

# Thistle BondingCoat

## Product Data Sheet

### Product description

#### Overview

Thistle BondingCoat is a lightweight, retarded hemihydrate that is pre-mixed gypsum plaster incorporating exfoliated vermiculite aggregate, which only requires the addition of clean water to prepare it for use.

#### Applications

Thistle BondingCoat is a gypsum undercoat plaster for use in the repair of low suction backgrounds, e.g. some brickwork, blockwork or concrete, Gyproc plasterboard, expanded metal lath, or surfaces treated with bonding agents. With a final coat of any Thistle finish plaster, Thistle BondingCoat provides a smooth, inert, high quality surface to internal walls and ceilings, and a durable base for the application of decorative finishes.

### Standards

Thistle BondingCoat complies with *EN 13279-1* types B4/20/2 and C3/20, and is manufactured under a quality system independently audited and certified as conforming with *ISO 9001: 2015*.

### Performance

#### Fire protection

Gypsum plasters provide good fire protection due to the unique behaviour of gypsum in fire. When gypsum protected building elements are exposed to fire, dehydration by heat (calcination) occurs at the exposed surface and proceeds gradually through the gypsum layer. Calcined gypsum on the exposed face adheres tenaciously to uncalcined material, retarding further calcination which slows as the thickness of calcined material increases. While this continues, materials adjacent to the unexposed side will not exceed 100°C - below the temperature at which most materials will ignite and far below the critical temperatures for structural components. Once the gypsum layer is fully calcined, the residue acts as an insulating layer while it remains intact.

**(NB)** - that bonding agents must not be used where the plaster is designed to contribute to the fire resistance.

#### Thermal resistance

11mm Thistle BondingCoat with a final coat of 2mm Thistle MultiFinish (total thickness 13mm) has a thermal resistance (R) of 0.03m<sup>2</sup>K/W.

#### Effect of temperature

Thistle BondingCoat is not suitable for plastering onto frozen backgrounds but it may be used under frosty conditions provided that, after plastering, the surfaces are adequately protected from freezing. Once fully set and dry, Thistle BondingCoat is only suitable for situations where the temperature does not exceed 49°C. Dry, bagged plaster is not affected by low temperatures. During the application of gypsum plasters in hot and / or dry conditions, care should be taken to ensure that rapid loss of water is avoided. Gypsum plasters require a proportion of the mixing water in order to set and achieve full strength. If the water is dried off too rapidly, the strength of the plaster will be impaired.

# Performance

## Effect of condensation and other moisture

Thistle BondingCoat should be protected from continuous exposure to moisture. Prolonged or repeated exposure to moisture may cause a loss of strength and / or adhesion.

## Product information

Pack size kg	Coverage per bag m	Setting time hours	Water requirement litres	Dry set weight kg/m	Pallet quantity kg
25	1.1 @ 11mm thickness	50 min, skim in 60 min	14	12.1 @ 11mm plus 3.4 of finish	500 (20 bags)

# Application and installation

## Background preparation

Surfaces should be reasonably dry, clean and protected from the weather, and suitable for the chosen specification. In addition, before plastering concrete backgrounds, ensure that any mould oil or other agents present are removed from the surface. No-fines concrete does not require wetting prior to plastering. Normal ballast concrete should be given sufficient time to mature before applying the plaster. Plaster should not be applied onto a 'green' background or when any free water is visible. Mature concrete will require wetting to displace the air before plastering. Clean water should be applied 5-10 minutes before plaster application to control the suction. In-situ or pre-cast concrete which is exceptionally smooth or which is made from limestone, brick, granite and certain lightweight aggregates, will require pre-treatment with Thistle Bond-it bonding agent.

## Storage

Bags should be stored dry, as absorption of water shortens the setting time, causes set lumps to form in the bags and may reduce the strength of the set plasterwork. If storing on a concrete floor, dry timber platforms should be provided. Thistle BondingCoat stored correctly has a shelf life of 4 months. Buckets and bags are printed with the 'use by:' date in order to permit use in strict rotation.

## Mixing

Thistle BondingCoat is pre-mixed with aggregate and only clean water needs to be added to prepare it for use. Mixing should be carried out in a clean bucket. Excessive mechanical mixing should be avoided. Tools and water used in mixing must be clean. Contamination from previous mixes can shorten the setting time and in turn reduce the strength of the plaster when set.

