



Jointing GIB® Plasterboard



Introduction

This leaflet has been designed to give you some useful pointers for jointing and finishing GIB® plasterboard. It covers some of the common situations that will be faced.

Many people simply remove wallpaper, apply a thin layer of plaster to the wall (this is known as skim coating) and then repaint the wall. Often within a short period of time hairline cracks appear. To help prevent this we recommend that old linings be removed and new GIB® plasterboard is used. There are many good reasons for doing this:

- The hassle of stripping wallpaper is eliminated.
- Insulation can be installed in the exterior walls - houses built before 1979 were not required to have wall insulation installed.
- New electrical sockets can be installed and old wiring replaced.
- New GIB® plasterboard is easy to stop and will give a much better finish.

Tip: Stopping GIB® plasterboard is a skill that requires some practise and skill, as a result you should consider the services of an experienced tradesman, not only will they achieve a better finish, which is important when painting walls, but they will finish the job more quickly and with less fuss.

Tools

Some or all of the following tools will be required depending on the actual work being carried out.

- Rubber Spatula, or similar, for mixing plaster
- Plastic Pail
- 75 mm Chamfered Broad Knife
- 150 mm Broad-knife
- 200 mm Trowel (Optional)
- 280 mm Trowel
- 100 mm Chamfered Broad-knife
- Sanding Float
- Corner Trowel

All tools should be clean and free of any old and set plaster. It is recommended that stainless steel tools be purchased if possible as these are less likely to corrode.

Tip: A light spray with CRC, or similar, and a wipe with a cloth or paper towel will also help keep metal tools in the best condition.

Remember that these tools are being used to create a smooth finish, any kinks or scratches in the edge of the tool will cause rough areas in the plaster. Do not use broad-knives for opening paint cans, etc.

Materials

Paper Tape

Paper jointing tape offers superior crack resistance and is the only jointing tape recommended by most plasterboard and joint compound manufacturers. It achieves this because the paper tape absorbs compound, melding with it to form a solid joint. Non absorbent fibrous tapes are unable to do this.

Paper tape comes pre-creased and has two distinct sides. The rougher side, facing out on the roll, is always bedded face down into the compound.

Joint Compound

The options for jointing compounds are numerous, however, these fall into two general categories.

The first is plaster based or setting compounds that are based on Plaster-of-Paris. They are supplied as a powder that is mixed with water immediately before application. They set to a hard finish as a result of a chemical reaction between plaster and water. An example is GIB Tradeset®.

Tip: Different set times are available for some products.

The second are the pre-mixed ready-to-use compounds that harden by the evaporation of water. Generally these are softer and easier to sand and are normally used for the top coat. Examples include GIB Plus 4® or GIB ProMix®.

Table 1 gives a summary of the compounds suitable for use by DIY when jointing GIB® plasterboard.

Table 1 - Selector Guide for Joint Systems

First Coat	Second Coat	Top Coat
GIB Plus 4®	GIB Plus 4®	GIB Plus 4®
GIB Plus 4®	GIB Plus 4®	GIB ProMix®
GIB Tradeset®	GIB Tradeset®	GIB Plus 4®
GIB Tradeset®	GIB Tradeset®	GIB ProMix®

At external corners and for holes or gaps deeper than 3 mm, the plaster is applied in thicker coats. Because of this, pre mixed compounds are only recommended for the final coat in these situations. Table 2 summarises the compounds suitable for use in these instances.

Table 2 - Selector Guide for External Corners and Gaps Exceeding 3 mm

First Coat	Second Coat	Top Coat
GIB Tradeset®	GIB Tradeset®	GIB Plus 4®
GIB Tradeset®	GIB Tradeset®	GIB ProMix®

It is recommended that joint compounds from the same manufacturer as the plasterboard be used. In this way you can ensure that the materials are compatible and have been tested as a system.

Tip: Always carefully read the instructions on the bag or pail before beginning.

How Much?

Table 3 gives the approximate usage rates for joint compounds. These figures are approximate and will vary depending on wastage and the actual thickness at which the product is applied. They also assume that joints formed from the recessed edges of GIB® plasterboard are being plastered.

