

PREPARATION

Levels of finish for plasterboard and their decoration



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Overview

Plasterboard linings will require different specifications depending on where they are installed and the level of finish that is required prior to decoration. The desired **level of finish** for plasterboard is a predetermined outcome that is specified and engineered not just an eventual appearance or paint decoration that is left to chance. **Most domestic and commercial buildings are prepared to a level 4 finish.**

The decision on what level of finish is desired or needed should be determined at the design stage. Leaving this decision until the decoration stage, after installation and/or finishing is complete, may not produce the desired outcome.

Three levels of finish for decoration finish:

There are three levels of finish as defined by AS/NZS 2589:2007 "Gypsum linings – application and finishing" for plasterboard. (Refer to figure 3.1.2 "Selection of level of finish for lining").

Level 3: Specified for areas that do not require any decoration (ie. above ceilings or inside service shafts etc). These areas are not painted or decorated and the final appearance is not important.

Level 4: The **standard** level of finish for plasterboard lining where normal decoration by painting is to be carried out. Unless otherwise specified, a level 4 finish shall be taken as the **default** standard level of finish for plasterboard (as defined in AS/NZS 2589 (2007)).

Level 5: The highest level of finish (when specified) for plasterboard lining where the desired outcome is to have a finished surface that is as free as possible from surface defects and visual blemishes. Level 5 finish does not however mean that the surface is without texture variation.

Whilst most dwelling occupants have an expectation that the plasterboard finish will be completely blemish free, with zero defects, this is unrealistic. It is difficult to achieve the correct expectation for the default level 4 finish should be "A level surface with no visible joints" and "a serviceable and uniform decorative finish".

When the expectations go beyond what can realistically be achieved with a level 4 finish, it is necessary for designers to carefully evaluate the benefits and cost implications of specifying a level 5 finish.

To achieve the specified level 5 finish, very close collaboration between the builder, carpenter/framer, plasterboard installer, plasterer and the painter is essential for a successful outcome.

Where a level 4 finish is exposed to critical lighting, it should be considered to employ wall coverings or textured coatings. Alternatively, a level 5 finish will need to be employed where the critical lighting conditions, such as low angle glancing light or spot lighting, are employed in conjunction with higher sheen level paints and/or darker colours on feature walls. These higher sheen levels or darker colours can highlight surface imperfections or blemishes, hence a higher level of finish may be the only effective way to achieve a surface that can be decorated satisfactorily.

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Level 4 Summary Requirements

To achieve the **default** or **standard** level of finish for plasterboard, the jointing shall comprise of a three coat system. All joints and interior angles will need tape embedded into the first coat of joint cement/compound. A further two coats of joint cement/compound are then applied over all joints, fastener heads, angles etc. In preparation for painting, the joint cement/compound must be finished evenly and free of tool marks or ridges. Note: Framing deviations and tolerances are: 4mm over 1.8 straight edge for 90% of the area, remainder 5mm. (Ref: Table 4.2.2 AS/NZS 2589 (2007))

Level 4 Skim Coated

A level 4 finish skim-coated is not equivalent to a level 5 finish.

AS/NZS 2589:2007 "Gypsum Linings – Application and Finishing" for plasterboard clearly nominates that a level 4 finish is the standard level of finish for plasterboard linings where normal decoration by painting is to be carried out.

Most domestic and commercial buildings are prepared to a level 4 finish.

On completion of the project, when the general appearance of the surface is considered unsatisfactory, the building contractor may believe that this level 4 finish can now be upgraded to a level 5 finish, by skim coating the existing surface in order to fix the unsatisfactory appearance.



Example of Level 4 Finish with a critical light problem

Whilst it is definitely possible to achieve an improved finish by skim-coating the entire surface with either a **plaster material** (trowel applied) or a **specialty paint** product (spray applied) over the existing level 4 finish, it is not equivalent to a level 5 finish.

A level 5 finish cannot be achieved by this practice as there has been no discussion nor any co-operation along the way between the designer, builder, framer, plasterer, painter and decorator.

