

Plaster skimming

Identification

Achieve a smooth, seamless surface ready to receive decorative treatment.

Skim plastering offers many of the advantages of a traditional solid plaster finish, including robustness, better acoustics and a quick turnaround on site.

Our ThistlePro® plasters provide the original and best smooth finish with added benefits.

ThistlePro DuraFinish plasters improves durability.

ThistlePro PureFinish plaster improves indoor air quality.

ThistlePro Magnetic is a plaster to create daily changeable displays.

ThistlePro FastSet Finish gives a faster set time straight out of the bag without the need of additives.

ThistlePro PureFinish contains ACTIVair®. ACTIVair makes indoor air healthier by eliminating up to 70% of formaldehyde present in indoor air.



Why specify plaster skimming products?

Our Thistle plaster range achieves a smooth and uniform finish in one visit to site

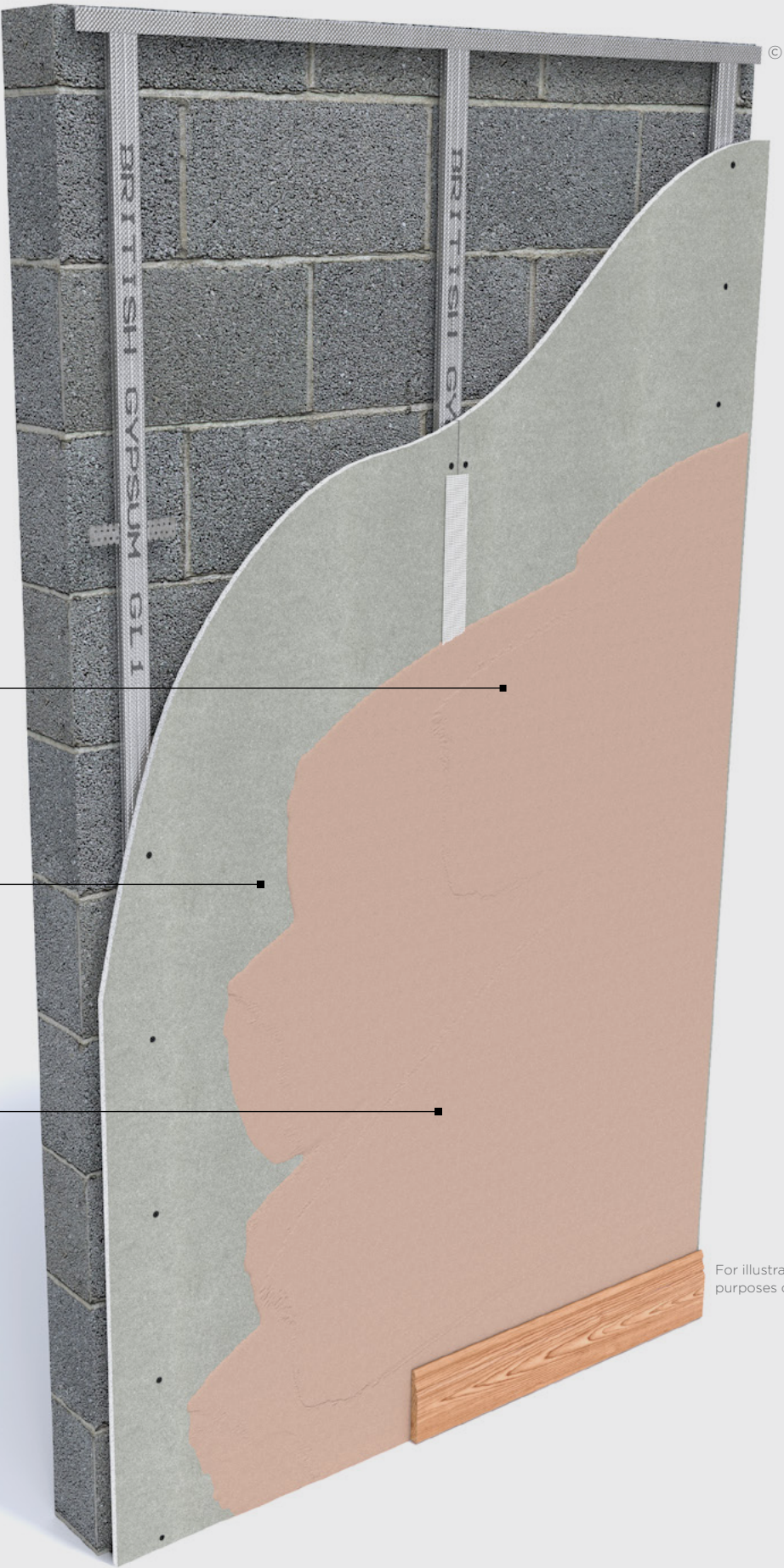
Thistle MultiFinish enhances acoustic performance on a range of GypWall systems

Thistle finishing plasters provide a system that's suitable for moderate impact and wear.

ThistlePro DuraFinish provides enhanced resistance and is proven 60% tougher compared to other standard skims.



You can use Thistle and ThistlePro plasters to finish our systems. There are specifications within these systems that qualify for our **SpecSure®** warranty. For more information see british-gypsum.com/specsure



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Plaster skimming

Design considerations

Reaction to fire

All Thistle finish plasters achieve a Euroclass A1 reaction to fire rating. This makes them an appropriate finish for almost all situations.

Sound insulation

The application of Thistle finish plasters can help the plasterboard element to achieve optimum acoustic performance. They do this in two ways:

- A change to the measured acoustic performance, by applying 2mm Thistle MultiFinish to both sides of certain GypWall partitions, has a positive effect on the sound insulation rating. This benefit results in a performance uplift of up to R_w 2dB.
- Any small gaps or other air paths will be sealed during plastering, limiting flanking routes for sound transfer.

This is effective on partitions that are limited by their high frequency performance (coincidence region). This application will also add mass to the partition, which has a positive effect on the mid-frequency of the spectrum. Refer to Building acoustics in system design principles on british-gypsum.com

Stability

Thistle finish plasters attain high strength during the drying process and do not suffer from inherent shrinkage cracks.

Quality of finish

Homeowners and building occupiers are quick to notice a poor quality finish. Thistle finishing plasters, are capable of providing a superior, smooth surface whether you're skimming on plasterboard or using a two-coat plaster system. And it's ready to take whatever decorative treatment you choose.

