

Recommended Levels for Finishing of Gypsum Board

SCOPE

This document provides various standards for the finishing of gypsum board wall or ceiling surfaces. It will assist in the coordination and development of projects, construction documents and the gypsum board finishing application.

Incorporation of this document by architects, contractors or building owners will help achieve the envisioned surface appearance at a competitive cost.

The levels are 0 to 5. Each level has its own criteria, which are intended to achieve the appearance and functional requirements. The following factors should be evaluated in selecting the appropriate level.

- desired final appearance — the higher the level number the better the finished surface quality
- function of the space
- typically, the higher the level number the greater the finishing cost will be
- type of final decoration (paint, textures, wall coverings)
- type and angle of lighting
- Different levels of finish can be used on the same project, even in the same space. This may reduce the cost but still meet the appearance and function objectives for the wall or ceiling surfaces.

It is recommended that the levels for finishing gypsum board be indicated in the gypsum wall board section of the specification and in the room finishing schedule.

By identifying each room with the level of finish and the paint material to be applied, the contractor will be able to better prepare the cost estimate and have an understanding of the expected finish appearance.

Each level of joint compound should extend beyond the preceding coat.

Reference standards for the finishing of gypsum board refer to ASTM C-840, GA-216 and the Drywall Finishing Council.

The preceding coat of joint compound should be dry prior to applying successive coats of joint compound. Square edge joints, commonly called “Butt Joints”, should be feathered out further than tapered joints.

A perfect gypsum board surface, even when done with a level 5, cannot always be achieved. The reasons can be the combination of the required joint compound built-up at the joints, the time of day and angle of a severe lighting source and/or the painting system.

The **Northwest Wall and Ceiling Bureau** recommends that the Levels of Finish be indicated in the construction documents and the process of finishing of the gypsum board adhere to the Levels of Finish.

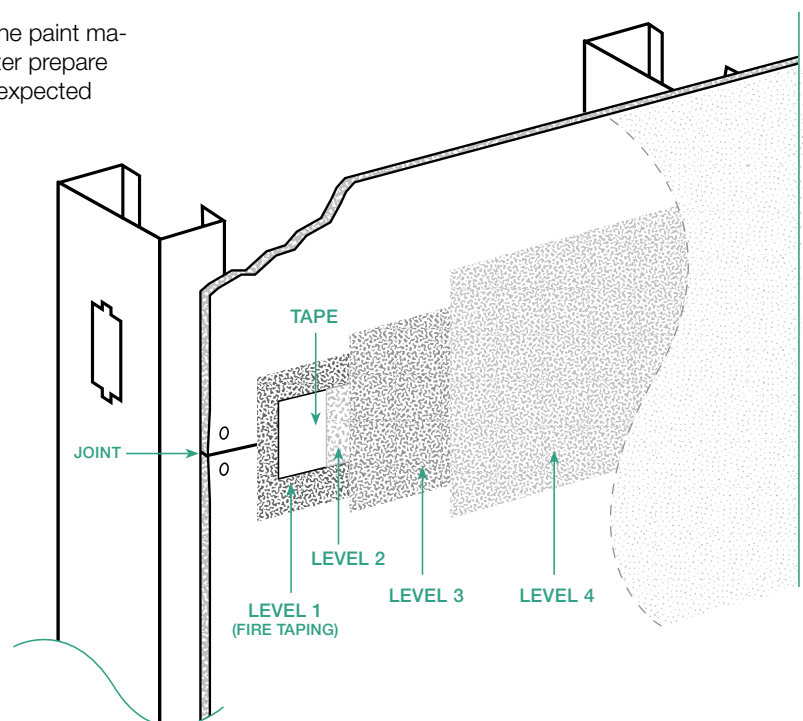
FINAL DECORATION / PAINTING

Included in the level of finish information is a basic recommendation for painting.

The method of paint application and the quality of paint greatly affect the final appearance of the gypsum board wall or ceiling surfaces. All painting shall be per PDCA/MPI standards.

Final decoration in this document refers to painting of the gypsum board finished surface. Each level indicates a basic painting recommendation. The primer and finish paint shall be of high quality and undiluted. The application shall be the mil thickness and quantity per square feet as specified by the manufacturer.

The wiping of finished gypsum board surface prior to and for the application of final decoration (paint) is under the scope of work of the painting contractor.



LEVELS FOR FINISHING GYPSUM BOARD

LEVEL 0 NO FINISHING

Scope of use

- temporary gypsum board construction
- when no final level of finish or finish decoration has been determined
- when permanent surface structures (cabinets, mirrors, etc.) are specified over the gypsum board
- when a permanent wall paneling is specified over the gypsum board

LEVEL 1 ONE COAT APPLICATION

Board Joints

- Tape embedded in joint compound. Tool marks and ridges acceptable.