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Level 5 Summary Requirements

When the expectations go beyond what can realistically be achieved with a level 4 finish, it is necessary for specifiers to carefully evaluate the benefits and associated cost implications of specifying a level 5 finish.

To achieve the specified level of finish, close collaboration between the builder, carpenter/framer, plasterboard installer, plasterer and the painter is essential for a successful outcome.

A level 5 finish will need to be specified and installed where higher sheen level paints and/or darker colours on feature walls etc are to be employed, as these can highlight and accentuate surface imperfections or blemishes. A level 5 finish will also be needed where critical lighting conditions, such as low angle glancing light or spot lighting occur on flat or low sheen level painted surfaces.

When more than one of these elements are present, it will considerably reduce the finished decorated outcome, even when the plastering conforms to the requirements of the Australian Standards, as a consequence. This emphasises again that these factors must be addressed at design stage, prior to the commencement of construction, to better align the final finish and outcome with the consumer's expectations.

Level 5 How it is achieved

To achieve a level 5 finish for plasterboard, the jointing comprises of a three coat system. All joints and interior angles will need tape embedded into the first coat of joint cement/compound. A further two coats of joint cement/compound are then applied over all joints, fastener heads, angles etc. In preparation for painting, the joint cement/compound must be finished evenly and free of tool marks or ridges. Note: framing deviations and tolerances are:... 3mm over a 1.8 straight edge for 90% of the area, remainder 4mm. (Ref: Table 4.2.2 AS/NZS 2589 (2007))

Level 5 Decoration

The final finishing step to achieve a level 5 finish involves a choice of two options. Either a **specialty paint** or a **plaster material** should be sprayed, rolled or trowelled (skim-coated) over the defined area, which will often require significant sanding to produce the final surface ready for decorating with paint.

The **plaster material** option is applied onto the plasterboard surface, usually by a plasterer. The surface of the defined area may then require detailed fine sanding to make it suitable for final painting & decoration.

For the **specialty paint** option, only specially designed **Plasterboard Primer/Surfacer** type paints such as Dulux Professional® FastFinish™ level 5 prepcoat are suitable for use in producing a level 5 finish. Usually, these products are applied by spray or roller to very high film thicknesses that will allow detailed fine sanding to be carried out prior to final painting and decorating.

With either option, the plasterboard will have been **skim-coated** to produce a uniform surface to which the final painting system can then be applied. Some minor surface imperfections may still be visible in a level 5 finish however these will have been minimised to the best possible degree.

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Decoration by painting

The main objective of the subsequent paint system is to deliver a final decorative appearance with a serviceable and uniform texture and colour that meets most expectations. Generally, flat, matt or low sheen paint systems along with pastel, pale or mid shade colours are recommended in order to produce the desired decoration result. Higher sheen level paints and/or darker colours will highlight any surface imperfections or blemishes.

To achieve the best possible results, a three (3) coat system (one coat of prepcoat followed by two coats of topcoat) is necessary in accordance with the guidelines contained within AS/NZS 2311 (2009) "Guide to the Painting of Buildings". In addition, the paint manufacturers' specification should be adhered to at all times. The following steps are recommended:

Clean the surface: After the surface has been patched, filled, sanded and inspected, all residual dust and debris will need to be completely vacuumed away and the surface wiped with a damp cloth or "tack-rag" prior to painting.

Seal the surface: The next step is to seal the prepared surface with a good quality "prepcoat" to provide good adhesion to the preparation, even out the porosity and minimise the suction effect, reduce the chances of "gloss banding" and provide a uniform and opaque surface for subsequent topcoating.

Our standard recommendation is a high quality water based "Acrylic Sealer/Undercoat" (ASU) or "Acrylic Primer/Sealer/Undercoat" (PSU) over the plasterboard primer/surfacer (such as Dulux Professional® FastFinish™ Level 5 Prep Coat).

