

BLISTERS IN TAPE

Description

Bubbles appear in areas of the paper jointing tape. These may range in size from approximately 10mm through to 40mm.

Cause

1. Insufficient or overly thin compound used under tape.
2. Tape not initially pressed into good contact with compound.
3. Too much compound forced from under tape by excessive tool pressure when embedding.
4. Not enough compound in recess.
5. Compound gauge is too dry.

Remedy

Slit tape to open up blistered area. Fill out with compound, press tape back in place with broad knife. When dry, smooth to level finish.

Prevention

1. Provide sufficient compound under entire tape – 0.5mm minimum.
2. Apply sufficient pressure with drywall tool when laying in tape.
3. Avoid excessive tool pressure in laying tape.

CENTRE CRACKING

Description

Cracks appear in the joint down the centre of the joint tape.

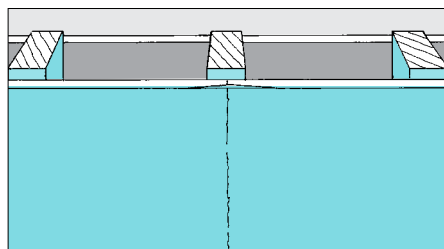
Cause Abnormal stress build-up resulting from structural deflection or racking.

Excessive stresses resulting from hygrometric and/or thermal expansion and contraction.

Remedy Relieve stress, provide adequate isolation by installing a control joint and re-tape. Feather compound over broad area to disguise build-up.

Prevention

1. Correct unsatisfactory environmental conditions. Provide sufficient relief and re-tape
2. Provide proper isolation from structure to prevent stress build-up.
3. Provide adequate control joints.
4. Structurally brace underlying framing.
5. Ensure moisture content of timber is 18% or less.



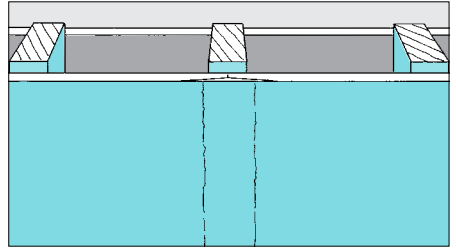
EDGE CRACKING

Description

Cracks at edge of paper tape or GIB® Goldline™ trims.

Cause

1. Fast drying of taping compound because of high temperature and low humidity or excessive drafts.
2. Improper application, such as over-dilution of compound, use of wrong compound, excessive compound under tape, no second coat over tape.
3. Cold, wet application conditions (also causes poor bond).



Remedy

Remove all poorly bonded tape and reapply compound and tape in correct manner.

Prevention

In hot, dry conditions, use GIB Plus 4® or GIB ProMix® All Purpose which dries slower than conventional setting compounds i.e. provides more open time. Place shielding devices over room openings to prevent drafts. Do not apply joint treatment over hot surfaces. Lightly wet down floors if room humidity is too low. During cold weather, control heat at min. 10°C and supply good ventilation. Avoid practices listed under “Cause” above.

EXCESSIVE AND/OR DELAYED SHRINKAGE

Description

Shrinkage that occurs after longer time periods or is unusually high.

Cause

1. Atmospheric conditions - slow drying and high humidity.
2. Insufficient drying time between coats of compound.
3. Excessive water added in mixing compound.
4. Excessive compound depth.
5. Combinations of the above.

Remedy

See Starved Joints, below.

Prevention

Ensure that each coat of compound is properly dry before applying the next. Ensure a minimum temperature of 10°C is maintained during application and drying of compounds.

FINISH GLOSS VARIATION

Description

Variations in gloss level of paint between the field of the plasterboard and joint area.

Cause

Differences in suction of the board paper and joint compound. Problem accentuated by strong side lighting with slight angle of incidence to ceiling or wall surface. Also may be chemical incompatibility of joint compounds and paint system.

Remedy

Allow to ‘age’ for 3-4 weeks then redecorate. Ensure that the paint is roller applied.

Prevention

Before painting with high gloss paint, apply skim coat of compound over entire surface or use a spray on skim coat system.

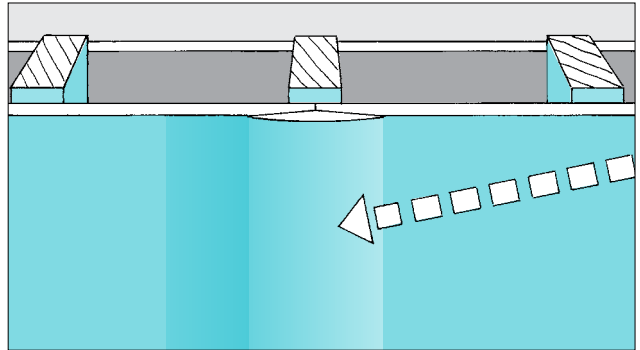
HIGH CROWNS

Description

Joint area is higher than the surrounding plasterboard and may result in shadowing across the joints.

