

# Thistle Undercoat Plaster (Convenience bags)

## Product Data Sheet

### Product description

#### Overview

Thistle Undercoat Plaster 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 Undercoat Plaster 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 Undercoat Plaster provides a smooth, inert, high quality surface to internal walls and ceilings, and a durable base for the application of decorative finishes.

### Standards

Thistle Undercoat Plaster complies with *EN 13279-1 type B4/20/2* and *C3/20* and is manufactured under a Quality Management System in accordance with *BS EN ISO 9001:2015*. The QMS is independently audited (certificate no: *FM 504548*).

### 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 Undercoat Plaster 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 Undercoat Plaster 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 Undercoat Plaster 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.

## Effect of condensation and other moisture

Thistle Undercoat Plaster 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

Product	Bag weight kg	Approx. water required for mixing litres	Approx. coverage per bag <sup>1</sup> (@11mm depth & 10% wastage) m <sup>2</sup>
Thistle Undercoat Plaster	7.5	4.2	0.75
	12.5	7.5	1.25
	20	12	2.00

<sup>1</sup> Coverage is dependent on background and thickness of application and details above should be used only as a guide.

# Application and installation

## Background preparation

Surfaces should be reasonably dry, clean, free from dust and protected from the elements, and suitable for the chosen specification. In addition, some masonry backgrounds of exceptionally high suction may require pre-treatment with Thistle Bond-it bonding agent. It is advisable to brush down the surface to remove any dust or loose pieces and then dampen the surface. Some masonry backgrounds of exceptionally high suction may require pre-treatment to control their suction. Additionally, if plastering is to be undertaken on a concrete surface, ensure all mould oil, grease or other agents present are removed from that surface. Fine 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 if there is free water visible. Mature concrete will require wetting to displace the air before plastering. Any concrete that is exceptionally smooth will require pre-treatment with Thistle Bond-it bonding agent.

## Storage

Thistle Undercoat Plaster should be stored off the floor in a clean and dry environment as absorption of moisture can shorten the setting profile and cause set lumps to form in the bags and may reduce the strength of the set plasterwork. If stored correctly, the product shelf life is 6 months. Bags are printed with a 'use by date' in order to assist with stock rotation.

## Mixing

Thistle Undercoat Plaster 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 Undercoat Plaster 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 Undercoat Plaster 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 Undercoat Plaster 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.

## 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 of 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. When plastering to provide a background for tiles, avoid 'polishing' the finished surface. Polished finished surfaces should be roughened and a suitable primer used.

## Maintenance

Thistle Undercoat Plaster 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.

The figure indicates the recommended coat thickness in millimetres.

Plaster selector guide	Thistle Undercoat Plaster mm	Thistle Finishing Plaster mm	Thistle One Coat Plaster mm
Common bricks	11		11
Engineering brick (raked joint)	11		11
Medium density block	11		11
Dense block	11		11
Plasterboard	8 <sup>1</sup>	2 <sup>1</sup>	8 <sup>1</sup>
Cast in situ/pre-cast concrete	11 <sup>1</sup>		11 <sup>1</sup>
Flat, smooth concrete		2 <sup>1</sup>	11
Damp undercoat plaster (e.g. finished same day)		2 <sup>1</sup>	
Dry undercoat plaster (e.g. finished after leaving overnight)		2 <sup>2</sup>	

<sup>1</sup>Thistle Bond-it bonding agent is required on concrete and moisture resistant plasterboards.

<sup>2</sup>Dampen background first.

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