Damage resistance

A skim finish not only provides a better finish, it is also more robust, providing additional resistance to damage in high traffic areas or rooms subject to greater wear and tear. ThistlePro DuraFinish provides additional resistance to accidental damage, glancing impacts and repeated abrasion, which can cause scratching, gouging or chipping of other wall finishes. It also has excellent adhesion to most backgrounds, therefore damage to small areas does not spread or cause debonding, which makes repair easier.

Looking for performance selection tables?

We're committed to providing technical information that is transparent, clear, accurate, and always up-to-date. So you can rely on it when making decisions at any stage of the design, specification, installation, use, maintenance and disposal process.

All performance data is now available to view and download on our website.

british-gypsum.com/thistle-plaster-systems



Indoor air quality – ThistlePro PureFinish

Volatile Organic Compounds (VOCs), including formaldehyde are invisible, yet often present in the air we breathe. They are emitted from furniture, carpets and building materials. Long-term exposure can potentially cause health problems and reduce general wellbeing. Studies show that clean air can speed up patient recovery in hospitals, reduce absenteeism at work, and increase pupils' concentration at school. ACTIVair® is our latest technology designed specifically to convert formaldehyde emissions into non-harmful inert compounds. Tests show that ACTIVair® decomposes up to 70% of the formaldehyde in a controlled test environment*. This smart technology continues to work for over 50 years**. Whilst other solutions absorb formaldehyde, they don't decompose them like ACTIVair®, risking re-emission at a later date.

* Based on tests using ISO 16000-23 standard, by independent certified body.

** Lifetime has been confirmed experimentally and analytically on a commercial board sample in the frame of a collaborative work with independent certified body ULE and Pr J. Zhang, University of Syracuse, expert in Environmental Chemistry and Engineering, Mechanical ventilation and Indoor air quality.

Table 1: Physical properties

Plaster category	Plaster type	Bag weight (kg)	Approximate coverage m² per bag (based on 2mm thickness)	Minimum setting time (minutes)
Thistle Essential	Thistle MultiFinish	25	10	90
	Thistle BoardFinish	25	10	90
ThistlePro	ThistlePro FastSet Finish	25	10	60
	ThistlePro DuraFinish	25	10	105
	ThistlePro PureFinish	25	10	90
	ThistlePro Magnetic	25	5*	200

* Based on 3mm thickness

Table 2: Performance comparison between Thistle MultiFinish and ThistlePro DuraFinish

Property tested	Test method	Real examples	Damage measured	Performance		Improvement (%)
				ThistlePro DuraFinish	Thistle MultiFinish	
Glancing impact blow	150 kg trolley, 30° angle, 1 m/s speed, simulating impact energy of 75J	Corners of furniture, trolleys and wheeled equipment, general light impacts	Depth of identification	0.68mm	2.60mm	74
Scratch resistance, diamond stylus	Taber shear/scratch tester, standard	Light contact with sharp objects	Weight loss	0.004g	0.07g	94%
Scratch resistance	Taber shear/scratch tester, modified to use key, 180g load	Light contact with sharp objects	Visual assessment	No damage	Visible scratch	—
	Taber shear/scratch tester, modified to use key, 3.4kg load	Medium-heavy contact with sharp objects	Weight loss	0.003g	0.195g	85%
Scratch resistance	Elcometer	Medium contact with sharp objects	Weight loss	0.008g	0.2g	60%
Abrasion resistance	Taber Abraser	Rubbing off chair backs	Weight loss	0.27g	0.3g	10%
Surface hardness average	BS EN 13279-1 – ball indentation	Heavy objects leaning on a wall	–	15N/mm²	15N/mm²	0%
Compressive strength	BS EN 13279-1 – prism crush	None	–	12N/mm²	12N/mm²	20%
Flexural strength	BS EN 13279-1 – prism 3-point bend	None	–	5N/mm²	5N/mm²	43%

Plaster skimming

Design considerations

The World Health Organisation concerns about formaldehyde (which is a common VOC) in relation to human health are well published (WHO guidelines for indoor air quality: selected pollutants; 2010).

You can't see VOCs, or smell them. Therefore there is no way of knowing what concentrations you are being exposed to on a daily basis. As building regulations lead to more airtight construction, the importance of VOC management becomes more critical.

ThistlePro PureFinish is a versatile finish coat plaster that provides good results on all suction backgrounds where there is a requirement for improved indoor air quality. ThistlePro PureFinish contains ACTIVair® technology and is an excellent choice of plaster for internal walls and ceilings.

ACTIVair® technology is designed specifically to decompose formaldehyde emissions into non-harmful inert compounds, thus eliminating the risk of re-emission. Tests show that ACTIVair® decomposes 70% of the formaldehyde in a controlled test environment.

Decoration – ThistlePro PureFinish

Gypsum-based plasterwork must always be thoroughly dry before decorating, although a coat of permeable paint can be applied in the interim. ThistlePro PureFinish plaster surfaces can be finished using breathable water-based paint and wallpaper finishes, as well as wall covering adhesives, but always follow the manufacturers' recommendations for the best results.

VOC concentrations in the air (PPM)

Indoor										Outdoor		
0.018	0.016	0.014	0.012	0.010	0.008	0.006	0.004	0.002	0.000	0.000	0.002	0.004
Formaldehyde												
Hexaldehyde												
Toluene												
Acetaldehyde												
n-Undecane												
m/p-Xylene												
n-Decane												
1,4-dichlorobenzene												
1,2,4-trimethylbenzene												
o-Xylene												
Ethylbenzene												
Benzene												
1-methoxy-2-propanol												
2-butoxyethanol												
Tetrachloroethylene												
Acroleine												
Trichloroethylene												
Styrene												
1-methoxy-2-propylacetate												
2-butoxy-ethylacetate												

Source: Indoor Air Quality Observatory VOC concentration

Interactive walls – ThistlePro Magnetic

ThistlePro Magnetic is a plaster designed to attract magnets – turning your wall into an interactive area.

With a plaster that attracts magnets you can turn any wall into an inspiring interactive gallery or notice board that you can change as often as you like, no fuss, no mess.