Interior Angles

- Tape embedded in joint compound. Tool marks and ridges acceptable.

Accessories

- Not required, unless specified.

Fasteners

- Cover fastener heads with one coat of joint compound if it is a fire-resistance assembly, otherwise not required.

Scope of use

- Appearance not important
- Referred to as “fire-taping of joints”
- Provides smoke and sound control
- Areas normally concealed from public view, such as plenum space above ceiling, attics, service type corridors or mechanical room

Paint

- Not applicable

LEVEL 2 ONE COAT APPLICATION

Board Joints

- Tape embedded in joint compound, wipe off the excess and leave a thin coat of joint compound over the tape. Tool marks and ridges acceptable.

Interior Angles

- Tape embedded in joint compound, wipe off the excess and leave a thin coat of joint compound over the tape. Tool marks and ridges acceptable.

Accessories

- One coat of joint compound over the flanges, wipe off excess and leave a thin coat of joint compound over the flanges. Tool marks and ridges acceptable.

Fasteners

- Cover fastener heads with one coat of joint compound and wipe off the excess. Tool marks and ridges acceptable.

Scope of use

- Areas where the surface appearance is not a concern, such as garages, warehouses, storage rooms etc.
- When water-resistant board is used for a backing for tile.

Paint

- Not intended to have a final decoration of paint.

LEVEL 3 TWO COAT APPLICATION

Board Joints

- Step one is tape embedded in joint compound, leaving a smooth thin coat of joint compound over the tape. Step two is a separate coat of joint compound over a dry first coat, leaving a smooth finished surface free of ridges, tool marks and sanding grooves.

Interior Angles

- Step one is tape embedded in joint compound, leaving a smooth thin coat of joint compound over the tape. Step two is a separate coat of joint compound over a dry first coat, leaving a smooth finished surface free of ridges, tool marks and sanding grooves.

Fasteners

- Step one covers the fastener heads with a coat of joint compound, leaving a smooth coat. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth finished surface free of ridges, tool marks and sanding grooves.

Accessories

- Step one is a coat of joint compound over the flanges, leaving a smooth surface. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth finished surface free of ridges, tool marks and sanding grooves.

Scope of use

- For surface that is to receive a medium to heavy sprayed drywall texture finish coat.
- For surface that is to receive a heavy grade wall covering.
- Not for smooth-coat finish or a final decoration (paint) of high sheen.

Paint

- A high-quality primer coat. If spray applied, follow by back rolling. A separate coat of a high-quality finish coat.
- A primer coat over the gypsum board surface prior to drywall texture coat, followed by the same painting procedure for the gypsum board, (primer coat and one coat of finish paint).

LEVEL 4 THREE COAT APPLICATION

Board Joints

- Step one is tape embedded in joint compound, leaving a smooth thin coat of joint compound over the tape. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Interior Angles

- Step one is tape embedded in joint compound, leaving a smooth thin coat of joint compound over the tape. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Accessories

- Step one is a coat of joint compound over the flanges, leaving a smooth surface. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Fasteners

- Step one covers the fastener heads with a coat of joint compound, leaving a smooth surface. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Scope of use

- For smooth surface finish.
- For surfaces to receive a light sprayed drywall texture finish coat or a light grade wall covering.
- Not for un-backed vinyl wall covering.
- Not for surfaces subject to critical lighting conditions.
- Not for surfaces that are to receive a final decoration (paint) of a high sheen.

Paint

- A high-quality primer coat. If spray-applied, follow by back rolling. A separate one or two coats of high-quality finish paint.
- A primer coat over the gypsum board prior to the drywall texture coat, followed by the same painting procedure for the gypsum board (primer coat, plus one or two coats of finish paint).

LEVEL 5 THREE COAT APPLICATION AND A SKIM COAT

Board Joints

- Step one is tape embedded in joint compound, leaving a smooth thin coat of joint compound over the tape. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Interior Angles

- Step one is tape embedded in joint compound, leaving a smooth thin coat of joint compound over the tape. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free

of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Accessories

- Step one is a coat of joint compound over the flanges, leaving a smooth surface. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Fasteners

- Step one covers the fastener heads with a coat of joint compound, leaving a smooth surface. Step two is a separate coat of joint compound over the dry first coat, leaving a smooth surface free of ridges, tool marks and sanding grooves. Step three is the final coat of joint compound feathered out over the dry second coat, leaving a smooth surface flush with the gypsum board and free of all marks.

Skim Coat

- A thin coat of joint compound (not rolled or spray-applied) over the entire finished gypsum board surface. Wipe down immediately, leaving a tight smooth film of joint compound. The other option is covering the entire finished gypsum board surface with a product especially manufactured for the purpose of developing a Level 5 finish, following manufacturers recommendations.