Table 3 - Approximate Coverage of Joint Compounds

Compound	1st/2nd Coat [m/kg]	Top Coat [m/kg]
GIB Tradeset®	2.5	-
GIB Plus 4®	3.5	18.0
GIB ProMix®	-	8.0

Drying Time

Joint compound must be allowed to dry before it is painted. It is not acceptable practise to plaster a hole or wall and paint over it almost immediately.

Approximate drying times for pre-mixed compounds can be found on the back of the pail, but typically these should be left for a minimum of 24 hours between coats, and longer if the conditions are cold and/or damp.

For best results it is recommended that water, air and mix temperatures be kept above 10°C.

Storage

Many of the problems that occur with joint compounds result from incorrect storage of the product. Correctly store material and don't use after the use-by-date indicated on the packaging.

For setting compounds most problems are caused because the product gets damp. These products should always be kept dry and stored raised off the floor. Once a bag has been opened it should be stored tightly sealed, preferably in a sealed container for longer periods. The shelf life of setting compounds is twelve months.

For pre-mixed compounds a common problem is the product going rotten in the pail - this is immediately identifiable by a strong sulphurous odour when the lid is removed. The longer the product is stored, and especially if extra water has been added, the more likely the product is to go rotten in the pail. It is important that any water added to thin the compound be clean. The shelf life of pre-mixed compounds is six months. Pre-mixed compounds must not be allowed to freeze.

Tip: Buy only as much product as is necessary to complete the work you will be doing.

Fixing the GIB® Plasterboard

There is plenty of information available on how to fix GIB® plasterboard. The key points to remember are:

- Fix the GIB® plasterboard horizontally - This will ensure that joints are below eye-level and as a result any imperfections are more difficult to see. Any glancing light from windows or lights is less likely to show a shadow line if joints are finished slightly raised.
- Do not join sheets above the corners of windows or doors - this is where stresses from applied loads and shrinkage are greatest and hence have a greater cracking risk. The best method is to cut a full sheet around the windows. Failing this, joins should be made nearer the centre of the window.
- Screw and glue: By screwing only around the perimeter of the board and using glue to fix the remaining areas of the board, the need to apply plaster over fixings in the middle of the board is eliminated, leading to a much better finish for the board. Don't fix through the adhesive.

For further information on fixing GIB® plasterboard, including fixing patterns, etc, read the Fixing GIB® Plasterboard guide or contact GIB® Helpline on 0800 100 442.

Stopping the GIB® Plasterboard

Edge (Longitudinal) Joints

These are the joins where two edges of GIB® plasterboard meet side by side. The GIB® plasterboard will have a slight recess (taper) in the edge of the GIB® plasterboard, making for easier stopping.

Preparation

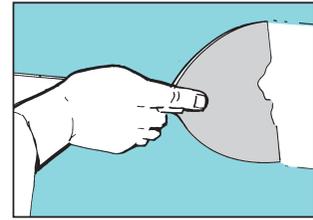
- Ensure that all fixings, screws or nails, are seated below the surface of the GIB® plasterboard. These should be just below the surface, any fixings that are driven too far into the GIB® plasterboard will cut the paper of the board causing problems such as 'popping'.
- Tidy up any damaged areas of GIB® plasterboard such as broken corners. It is usually easier to remove these completely and fill them with a plaster based (setting) compound prior to continuing.
- Remove any dust or loose material from the GIB® plasterboard.
- Mixing instructions can be found on the back of the bag or pail.

Tip: As a guide when mixing powdered compounds, sprinkle in just enough powder until the water no longer soaks through. If water soaks through, sprinkle in a little more powder.

Tip: It is better to mix a compound too thick than too thin. It is easier to add water than to add powder.

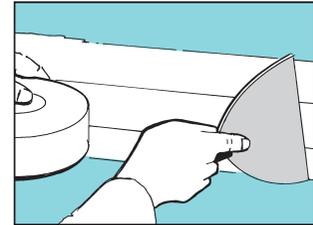
First Coat

1. Using a 150 mm broad-knife, fill the recess formed by the edges of the sheets with jointing compound.



Tip: Generally speaking the flatter a trowel or broad-knife is held to the board surface the more compound will be applied. The closer to perpendicular the trowel or broad-knife is held the more compound will be removed.