ThistlePro Magnetic can be applied to new or existing walls. Applied with a minimum 3mm thickness it can be decorated with standard emulsion paint or combined with specialist decorative finishes, including blackboard and whiteboard paint or wallpaper.

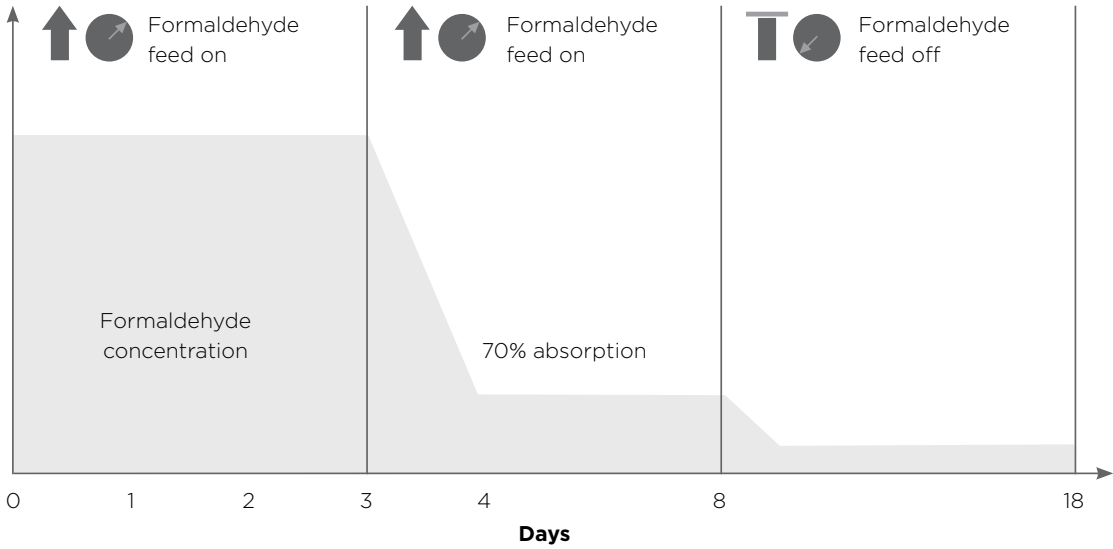
Planning – key factors

Care must be taken when applying finish coats in low temperatures and an allowance made for slightly longer setting and drying times. Plasters must only be applied where backgrounds are not frozen or will remain at 2°C or above until dry.

Ambient and background temperatures must be maintained above 5°C until fully dry to apply ThistlePro DuraFinish.

When installing suspended ceilings, Gypframe FEA1 Steel Angle is the preferred suspension option when a plaster finish is specified.

ACTIVair® test principle



Backgrounds

Plasterboards (excluding moisture resistant grade boards)

Skimming should be specified only on the face of boards, i.e. the side without a paper overlap. This will be the ivory face in the case of Gyproc WallBoard, Gyproc WallBoard Ten, Gyproc DuraLine and Gyproc HandiBoard, the coloured face of Gyproc FireLine and Gyproc SoundBloc. Joints must be reinforced and for greatest resistance to cracking this should be carried out using Gyproc Joint Tape. Alternatively, Thistle ProTape FT50 or FT100 can be used. A range of corner and stop beads are available for reinforcement of external angles and edges.

Glasroc F MultiBoard, Glasroc F FireCase and Rigidur H

Skim finishing should be applied to the smooth face of the board. Rigidur H needs to be treated with diluted Thistle GypPrime prior to skimming to control the suction. Application techniques and joint reinforcement are similar to those used on plasterboards.

Moisture resistant (MR) grade boards

Skim plastering is not normally specified to Gyproc Moisture Resistant grade boards. These types of board are intended for use in environments of higher than normal humidity for which no gypsum plaster is designed to be suitable.

Where moisture resistant board options are used in shell and core construction to provide temporary resistance to high moisture conditions, they can be skimmed at a later date after the building envelope has been made weather-tight. Likewise, moisture resistant boards can be skimmed where they are being used for convenience and are away from wet areas. Tiling is not recommended on plaster skimmed MR plasterboards. Application techniques and joint reinforcement are the same as those used on plasterboards. Plaster should be applied only to the face of moisture resistant boards. Pre-treatment with Thistle Bond-it is required when using Thistle finishing plasters. Pre-treatment is not necessary if using ThistlePro DuraFinish.

Mixing

Thistle plasters should be mixed by adding to clean water using clean mixing equipment. Contamination from previous mixes can adversely affect the setting time and strength. Fresh contamination has more effect than old, so equipment should be washed immediately after mixing.

Thistle plasters are suitable for mixing by hand or mechanical whisk of a slow speed, high torque type. While mechanical mixing speeds the process up, there is no need to continue mixing after dispersing lumps and achieving the right consistency. Over-mixing wastes time and energy, can affect setting times, lead to deterioration in workability and create difficulty in achieving a flat finish.

Tiling

Tiles up to a weight of 20kg/m² can be applied directly to Thistle finish coats, 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/m², 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 used.

Tiles should not be applied directly to Thistle undercoats, with the exception of Thistle DriCoat.

Tile finishing is not compatible with ACTIVair® technology, as the technology requires a breathable finishing.

Plaster skimming

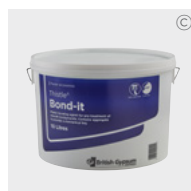
System components

Achieve a smooth, seamless surface ready to receive decorative treatment.



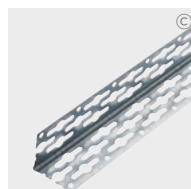
Thistle GypPrime

Thistle GypPrime is a suction control primer to give a lower suction base on very dry backgrounds.



Thistle Bond-it

Thistle Bond-it is a bonding agent for smooth and/or low suction backgrounds providing an adequate key.



Thistle Thin Coat Plaster Angle Bead

Angle Bead
Thistle Thin Coat Plaster Angle Bead is a galvanised steel bead with perforated wings. Use it to reinforce external angles in 2mm plaster finishes.



Thistle Thin Coat Plaster Stop Bead

Thistle Thin Coat Plaster Stop Bead is a galvanised steel bead with perforated wings. Use it to form a clean edge in 2mm plaster finishes.