Cause

1. Excessive compound over joint.
2. Compound not feathered out beyond shoulders.
3. Improper bedding of tape.
4. Framing out of alignment or sheet edges not tight against framing.
5. Improper adjustment of mechanical tools.
6. Misuse of or worn tools.



Remedy

Sand joints to flush surface (take care to avoid scuffing paper or joint tape by over-sanding).

Prevention

Embed tape properly, using only enough compound to cover tape. Fill tape depression or tape itself at butt joints. Adequately feather compound.

STARVED JOINTS

Description

Joint area is under filled in relation to the surrounding plasterboard.

Cause

1. Delayed shrinkage caused chiefly by insufficient drying time between coats of compound.
2. Insufficient compound applied for second taping coat to fill joint recess/taper. Shrinkage usually progresses until drying is complete.
3. Over-thinning compound, particularly with boxes.

Remedy

Reapply a full coat of compound over tape. Since this is the thickest application most shrinkage occurs in this coat, making it easier to fill taper properly. Finish by standard procedure.

Prevention

Allow each coat of compound to dry thoroughly before applying succeeding coat, or use a low-shrinkage setting compound such as GIB Tradeset® or GIB Lite Blue®.

JOINT DARKENING

Description

A dark area occurs in the area of the joint commonly as a result of set compound being darker than dried compound.

Cause

Occurs most commonly with colour-tinted paint rather than white. Most severe when applied in humid weather or when joints have not fully dried.

Remedy

Redecorate after joints are thoroughly dry.

Prevention

Be sure joints are thoroughly dry before painting.

NAIL/SCREW POPS

Description

1. Protrusions or bumps directly over the nail/screw head.
2. Rupture of the surface around nail/screw head.
3. Looks like nail/screw head protruding above the surface of the board.
4. Blister in the board (convex or concave).

Cause

1. Timber Shrinkage - Timber shrinks as it dries causing the fastener to protrude. Nail/screw pops may not become apparent for some considerable time after installation.
2. Fixing through glue - If screws or nails are applied through adhesive a pop can occur as the glue dries and shrinks back pulling the plasterboard closer to the framing member.
3. Plasterboard not held in close contact with the framing members - If the plasterboard is not held firmly against the stud while fixing it increases the possibility of over-driving the nail, resulting in a blister like defect the size of the hammerhead.
4. Overdriven or skewed nails/screws can puncture the face paper, which results in no holding power.

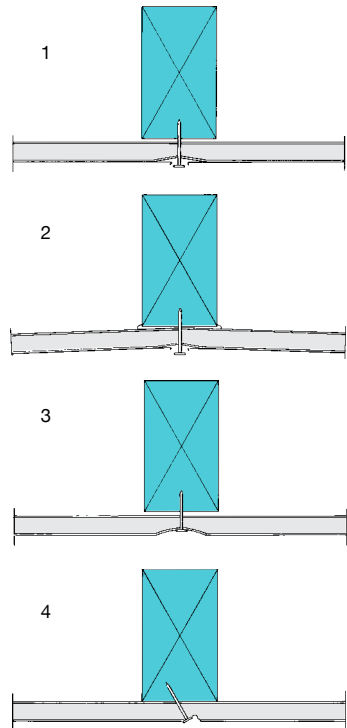
Remedy

Nail pops that occur after at least one months heating cycle are probably caused by timber shrinkage. Because further shrinkage is likely to occur and pops reappear, do not repair until the end of a heating season.

A screw should be reapplied 50mm from the popped fastener. Drive in a new fastener whilst applying firm pressure to ensure firm contact with framing. Use a nail punch to seat the popped fastener beneath the surface of the plasterboard. Remove loose compound and paper. Apply two coats of taping compound followed by a topping coat then redecorate.

Prevention

5. Timber shrinkage - Use GIB® Rondo® Metal Ceiling Battens for ceilings or kiln dried timber. Close in the building and protect the framing from the elements as soon as possible. Ensure that timber moisture content is 18% or less at the time of lining. Use of steel battens for large ceiling areas will eliminate shrinkage factors.
6. Fixing through glue - For walls; use nails/screws around the perimeter and GIBFix® adhesive in the centre. No mechanical fastener should be within 200mm of an adhesive daub. Never nail/screw through glue.
7. Plasterboard not in close contact with the framing members - When fixing ceilings fix the centre of the plasterboard first. In all cases hold the plasterboard firm against the framing member whilst fixing.
8. Nailheads/screwheads puncturing face paper - Drive nails/screw in straight so they are neatly seated slightly below the surface of the sheet.