2. Centre the paper tape along the joint and using a 150 mm broad knife press the tape down into the compound.



3. Draw the broad-knife, held at approximately 45 degrees to the board surface, along the joint to remove any trapped air bubbles beneath the tape. Ensure that sufficient compound is left behind the tape to achieve a good bond.

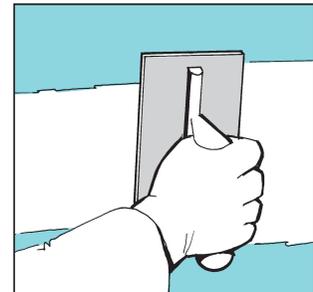
Tip: If any blisters appear in the tape this is usually an indicator that insufficient compound is present behind the tape. Simply lift the area of tape away using the corner of the broad-knife, apply a small amount of compound and press the tape back into the compound once more.

4. Immediately apply a thin coat of compound over the surface of the tape. This reduces the possibility of the tape curling and wrinkling which can lead to edge cracking.
5. When the compound is set (or dried) scrape back any build up of compound along the joint using a broad-knife or trowel.

Second Coat

1. Apply a second coat of jointing compound with a 200 mm trowel. Ensure that this coat extends outside the area of the first coat.

Tip: To save money on additional tools it is possible to use a 280 mm trowel but ensure that the compound is not spread the entire width of the trowel.

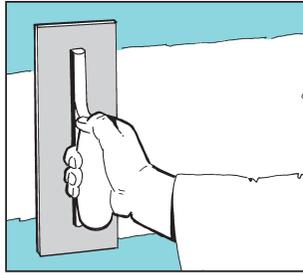


2. Feather the joints to eliminate build up of the compound at the edges.

- Allow to thoroughly dry (24 hours) and scrape back any build up of compound along the joint.

Top Coat

- Apply a finishing coat of compound with a 280 mm trowel. Joint edges should be feathered at least 50 mm beyond the edges of the previous coat.
- Allow to dry for approximately 24 hours.
- Lightly sand in the same direction as the joint using 220 grit, or finer, sandpaper.



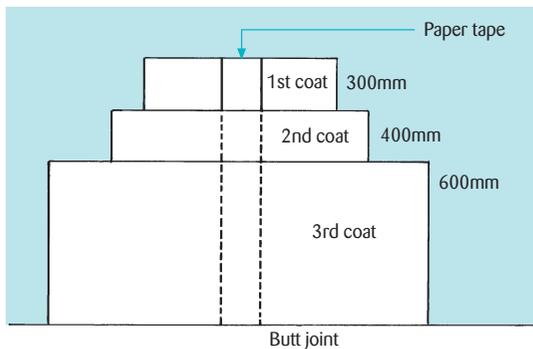
Tip: Take care not to scuff the face paper of the GIB® plasterboard, as this can lift the paper fibres and mar the finish.

- After sanding, mark any defects and imperfections with a pencil, then retouch these areas with compound. Leave to dry and sand. Repeat this process until the desired finish is achieved.

Tip: Imperfections will be easier to see by shining a light, such as a torch, along the wall. This will show up any imperfections as shadows.

End Joints and Cut Edges

When jointing sheet ends, which are not recessed, care needs to be taken to ensure the surface build up of compound is minimised. The same basic procedure as for tapered edges should be followed, except that each of the stages should be doubled in width, resulting in a 600 mm finished joint width.



Tip: Take extra care when bedding in the tape to ensure that sufficient compound remains behind the tape. The absence of a recess can often lead to all the compound being forced out from behind the tape.

Nail & Screw Spotting

If the guidelines for fixing that are given in Fixing GIB® Plasterboard guide are followed, there should be no fixings in the middle of the GIB® plasterboard on the wall. However, sometimes this cannot be avoided, for example, in ceilings.

The same process and compounds should be used as for stopping longitudinal joints.