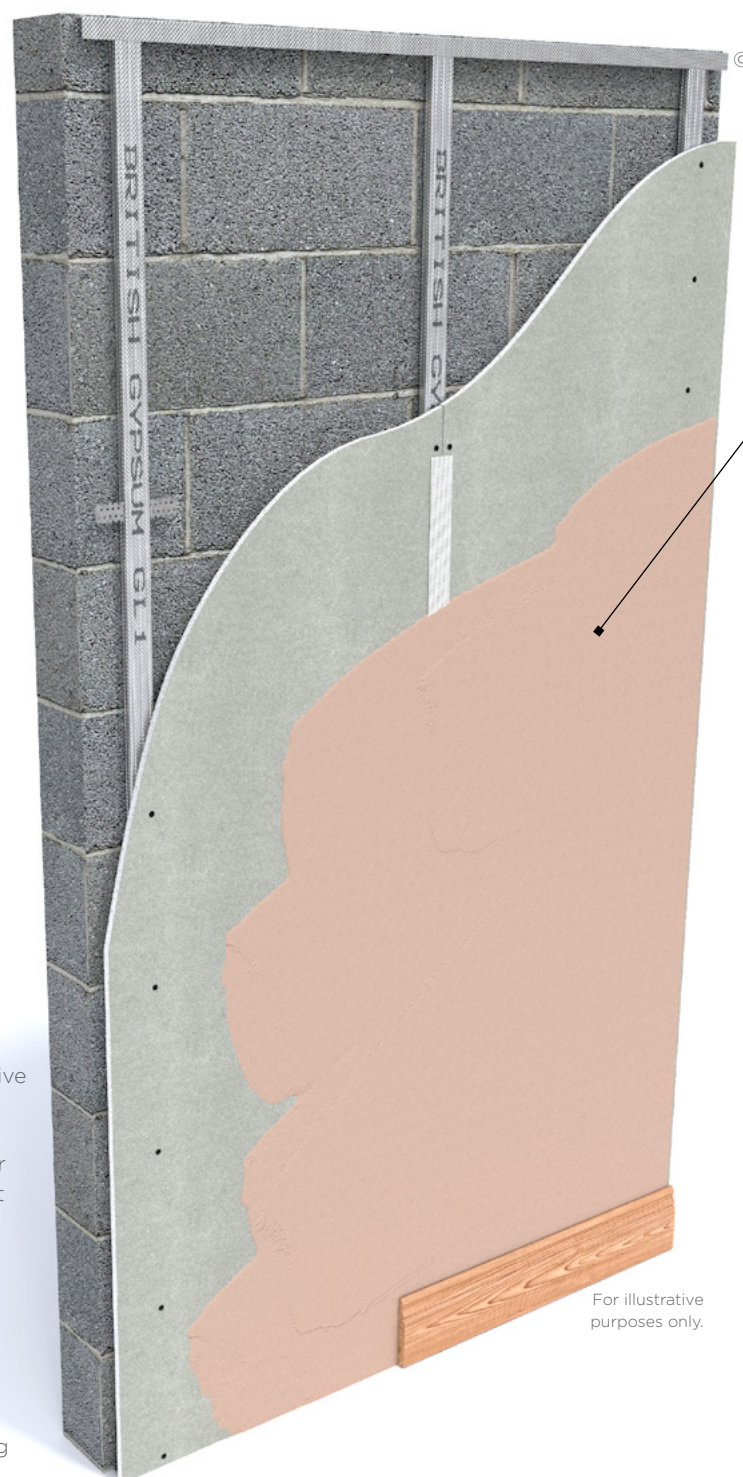
Thistle ProTape FT50

Thistle ProTape FT50 is a self-adhesive glass fibre mesh tape. Use it to reinforce flat joints in skim finishes to plasterboard backgrounds and for placing over gaps and reinforcement to small areas of damaged plasterboard.

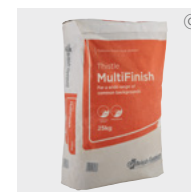


Gyproc Joint Tape

Gyproc Joint Tape
Gyproc Joint Tape is a paper joint tape with a centre crease and spark perforations. Use it for reinforcing flat and internal angle joints in plasterboard constructions, including through autotaping machines.

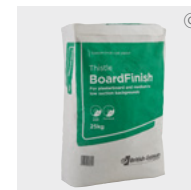


For illustrative purposes only.



Thistle MultiFinish

Thistle MultiFinish is a gypsum finish plaster that provides a smooth, inert and high quality surface to internal walls and ceilings.



Thistle BoardFinish

Thistle BoardFinish is a gypsum finish plaster that provides a smooth, inert and high quality surface to internal walls and ceilings.



ThistlePro FastSet Finish

ThistlePro FastSet Finish gives a faster set time straight out of the bag without the need of additives. It's a quick setting gypsum finish plaster that provides a smooth high quality surface finish. Ideal for patch and repair jobs as well as smaller internal walls and ceilings.



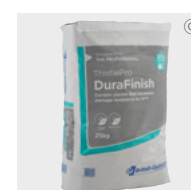
ThistlePro Magnetic

ThistlePro Magnetic is a finish plaster that attracts magnets, letting you hang paintings and other items without fixings. It gives you interactive walls in schools, offices, living spaces, or anywhere where you want to get more creative with your walls.



ThistlePro PureFinish

ThistlePro PureFinish helps to make indoor air healthier by absorbing one of the most common airborne pollutants. It's a gypsum finish plaster that provides a smooth, inert and high quality surface to internal walls and ceilings.



ThistlePro DuraFinish

ThistlePro DuraFinish is an extra hardwearing finish plaster that resists impact to keep walls in high traffic areas damage free for longer, cutting maintenance costs. It is a gypsum finish plaster that provides a smooth, inert and high quality surface to internal walls and ceilings.



You can use Thistle and ThistlePro plasters to finish our systems.

There are specifications within these systems that qualify for our **SpecSure®** warranty. For more information see **british-gypsum.com/specsure**

Plaster skimming

Installation



Thistle Bond-it may be required for background preparation to provide a mechanical and chemical key for the appropriate undercoat or finish plaster.



Thistle GypPrime can be used for background preparation where high levels of suction may adversely affect the undercoat or finish plaster.

The information below is intended to be a basic description of how the system is built.
Full installation guides are available at british-gypsum.com/instructions



A Thistle Thin Coat Angle Bead is fixed to the plasterboard angle by embedding in dabs of finish plaster.



