.

Suitable for application onto most host surfaces with suction.

If working on weak/friable backgrounds such as cob, please contact us for further application information.

Do not use this product if the temperature is above 30°C, below 5°C or if the risk of frost or snow is present within the next few weeks, this includes temperature drops associated with wind-chill.

Coverage

After mixing, a 15ltr bag will produce approximately 15 litres of mortar. This will cover approx. 2.2m2 at 10mm thickness.

Benefits

- K Value – 0.0395
- Significantly warmer buildings
- Reduced heating costs
- Management of relative humidity and condensation within living areas
- Lightweight and easy to apply
- Density – 250kg m/3
- Sustainable and environmentally friendly plaster
- Consistency of product compared to site mixed alternatives

Colour and Texture

Cornerstone SuperTherm is entirely natural in colour. No pigments or colourants are added. When finished it often has a slightly textured su face but is typically white. However, please note that colour variation is still possible due to the use of natural and recycled materials in the product.

Preparation

We would expect appropriate preparation in accordance with best practice; where the surface is clean, free of dust and other debris.

Where necessary the background should be adequately dampened to promote adhesion/bond with the host surface.

Dense impervious backgrounds/materials are unlikely to be very absorbent and require little to no dampening, whereas more absorbent backgrounds/materials require adequate

dampening in order to prevent rapid drying.

We have an application guide available for this product which covers some of the more technical aspects, it also offers some tips and advice so we recommend reading it in full before applying this product.

Mixing

A 15ltr bag of mortar will require 4.5 to 5.5 litres of clean potable water. The water addition will vary according to the application and desired consistency/workability of the mortar. Always avoid making the mix too wet, as this can promote shrinkage issues, especially when used at higher thicknesses of plaster.

SuperTherm should only be used as full bag mixes, do not part mix bags.

Mixing: Add 90% of the water, followed by the dry plaster. Place a lid over the mixer (see recommendations for mixer lids). Allow the material to mix for 1 to 2 minutes, then stop the mixer, scrape the sides clean. Add at least 50% of the remaining water and continue to mix for another 2 to 3 minutes with the mixer uncovered. Stop if necessary to scrape the sides of the mixer clean, then add additional water if required and continue mixing.

Mixing Time: The minimum mixing time is 6 minutes and the maximum mixing time is 8 minutes.

These times are imperative and must be adhered too.

Quenching: Like most lime mortars this blend will benefit from Quenching; allow the mortar to stand for 10 to 20 minutes after mixing, before use.

Once water has been added, this mortar has an open time of at least 4 hours.

Usage

Areas Of Use: SuperTherm is suitable for use onto masonry backgrounds with some suction; for application onto tanking please consult us first as special application methods may be required.

For any other render carriers please contact us for more details on suitability.

Coats: Thickness of the coats will depend on the desired thermal improvement as well as the application method, spraying this render allows for deeper depths to be achieved faster. This product should be applied as part of at least a two-coat system.

Application: Due to the various ways and thicknesses this product can be applied, please refer to the application guidance document as this will give specific guidance on the most common application methods.

Packaging

This product is supplied in 15ltr polythene lined paper bags, palletised for shipping and handling. The packaging is a mixed material and should be recycled accordingly.

Pallets contain 100 bags as standard at 15ltr each, we can supply these as up to 150 bags on request, however pallets can have height restrictions for certain delivery locations. (pallet sizes TBC)

Storage

This product should be stored in dry conditions, in unopened bags and clear from the ground. Always protect bags from water and damp. Reseal part bags after opening if unused product is present.

Use within 6 months of manufacturing date (provided on each bag).

Health and Safety

RISK PHRASES: R36 / R37 / R38 / R43

- Avoid contact with skin and eyes.
- Contact with wet mortar may cause irritation, dermatitis and/or burns.
- Contact between lime powder and body fluid (sweat, eye fluid etc.) may cause skin burns and respiratory irritation, dermatitis or burns.

SAFETY PHRASES: S2 / S24/25 / S26 / S37

- Avoid eye and skin contact by wearing suitable eye protection, protective clothing and gloves.
- Avoid breathing dust.
- Keep out of reach of children.
- On contact with skin and/or eyes, rinse immediately with clean water and seek medical attention.

Declaration

Roundtower lime mortars for renders and plasters are manufactured to the requirements of BS EN 998-1: 2016.

This product will contain no Portland Cement whatsoever.

Document Control

Datasheet version 1.6, issued Feb 2023. More modern versions of this document will supersede this datasheet, with no exclusions.