Scope of use

- For surfaces requiring the highest quality finish for smooth surface.
- For surfaces subject to severe natural or artificial lighting conditions. Strong side- or down-lighting conditions.
- For surfaces specified to have a final decoration (paint) of high sheen (gloss or semi-gloss), enamel or dark tones.
- For all radius walls and ceilings

Paint

- A high-quality primer coat. If spray-applied, follow by back rolling two separate coats of high-quality finish paint.
- Proprietary material manufactured for the purpose of achieving a level 5 finish does not eliminate the need for a paint primer

GLOSSARY FOR THIS DOCUMENT

accessories

Corner beads, control joints, expansion joints, reveals or edge trim

bedding coat

The first coat of joint compound and tape

butt joint

The joint formed by two square edges (ends) of the gypsum panels meeting.

critical/severe lighting

Strong side- or down-lighting across the board surface from natural or artificial sources

face layer

The outer layer of the gypsum board paper for decoration

final decoration

The painting system

fire-taping

Tape and joint compound at gypsum board joints, with no subsequent finishing coats

gypsum board

The generic name for a family of non-combustible sheet products, used primarily for interior walls and ceilings, consisting of a core, primarily of gypsum and paper surfacing.

joint compound

A material used for covering accessories and joints in order to finish a gypsum board surface smooth. Often referred to as "mud"

joint

The seam produced by the placement of two sheets of gypsum board next to each other

primer coat

A paint material applied before the drywall texture or any of the finish paint materials. Designed to equalize the suction difference between the gypsum board face paper and the joint compound, a primer prepares the surface for an additional coating.

skim coat

Used to reduce texture and suction variations. The last step in a Level 5 finish before the primer coat. Application of a joint compound of a product especially manufactured for the purpose of giving a uniform and smooth appearance over the entire surface.

spotting

Covering fastener heads with joint compound

tape

A special paper (or fiberglass) tape for concealing and reinforcing the board joints.

tapered joint

The edge of the gypsum panel that has a manufactured recess for joint tape and joint compound.

texture

A surface decoration over the entire gypsum board surface. Various patterns spray-applied using mechanical equipment. Referred to as "drywall texture"

Recommended Criteria

- Before starting the finish of the gypsum board, the level of finish shall be determined and approved. A pre-construction meeting should be conducted with the following people in attendance: owner's representative, developer/general contractor, architect, framing representative, contractor responsible for installing and finishing the gypsum board and painting contractor.
- The level of finish shall be specified in the construction documents and/or indicated in the contract of the wall and ceiling contractor. Unless otherwise specified, level 3 is assumed for medium to heavy textures and a level 4 for light textures or smooth wall.
- The level of finish shall be in accordance with the specified fire-resistance and/or sound-rated assemblies.
- Before starting the finishing work, if the project conditions allow, develop a sample space (room) demonstrating the final specified surface appearance (level of finish and paint) subjected to the lighting conditions when occupied.
- The finish application and the final inspection of the finished surface should be under the same lighting conditions. The lighting condition should be what would prevail when the space is occupied. These types of lighting conditions shall be provided by those other than the contractor responsible for the scope of levels of finish.
- The contractor responsible for the finishing work shall provide all material and equipment and perform the scope of work as specified: shall be able to meet the schedule, shall have performed in the past the same scope of work satisfactorily, shall be able to meet all financial obligations relating to the scope of work and shall use only a trained and skilled workforce.
- No level of finishing is designed to—nor can it—true up a gypsum board surface that is subjected to deviations caused by the substrate to which it is attached, or if the gypsum board is not in a condition to produce the intended visual finished appearance. The substrate (framing) is to be true, level, in-line and straight.
- The type of control joints or expansion joints and their location shall be indicated only by the architect in the project construction documents.
- Gypsum board shall not be damaged and shall be completely dry. The space shall have no water on the floor and be weather-tight.
- The levels of finishing shall be applied in a well ventilated space. The temperature shall be a minimum of 50°F/10°C for 48 hours prior to the start of the finishing scope of work and shall be maintained until all the work is completed, dry and the space is occupied.
- Abuse-resistant gypsum panels shall be finished per the manufacturer's recommendations.
- The architect is to select and coordinate the level of finish and paint system that is appropriate for the final appearance and intended use of the finished gypsum board system. This guide is only intended for standard gypsum wall-board manufactured per ASTM C 1396 as described in section 1.1.1.



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The NWCB has been serving the construction industry for over forty years. It is recognized as a technical authority, educational body and spokesperson for the wall and ceiling industry. It provides services to architects and the construction community on all matters relating to the diversified wall and ceiling industry.

As the industry's development and coordination organization, the NWCB saw the need to establish this document to provide a unified standard for Finishing of Gypsum Board. It is meant to serve as a set of recommendations and is not intended for any specific construction project. The NWCB makes no express or implied warranty or guarantee of the techniques, construction methods or materials identified herein.