Where there is an increased risk of cracking, or where gaps exceed 3mm, the gaps are reinforced with Gyproc Joint Tape bedded in Thistle plaster. In other situations, plasterboard joints can be reinforced with Thistle ProTape FT50 or FT100 glass fibre mesh tape.

Cleaning equipment

All equipment should be thoroughly cleaned before and after use. Small residual amounts of set or part-set material will accelerate the hardening of freshly mixed finish plaster.



Thistle plasters should be mixed by adding to clean water and using clean mixing equipment. Contamination from previous mixes must be avoided as this can adversely affect the setting time and strength.



Thistle plaster is applied with firm pressure, built out to the required thickness in two applications and trowelled to a smooth matt finish. When applying ThistlePro FastSet Finish, a single mix for both first and second coat is recommended.

Two coat plasters

Identification

High quality lining solutions providing the perfect finish for your walls

Thistle plasters offer a full range of specific and multi-purpose solutions for a wide range of internal plastering needs and backgrounds including concrete, brick, blockwork, expanded metal lath and plasterboard. They are designed to suit either hand or machine application.

Backed up by a range of compatible, high quality accessories, Thistle plasters produce a high quality surface that's tough and durable.

These systems can be skim finished with ThistlePro® PureFinish which contains ACTIVair®. ACTIVair makes indoor air healthier by eliminating up to 70% of formaldehyde present in indoor air.



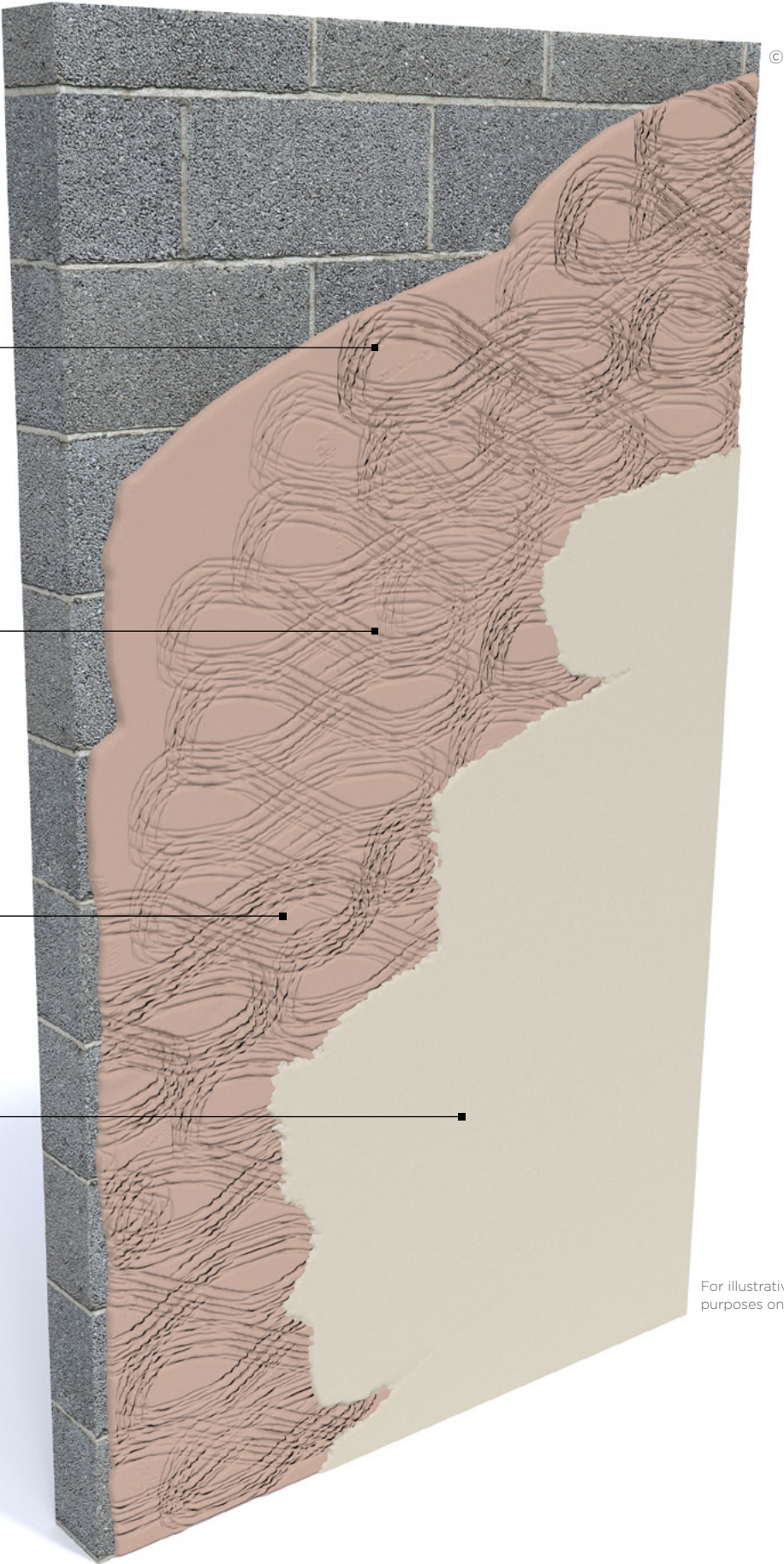
Why specify two coat plasters?

Thistle plasters provide a long term high quality appearance. They range from extra durable plasters, such as ThistlePro DuraFinish, that resist scuffs and knocks, to plasters specifically designed for different types of background

Thistle plaster is ideal for use where thermal mass is an integral part of the design of the building. Plaster provides the desired decorative finish whilst also enabling efficient heat transfer between the air and the fabric of the building

Plastering contributes to the overall airtightness of masonry walls

Thistle two-coat plasters are highly durable and resistant to damage, reducing whole life costs and potentially extending maintenance cycles



For illustrative purposes only.

Two coat plasters

Design considerations

Building design

In general, normal thicknesses using undercoat/finish plaster systems are 11mm to walls or up to 8mm to ceilings, plus 2mm of finish plaster.

One coat products are applied to the same total thickness, i.e. 13mm to walls or up to 10mm to ceilings.

When using ThistlePro DuraFinish, the specified thickness of 2mm must be applied for the full performance to be achieved.