PEAKING

Description

A condition where joints are visible under critical lighting. More prevalent when board has been installed in cold weather. Often called ridging or beading. Looks like a continuous ridge along the length of the joint, with a uniform peak like pattern at the centre. Commonly occurs in conjunction with 'nail popping'.

Cause

1. Excessive gaps (i.e. over 3mm) left between sheets.
2. Timber movement due to excessive moisture content of timber at time of lining and subsequently drying out. This is more prevalent with 10mm plasterboard than thicker plasterboards.
3. No gaps at the base of wall sheets. This can cause pressure on the base of the sheets thus transferring tension to the joints.
4. Inadequate ventilation with concrete floor slabs. Results in a build up of water vapour.

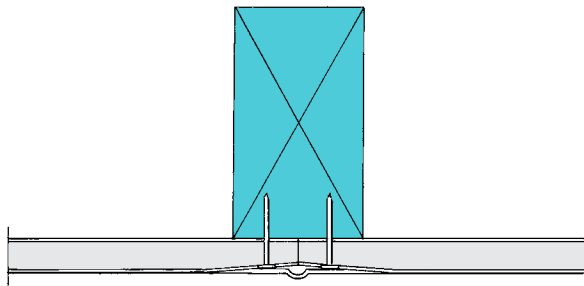
Remedy

Ridges must only be repaired after a full heating cycle: (6 months to a year). February is generally the best month for rectifications.

Apply a coat of setting compound over the joints using a 300mm trowel to widen the joint. Scrape back and apply a light coat of a topping coat. Re-seal affected area. Examine the surface with harsh lighting to determine whether the ridge has been concealed. If all right, then decorate.

Prevention

1. Use GIB® Rondo® Metal Ceiling Battens on ceilings.
2. Ensure timber framing moisture content is 18% or less at time of lining.
3. Use compounds at the heaviest consistency as possible.
4. Use a back blocking system.
5. Gaps between sheets should be pre-filled with a setting compound and allowed to completely dry before application of tape and subsequent coats of compound.
6. Always allow a 5-10mm gap at the base of wall sheets to allow for shrinkage of the wall plates and studs.
7. Use thicker plasterboards such as 13mm.
8. Ensure framing materials are maintained at a minimum temperature of 10°C during and following installation. Allow adequate ventilation.



SHADOWING

Description

Shows as a build up of dust, typically once the wall has been decorated.

Cause

Temperature differentials in outside walls or top-floor ceilings cause airborne dust to collect on colder condensation spots of interior surface. This results in photographing or shadowing over fasteners, furring or framing. Most severe with great indoor-outdoor temperature variation or uninsulated areas such as garages.

Remedy

Wash painted surfaces, remove spots with wallpaper cleaner, or redecorate surface.

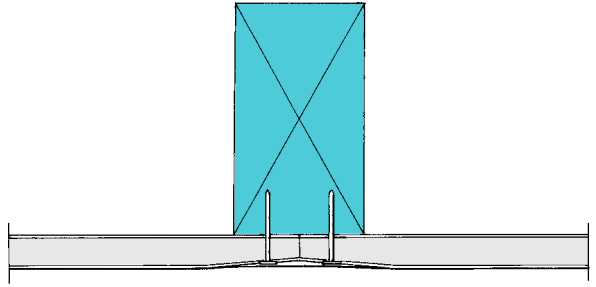
SHRINKAGE

Description

Compound shrinking back when it dries causing a depression at the joint or on a fastener. Looks like depressions at the joint.

Cause

1. Compound too thin or watery.
2. Inadequate drying between coats.
3. Slow drying due to excessive filling in one coat.
4. Re-tempering setting compounds which break up the gypsum crystal structure and causing shrinkage.
5. Under slow drying conditions, joints and plasterboard may hold moisture for weeks.



Remedy

Lightly sand affected areas and re-apply jointing and topping compounds and sand using 220 grit or finer sand paper. Re-seal affected area and then fully decorate.

Prevention

Provide proper drying conditions for compound. The two setting coats must be thoroughly dry prior to top coating. The top coat must be thoroughly dry prior to application of sealer.

Use compound at heaviest workable consistency and allow to stand for 2-3 minutes before applying.