- Use a 100 mm broad-knife for each of the first two coats of compound.
- Leave first two coats to dry for 24 hours prior to applying the finishing coat.
- Use a 150 mm broad-knife for the finishing coat.
- Leave to dry for 24 hours and then lightly sand with 220 grit

Tip: Apply the compound in one direction and then wipe off the excess in a perpendicular direction, holding the knife at a high angle.

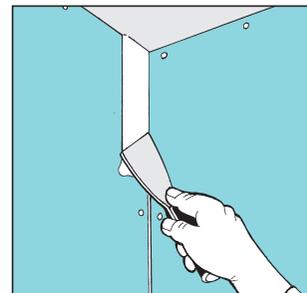
Dealing With Corners

Internal Corners

In most rooms there will be at least four internal corners where the walls meet. Internal corners are also formed at wall-ceiling intersections. Often the wall-ceiling junctions are covered with Scotia, Cove or Cornice, however, these can also be stopped using the same process.

Use the compound selector in Table 1 for determining the compounds to be used, however, this would normally be the same as those used for the joints.

- Using a 75 mm chamfered broad-knife apply the compound to both sides of the corner.

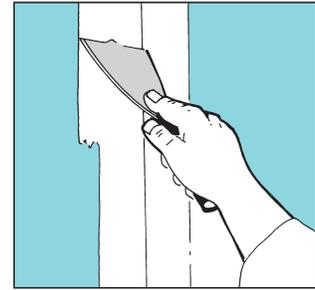


Tip: Keep the high side of the chamfered broad-knife toward the corner, this helps reduce removing compound from the other side of the corner during application.

- Measure and cut the paper tape to length. Fold the tape along the centre line (crease) and bed the paper tape into the compound using the 75 mm chamfered broad-knife.

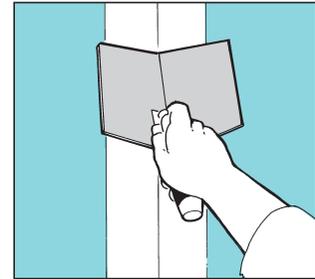
- Apply a thin coat of compound over the top.

Tip: Apply the compound to one side of the corner at a time and leave to set/dry in between. This way the compound is hard on the opposite side of the corner and the compound will not be scraped off.

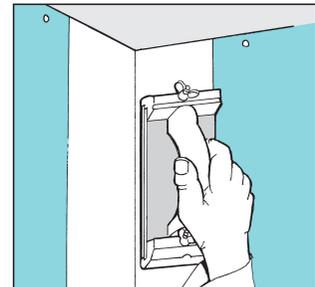


- Apply the final coat of compound, ensuring that the edges of the previous coat are completely covered.

Tip: A special corner tool can be used to do this (shown) or a 150 mm broad-knife can be used following the procedure of doing one side at a time.



- Leave to dry and lightly sand with 220 grit sandpaper or finer. Sand in the direction of the joint being careful not to scuff the paper.



External Corners

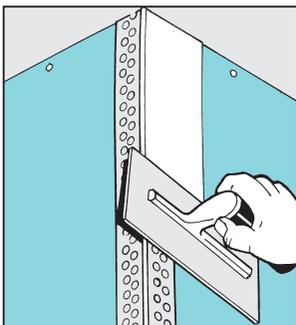
External corners can be finished with metal trims or GIB® Goldline profiled GIB® plasterboard trims. GIB® Goldline trims are available in range of different profiles including rounded corners that are great in high impact areas.

Trims are attached over the corner and then covered with compound. Because of the thickness of plaster involved in covering these trims, pre-mixed compounds must not be used for the first two coats. Use the compound selector in Table 2 when selecting compounds for this application.

- Nail or screw the Slim Angle to the corner. Fix at 100 mm centres on alternate sides of the corner (fixings should also be placed on both sides at each end of the trim).

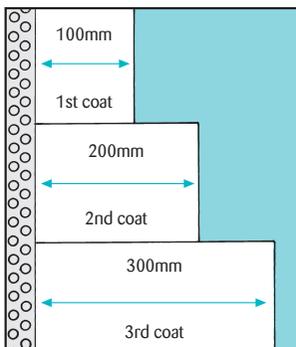
Tip: GIB® Goldline trims should not be nailed. These are held in place by first applying a coat of compound and embedding the trim into the first coat of compound. Once dry they are finished in the normal manner. For more information contact GIB® Helpline on 0800 100 442.