When using Thistle Bond-it or plastering ceilings, do not exceed the thicknesses given. In cases involving both the use of a bonding agent and a sloping or horizontal background, e.g. the underside of concrete stair or floor units, it is strongly advised to reduce thickness further to minimise stress placed on the bonding agent. Greater thickness requires the use of a support for the suitable plaster, e.g. Thistle BondingCoat onto metal lathing.

Refer to Table 1 on page 6.56.

For plaster systems used on walls that do not use a bonding agent, thicknesses up to a maximum of 25mm, may be built up in a series of fully keyed coats of nominally 8mm using the same undercoat product throughout. Total thickness over 25mm normally requires the use of expanded metal lathing for Thistle BondingCoat. If necessary this can be spaced away from the background, e.g. by fixing to timber battens.

Reaction to fire

Gypsum plaster is non-combustible and achieves EN Euroclass A1. It contains water, chemically combined in its crystallized structure, that has to be driven off before the cold face temperature can rise above 100°C.

Background preparation

All surfaces should be reasonably dry and protected from the weather. Backgrounds need to be suitable with regards to:

- Its strength – can it take the weight of the plaster.
- Suction – how quickly will it pull the moisture out of the plaster as it sets.
- Bonding properties – does it have a texture for a key.
- Shrinkage – will it continue to shrink underneath a layer of plaster.

- Thermal movement characteristic – will it expand or contract causing the plaster to crack.
- Water and soluble salt content – are the levels likely to cause problems to the key or finish.

If there is any doubt about the suitability of a background for direct plastering, a trial panel should be plastered and tested for adhesion once dry. If adhesion is inadequate, the appropriate preparation and bonding agent must be applied to the background prior to plastering.

Important

Thistle plasters should only be applied to backgrounds where the minimum temperature will remain at 2°C or above until dry (except ThistlePro DuraFinish which should remain at 5°C or above until dry)

Thistle plasters should not be specified for use where temperatures exceed 49°C.

Preparation

Backgrounds such as ceramic tiles, glazed bricks, exceptionally smooth concrete or concrete made from limestone, brick, granite and certain lightweight aggregates, will require preparation and pre-treatment with Thistle Bond-it bonding agent prior to plastering. The surface should be thoroughly cleaned and allowed to dry before pre-treatment.

If there is any doubt about the suitability of a background for direct plastering, a trial panel should be plastered and tested for adhesion once dry. If adhesion is inadequate, the appropriate bonding agent must be applied to the background prior to plastering.

The surface must be clean, dry and suitable to receive gypsum plaster.

Very high or low suction substrates should be pre-treated.

The use of Thistle Bond-it is recommended for smooth and/ or low suction backgrounds. Thistle Bond-it bonding agent is specially formulated for use on smooth backgrounds. It has many advantages over PVA and is the only bonding agent recommended for use with Thistle gypsum plasters (excluding Thistle HardWall). Benefits include:

- Contains fine aggregates for better mechanical adhesion.
- Applied in one coat only.

- Plaster is applied when Thistle Bond-it is dry, allowing flexible timing of application.
- Plaster can be applied at normal thickness, i.e. up to 13mm.
- Maximum 8mm on soffits.
- No dilution required, ensuring consistent product application.
- Green coloured for ease of identification in application.

The high suction of certain backgrounds can be suitably adjusted by sprinkling with water but some very porous surfaces, wetting alone may be insufficient as the water is almost immediately absorbed.

Thistle GypPrime is specially formulated for the pre-treatment of very high suction backgrounds. It is the only suction control primer recommended for this use with Thistle plasters. It can be diluted as required, giving total flexibility for different levels of suction control, and is yellow coloured for ease of identification.

Thistle Bond-it and Thistle GypPrime should be applied strictly according to the user instructions. Care should be taken not to exceed the recommended plaster thickness otherwise bond failure may occur. Where a greater thickness of plasterwork is required, due to an uneven background for example, expanded metal lathing and Thistle BondingCoat should be specified.

Brickwork/blockwork

On high suction brickwork / blockwork the use of Thistle HardWall is recommended. Aerated concrete blocks can give rise to high suction. Suction can be controlled with water or, if severe, pre-treated with Thistle GypPrime.

Low suction backgrounds, such as some concrete blocks or engineering bricks, provide minimal absorption. The joints should be raked thoroughly to give an adequate mechanical key. Smooth backgrounds should be pre-treated with Thistle Bond-it. Dense aggregate concrete blocks do not require wetting prior to plastering, but the plaster should be applied with very firm pressure to ensure intimate contact with the background.

Concrete

The surface must be clean, dry and suitable to receive gypsum plaster. Any mould, oil or other release agents present must be thoroughly removed from the surface.

Normal ballast concrete should be given sufficient time to mature before applying plaster. The 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 to 10 minutes before plaster application.

In-situ or pre-cast concrete that is exceptionally smooth, or which is made from limestone, brick, granite and certain lightweight aggregates, will require pre-treatment with Thistle Bond-it.

No-fines concrete does not require wetting prior to plastering.

Pre-cast concrete units should be plastered with Thistle BondingCoat.

With composite ceilings, the concrete beams should be pre-treated with Thistle Bond-it. If required, the suction of the infill panels can also be controlled.

To reduce the risk of cracking, the floating coat should be applied with sufficient pressure to fill all gaps between the units.

Combination backgrounds

The right product for each part of the background should be used, with joints formed using back-to-back Thistle Plaster Stop Beads, but this can be impractical, e.g. narrow concrete columns or lintels within block walls. These should be bridged using metal lathing and the plaster isolated from the concrete using building paper. Refer to Annex B3 of BS EN 13914-2.

Control joints

It is common for movement joints to be included in masonry construction. Where these occur, back to back Thistle Plaster Stop Beads should be used.

Two coat plasters

Design considerations

Expanded metal lath/beads

Thistle plasters should only be applied to galvanised steel or epoxy coated stainless steel. Before plastering, all cut edges, damaged metal lath, staples, nail heads and ends of tying wire should be bent inwards and adequately protected by galvanising, painting or by applying a thick coat of lacquer. Normal application to expanded metal lath employs a pricking-up coat, which should be forced through the metal lath to provide a good key to the background. The surface of the pricking-up coat must be wire-scratched to provide a good key for a floating coat of the same undercoat plaster. The pricking-up coat must be allowed to set but not too dry before the floating coat 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 a Thistle or ThistlePro finishing plaster. Thistle GypPrime is required prior to the application of ThistlePro DuraFinish.