## Application

Thistle BondingCoat should be applied with firm pressure, built out to the required thickness, ruled to an even surface and lightly scratched to form a key for 2mm Thistle finish plaster, such as Thistle MultiFinish. If Thistle BondingCoat and a finish plaster are to be applied to Gyproc plasterboards, Gyproc Joint Tape should be used to reinforce joints and angles. Any gap between boards exceeding 3mm should be pre-filled with Thistle finish plaster, such as Thistle MultiFinish, with the plaster being spread along each joint. Gyproc Joint Tape is then pressed firmly into the finish plaster, and immediately covered with a further application. The joints should be allowed to stiffen, but not dry, before plastering commences.

With pre-cast concrete units, in order to reduce the risk of cracking to a minimum, the floating coat should be applied with sufficient pressure to fill all the gaps between the units. The surface of the pricking-up coat must be wire scratched to provide a good key for the floating coat, and allowed to set, but not dry, before the floating coat of the same plaster is applied. Floating coats should be applied at a thickness of 8mm, up to a total plaster thickness of 25mm, and wire scratched between each coat. The final floating coat should be ruled to an even surface and lightly scratched to form a key for Thistle finish plaster, such as Thistle MultiFinish.

With composite ceilings, the concrete beams should be pre-treated with Thistle Bond-it bonding agent. If required, the suction of the infill panels can be controlled with a dilute solution of Thistle GypPrime. Thistle BondingCoat application to expanded metal lath involves first a pricking-up coat, which should be forced through the metal lath in order to provide a good key to the background.

# Application and installation

Background/ lining	Coat thickness mm	Approx. weight set and dry kg/m	Approx. coverage m/1000kg
Gyproc HandiBoard, Gyproc WallBoard, Gyproc Plank	8	7.1	135 - 150
Engineering bricks (with raked joints)	11	9.8	100 - 115
Dense aggregate concrete blocks no-fines concrete	11	9.8	100 - 115
Normal ballast concrete walls	11 <sup>1</sup>	9.8	
Normal ballast concrete soffits	8 <sup>1</sup>	7.1	100 - 115
Other aggregates concrete	8 <sup>2</sup>	7.1	135 - 150
Pre-cast concrete units/ composite ceilings	8 <sup>1</sup>	7.1	135 - 150
Extended metal lath	11 <sup>3</sup>	14.7	135 - 150
Backgrounds treated with Thistle Bond-it (e.g. glazed or painted surfaces)	8	7.1	70 - 80
Expanded polystyrene soffits	8 <sup>1</sup>	7.1	135 - 150
Expanded polystyrene walls	11 <sup>1</sup>	9.8	100 - 115

<sup>1</sup> Thistle Bond-it bonding agent may be required.

<sup>2</sup> Thistle Bond-it bonding agent is required.

<sup>3</sup> From face of lath.

## Finishing

Finish using any Thistle finish plaster such as Thistle MultiFinish.

## Decoration

Thistle plasters can be decorated with most paint finishes and wall coverings. Follow manufacturers' recommendations. Impermeable finishes, including tiles, should not be applied until the background and plaster are dry. A permeable paint can be used in the interim. *BS EN 13914 Code of Practice for Internal Plastering* states that plastering should be done under similar or better lighting conditions than the final work will be judged in. This is particularly important for glossy finishes and / or low-angle natural or artificial lighting.

## Tiling

Tiles up to 20kg/m<sup>2</sup> can be applied directly to the Thistle finish except where the system includes a bonding agent. As the total weight of tiles and plaster applied over a bonding agent is limited to 20kg/m<sup>2</sup>, consideration should be given to tiling directly to the background. If plastering to provide a background for tiles, avoid polishing the surface. Polished plaster surfaces should be roughened and a suitable primer.

## Maintenance

Thistle BondingCoat with a final coat of 2mm of Thistle MultiFinish provides a plastering system suitable for moderate to high impact / wear areas. If the plaster is correctly applied, it should not require any form of maintenance. For better scratch resistance, use ThistlePro DuraFinish which is 60% tougher than standard finish coats

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