- Using a 150 mm broad-knife or 200 mm trowel apply a first coat of setting compound.



- When hard, lightly scrape back using a broad-knife or the edge of a trowel.
- Apply a second coat of setting compound using a 200 mm trowel. When hard, lightly scrape back.

- Apply a third coat of pre-mixed compound using a 300 mm trowel and leave to dry.



- When thoroughly dry, lightly sand in the direction of the joint with 220 grit or finer sandpaper, taking care not to scuff surface paper of the GIB® plasterboard.

Skim Coating

Skim coating involves covering the entire GIB® plasterboard surface with a thin layer of finishing material to give a smooth, consistent texture across both joints and the paper surface of the GIB® plasterboard.

As stated in the introduction if this is being done to cover old walls then it is recommended that you remove the old linings and start afresh. This method typically costs only a little more than skim coating the old GIB® plasterboard but has many advantages.

If skim coating is the only option for you or you have a special requirement for a very smooth finish such as in a critical light area then it is recommended that a tradesman is used. Walls must be prepared in different ways depending on whether it is new GIB® plasterboard, has been painted, has had wallpaper or even if the GIB® plasterboard is old. A tradesman will be aware of the correct way of preparing the wall to reduce the risk of problems into the future.

Decorating

Checking the Jointing

The quality of the final decoration is dependent on the quality of the jointing. Using Table 4, inspect the quality of the jointing prior to decoration.

Tip: Imperfections will be easier to see by shining a light, such as a torch, along the wall. This will show up any imperfections as shadows.

Table 4 - Checking The Jointing

What	How	Remedy
Overfilled (Crowned) Joints	Look for excessive shadowing.	Sand back taking care not to sand the surface paper.
Underfilled (Starved) Joints	Look for excessive shadowing.	Fill with a pre-mixed (GIB® Plus 4®) compound and finish as per Edge (Longitudinal) Joints.
Over Sanding of Joints	Look for scuffed paper and scratch marks.	Repair with a pre-mixed (GIB® Plus 4®) compound and lightly sand.
Tool Marks	Look for ridges, gauges and holes in the joint area.	Repair with a pre-mixed (GIB® Plus 4®) compound and lightly sand.

Paint Decoration

There is plenty of information available on painting GIB® plasterboard, however, the following guidelines give a summary of best practices.

- Use flat paints rather than semi-gloss or gloss where possible. Gloss paints will reflect light to varying degrees, exaggerating surface imperfections.
- Light colours tend to diffuse light helping to disguise any surface imperfections. If it is intended that dark colours will be used then it is recommended that the services of an experienced tradesman be sought.
- Avoid the use of harsh lighting such as wall washers or creating situations that give harsh light such as windows extending to a wall or ceiling line. Where 'harsh' or 'critical' lighting conditions occur, i.e. where the dominant light source shines across the surface, imperfections will be easily seen. Consider skim coating the wall or applying a wallboard prep coat.
- Use water based paints, except in wet areas, as these will make it easy to create an 'orange peel' effect which helps to disguise any imperfections.

- 'Cut in' around edges and doors with a paint brush and then apply the remainder of the paint system using a medium to long nap roller (7-20 mm). This will aid in creating a soft 'orange peel' effect.
- Always maintain a 'wet edge' with the roller and apply the last coat with the roller marks in the same directions and parallel to the dominant light source.

Paint systems should always be applied in accordance with the manufacturer instructions.

Wallpaper Decoration

It is important that an oil-based sealer is applied to the surface prior to wallpapering. Some wallpapers are quite thin and the joint may telegraph through due to differences in porosity between the joint and the GIB® plasterboard surface. This also aids in the removal of the wallpaper at a later date if redecoration is required.

Note: Whilst the advice and recommendations contained in this brochure have been produced with proper care, they are offered only with the object of assisting those interested in or involved with the jointing of GIB® plasterboard. Winstone Wallboards Ltd and BRANZ do not accept responsibility for the advice, recommendations, etc, contained herein.



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