Machine applied undercoat and one coat plaster requires the use of spray lath.

Sand/cement undercoats

Cement based undercoats shrink on drying, usually with some cracking, which can appear several days or even weeks after application. If a Thistle finish plaster is applied before the shrinkage is complete there is an increased risk of delamination or cracking of the finish, particularly if the undercoat was not thoroughly keyed.

The key provided to cement-based undercoats needs to be much deeper and the drying time allowance much longer than for gypsum-based undercoats. Retarded ready-mixed sand / cement mortars may have delayed shrinkage, and may contain additives that interfere with the setting or strength of Thistle finish plasters.

Re-plastering walls following damp-proof course treatment

Thistle DriCoat is the only Thistle plaster recommended for this application.

The source of the rising dampness must be identified and eliminated. The existing plasterwork should be hacked off to a height at least 0.5m above either the new damp-proof course or the last detectable sign of dampness. Where the old plaster is gypsum based, it must be completely removed.

Following chemical damp-proof injection, old mortar joints, which are the site of higher salt concentrations, should be thoroughly raked out and the face of the brickwork brushed with a wire brush. Ideally, re-plastering with Thistle DriCoat should be delayed as long as possible to allow the background to dry out. Before re-plastering, any salts brought to the surface of the background during drying should be carefully removed.

Heavy salt contamination in the background can cause persistent damp problems. Buildings not originally built with a damp-proof course, such as older farmhouses, stables and barns, or buildings that have been exposed to storage of chemicals, are particularly at risk from this problem. Thistle DriCoat should not be used in these situations unless an appropriate survey shows that the risk from salts is minimal. The use of an independent wall lining may be a better solution.

Chimney breasts are another area where salt deposits may be heavy.

Application of Thistle DriCoat can proceed once the background is clean, sound, free from dust and efflorescence, and where only residual moisture is present. Low suction or smooth backgrounds, such as engineering bricks, should be treated prior to plastering with a water-resisting bonding aid (by others), which should be plastered in accordance with the manufacturer's recommendations.

Where the background is dry, it is important to control suction with the application of water. This prevents rapid drying of the plaster, which would impair its strength. Thistle BoardFinish should be used as a finish coat to Thistle DriCoat.

Angle beads must not be fixed with gypsum-based materials. Thistle DriCoat should not be used below ground level as hydrostatic pressure can give rise to direct water penetration. A suitable tanking treatment must be specified in this situation.

Mixing

Thistle plasters should be mixed by adding to clean water using clean mixing equipment. Contamination from previous mixes can adversely affect the setting time and strength. Fresh contamination has more effect than old, so equipment should be washed immediately after mixing.

Thistle plasters are suitable for mixing by hand or mechanical whisk of a slow speed, high torque type. While mechanical mixing speeds the process up, there is no need to continue mixing after dispersing lumps and achieving the right consistency. Over-mixing wastes time and energy, can affect setting times, lead to deterioration in workability and create difficulty in achieving a flat finish.

Undercoat plastering to plasterboard

Plaster should only be applied to the front face of plasterboards.

Where a Thistle BondingCoat, Thistle or ThistlePro finishing plaster is applied to plasterboards, Gyproc Joint Tape should be used to reinforce joints and angles. Any gap between boards exceeding 3mm should be pre-filled with plaster, which is spread along each joint. Gyproc Joint Tape is then pressed firmly into the plaster, and immediately covered with a further application. The joints should be allowed to stiffen, but not dry, before undercoat plastering commences. Thistle Universal OneCoat is also suitable for use on plasterboards where it combines the functions of both undercoat and finish plaster.

Projection plastering

Thistle Universal OneCoat and Thistle HardWall are both suitable for machine application. Plaster should be sprayed on to the background in the form of a ribbon. The consistency should allow the ribbons to run together. When a substantial area has been covered, the plaster is worked and ruled as in hand plastering. When using Thistle Universal OneCoat it is easier to attain the required thickness in one application by machine, but the total thickness should not normally exceed 25mm, subject to background suitability.

One coat hand plastering

Thistle Universal OneCoat should be applied with firm pressure, built out to the required thickness and ruled to an even surface, filling in any slacks or hollows. As the plaster stiffens, further flattening and paring should be carried out. When sufficiently firm, the surface should be scoured with a sponge float and water as required, to raise the fines to the surface. Allow the fines time to stiffen, then progressively trowel to a smooth matt finish.

Two coat plasters

Design considerations

Decoration

Thistle plasters can be decorated with most paint finishes and most wall coverings. Follow paint 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.

ThistlePro PureFinish plaster surfaces can be finished using breathable water-based paint and wallpaper finishes, as well as wall covering adhesives, but always follow the manufacturers' recommendations for the best results.

Take care with Thistle HardWall, which dries from the surface, appearing surface dry before it is fully dry in its depth. BS EN 13914-2: Design Considerations and Essential Principles 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/m² can be applied directly to the Thistle finish coats, 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/m², consideration should be given to tiling directly to the masonry background without plastering. If plastering to provide a background for tiles, avoid polishing the surface. Polished plaster surfaces should be roughened and a suitable primer used. Tiles should not be applied directly to Thistle undercoats, with the exception of Thistle or ThistlePro finishing plaster. Tile finishing is not compatible with the ACTIVair® technology in ThistlePro PureFinish, as the technology requires a breathable finish.

ThistlePro Plasters

Systems can be finished with one of our ThistlePro finish plasters. Designed to offer more choice when it comes to plaster, the range provides an opportunity to add an extra dimension to plastering, giving either the plasterer or end user extra benefits compared to standard plaster.

ThistlePro PureFinish contains ACTIVair® technology which improves indoor air quality by removing formaldehyde.

ThistlePro DuraFinish is our most versatile and hard wearing plaster. It is 60% tougher than standard skim.

ThistlePro Magnetic is a unique plaster that attracts magnets, allowing walls to be turned into interactive spaces.


ThistlePro FastSet Finish gives a faster set time straight out of the bag without the need of additives.

To find out more visit the plaster skimming section.