Application of the decorative paint system can be by brush for cutting-in and roller (traditional methods) or spray and backrolling (for speed on new construction projects), employing a reasonably high level of care and workmanship to avoid further surface imperfections or non-uniform appearance.

Prepare for topcoat: Allow the "prepcoat" to dry thoroughly, inspect carefully then lightly de-nib sand the prep-coated surface with ultra-fine grade sandpaper to remove any foreign particles that may have become lodged in the paint work. Clean the surface once again (as above) to remove all dust. Not allowing the sealer undercoat to fully dry may result in variations in gloss.

Application of Topcoats: Carefully apply 2 coats of specified topcoat by brush, roller or spray and backrolling to achieve the desired result. Allow first coat to dry thoroughly before lightly de-nib sanding and dust-down between coats. We recommend Dulux Professional® Rollers with an 11mm nap.



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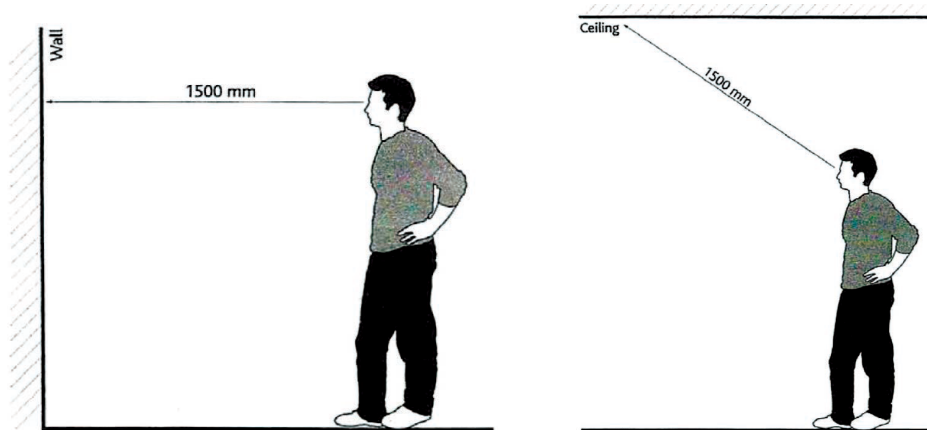
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Final appearance

The painted surface should exhibit uniform colour, sheen, opacity and film thickness along with freedom from painting defects such as brush or roller marks, spray pattern texture irregularities and other inconsistencies.

To avoid glancing light issues, it is recommended that visual inspections of finished surfaces are carried out in normal daylight conditions, between the hours of 10am and 2pm. No torches or artificial light are to be used.

Also, the inspection of a particular surface should be carried out (as per the diagrams) at a distance of 1.5 to 1.8 metres and viewing angles should be 90° and 30° . Viewing at more acute angles or under strong illumination is not an endorsed method or standard therefore should not be imposed



*Two drawings illustrating minimum normal viewing positions and distances for walls and ceilings.

Differences in appearance will occur however where such differences are not clearly visible from a viewing distance of 1.5 to 1.8 meters, the finish is considered acceptable according to AS/NZS 2311 (2009).

Summary

Industry experience shows that employing good plasterboard installation practice, using quality paints and preparation products as well as employing recommended application methods will together result in the desired outcome being achieved.

In accordance with AS/NZS 2311 "The Painting of Buildings" a 3 coat system (as a minimum) will be required in order to achieve the desired result on a level 5 finish.

References

Further information on the installation, fixing and finishing of plasterboard can be found in the Australian Standard AS/NZS 2589 (2007) "Gypsum Linings – Application and Finishing" or by contacting the Association of Wall & Ceiling Industries (AWCI) AUS & NZ (www.awci.org.au)

Detailed information on the preparation and painting of plasterboard can be found in the Australian Standard AS/NZS 2311 (2009) "The Painting of Buildings" sections 2.4.5 and 3.12.

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1956 Dandenong Road Clayton
Victoria 3168 Australia
T 13 23 77
www.dulux.com.au/trade
www.dulux.com.au/specifier

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