Table 1 – Undercoat solid plasters

















Two coat				One coat
Product	 Thistle HardWall High impact resistance for most masonry backgrounds. Can be spray applied.	 Thistle BondingCoat For smooth and low suction backgrounds.	 Thistle DriCoat Cement based plaster for replastering after a DPC. Finished with Thistle BoardFinish.	 Thistle Universal OneCoat For hand or spray application to most backgrounds.
What background surface?				
Suction ↑ High ↓ Low	Aircrete blocks	✓	–	✓
	Common bricks	✓	–	✓
	Medium-density blocks	✓	✓	✓
	Dense blocks	✓ Not on smooth low suction blocks	✓ Use on smooth low suction blocks	✓ Use on smooth low suction blocks
	Engineering bricks with raked joints	–	✓	–
	Plasterboard and Glasroc F MultiBoard	–	✓ Use on moisture resistant variant plasterboards	–
	Cast in situ and pre-cast concrete	–	✓ B	–
	Painted/tiled surfaces	–	✓ B	–
	Metal lathing	When bridging columns and lintels	✓	✓
Properties				
Thickness applied – walls		11mm	11mm	11mm
Thickness applied – ceilings		8mm	8mm	–
Coverage per bag hand applied		3.0m ² at 11mm	2.75m ² at 11mm	3.25m ² at 11mm
Water requirement (litres per bag)		15	14	15
Dry set weight		8.8kg/m ² at 11mm	11kg/m ² at 11mm	7.5kg/m ² at 13mm
				12.6kg/m ² at 13mm

Notes:
Thistle plasters should only be applied to backgrounds where the minimum temperature will remain at 2°C or above until dry (except for ThistlePro DuraFinish which should remain at 5°C or above until dry).


 **Bonding agent: Thistle Bond-It**
Bonding agent for smooth low suction backgrounds. Apply undiluted, in one coat. Plaster when dry. (Not to be used with Thistle HardWall). Use Thistle Bond-It where you see this symbol.


Two coat plasters

System selector

Table 2 – Skim finish plasters							
Essential finish				Performance finish			
Product		 ©	 ©	 ©	 ©	 ©	 ©
		Thistle MultiFinish A versatile plaster for skim finishing undercoats and plasterboards.	Thistle BoardFinish For low to medium suction backgrounds especially plasterboard.	ThistlePro FastSet Finish A versatile finish plaster that gives a faster set time straight out of the bag without the need of additives.	ThistlePro DuraFinish A versatile plaster that is 60% tougher than standard skim plasters.	ThistlePro PureFinish Finish plaster containing ACTIVair® technology for finishing undercoat plasters and plasterboard.	ThistlePro Magnetic A Thistle plaster that attracts magnets leaving a quality surface for internal walls and a durable base for applying decorative finishes.
What background surface?							
High ↑ Suction ↓ Low	Dry undercoats	✓ Dampen background first	–	✓ Dampen background first	✓ 	✓ Dampen background first	✓
	Damp undercoats	✓	–	✓	✓ 	✓	✓
	Plasterboard	✓  Use on moisture resistant variant plasterboards	✓  Use on moisture resistant variant plasterboards	✓  Use on moisture resistant variant plasterboards	✓	✓  Use on moisture resistant variant plasterboards	✓
	Flat, smooth concrete	✓ 	✓ 	✓ 	✓	✓ 	✓
	Waterproofed, cement-based undercoats	–	✓	–	✓	–	–
Properties							
Thickness applied – walls		2mm	2mm	2mm	2mm	2mm	3-6mm
Coverage per bag hand applied		10m² at 2mm	10m² at 2mm	10m² at 2mm	10m² at 2mm	10m² at 2mm	5m² at 3mm
Water requirement (litres per bag)		11.5	11.5	11.5	11.5	11.5	8
Dry set weight		2.7kg/m² at 2mm	2.7kg/m² at 2mm	2.7kg/m² at 2mm	–	2.7kg/m² at 2mm	

Notes: Thistle plasters should only be applied to backgrounds where the minimum temperature will remain at 2°C or above until dry (except for ThistlePro DuraFinish which should remain at 5°C or above until dry).
On flat surfaces, 2mm is recommended. If the surface is very uneven, consider dubbing it out with an undercoat.

 **Suction control: Thistle GypPrime**
Suction control primer used to reduce suction on very dry backgrounds. Use diluted (up to 5 parts water to one part Thistle GypPrime) or undiluted if severe suction control is required. Plaster is applied after Thistle GypPrime has soaked into the background. Use Thistle GypPrime where you see this symbol

 **Bonding agent: Thistle Bond-it**
Bonding agent for smooth low suction backgrounds. Apply undiluted, in one coat. Plaster when dry. (Not to be used with Thistle HardWall). Use Thistle Bond-it where you see this symbol.

Two coat plasters

Installation



Thistle Bond-it may be required to provide a mechanical and chemical key for the appropriate undercoat plaster.



Thistle GypPrime may be required to be used on backgrounds where high levels of suction may adversely affect the undercoat or finish plaster.

Cleaning equipment

All equipment should be thoroughly cleaned before and after use. Small residual amounts of set or part-set material will accelerate the hardening of freshly mixed finish plaster.

The information below is intended to be a basic description of how the system is built.



Mix Thistle plasters by adding to clean water and using clean mixing equipment. Avoid contamination from previous mixes as this can adversely affect the setting time and strength.



Fix a Thistle Plaster Angle Bead or Thistle Plaster Stop Bead to the background by embedding in the undercoat plaster. Where Thistle BondingCoat undercoat plaster is to be applied to plasterboard, reinforce the board joints with Gyproc Joint Tape bedded in Thistle plaster.



Select the correct Thistle plaster to suit the background suction and surface texture. Apply the plaster in maximum 8mm coats. Allow each coat to set before applying the next.



Rule the final coat to an even surface and lightly scratch to form a key.



Mix Thistle plasters by adding to clean water and using clean mixing equipment. Avoid contamination from previous mixes as this can adversely affect the setting time and strength.



Allow the Thistle Undercoat Plaster to set. Apply Thistle Finish Plaster with firm pressure, build out to the required thickness in two applications and trowel to a smooth matt finish. It may be necessary to control the suction with Thistle GypPrime. Good site practice should be followed, as outlined in BS EN 13914-2, Design considerations and essential principles for internal plastering.