In slow drying conditions apply a number of thinner coats rather than a few thick coats.

Under slow drying conditions use shorter set time joint compounds.

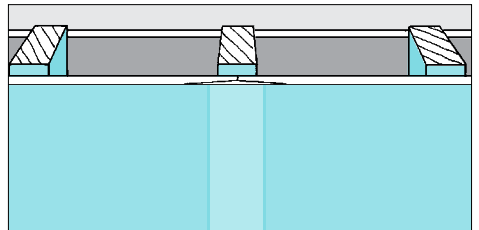
TRAM LINES/TRACKS

Description

Shrinkage of the paper tape within the joint compound. Looks like the tape is visible on the joint.

Cause

1. The first coat of compound is not sufficiently dry before the second coat is applied. When the first coat dries it shrinks and pulls the tape back into the joint.
2. Compound is too thin or watery.
3. Inadequate drying between coats. Poor drying conditions.
4. Slow drying due to excessive filling in one coat.
5. Premature paint application.



Remedy

Lightly sand affected areas.

Apply a skim coat to the joint with a setting joint compound, then a top coat and sand. Decorate.

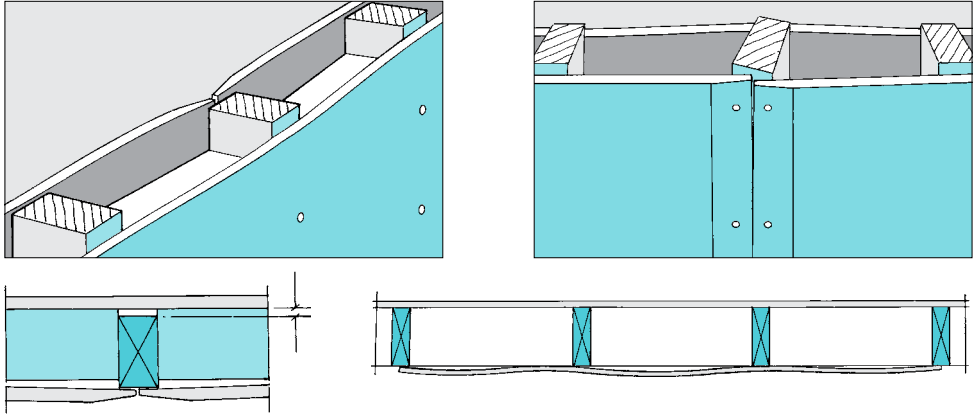
Prevention

Allow joint compound to fully dry between coats.

WAVY SURFACES

- **Description**

Plasterboards are not flat but have a bowed, dished or undulating surface. Studs or ceiling joists not on the same plane as other framing members. A twisted framing member. Shadows being cast across the joint. Plasterboard forced into place.



Causes

1. Framing oversights. Framing out of alignment with adjacent framing making it difficult to bring the sheet into firm contact with framing members.
2. Excessive moisture in the timber framing can also cause warpage, twisting or bowing as it dries.
3. Fixing the perimeter of the sheet prior to the centre.
4. Fixing of damp plasterboard.
5. Excessive loading from insulation or light fittings causing too much weight on plasterboard.
6. Incorrect placement of vapour barrier causing moisture build up within the plasterboard.
7. Exceeding maximum span of fasteners when fixing.
8. Not allowing a 5-10mm gap between the floor and the plasterboard.
9. Incorrect fastening sequence for lining light gauge steel framing.
10. High temperatures in the ceiling space causing board expansion, particularly in skillion roofs with poor ventilation.
11. Incorrect storage- storing of plasterboard on edge on damp concrete floors.

Remedy

It is extremely difficult to rectify some of these problems without having to resort to full replacement of the linings after rectifying underlying factors.

Replace all warped or crooked studs.

Prevention

1. Timber members must be brought into alignment.
2. Check stud, batten and joist alignment, correcting wherever necessary.
3. Always fix from the centre outwards
4. Sheets must be touch fitted and not forced into place.

TRIM DEFECTS

Description

Cracks appearing at the edge of GIB® Goldline™ Platinum trims.

Cause

1. If the taping compound is allowed to dry too fast because of high temperatures and low humidity or excessive drafts.
2. Improper application, such as over-dilution of compound, use of wrong compound, excessive compound under tape, no second coat over tape.

3. Cold, wet application can result in poor bond.

Remedy

Remove all poorly bonded trims and reapply compound and trims as recommended.

Prevention

Do not install at temperatures below 10°C. During cold weather, control heat at a minimum 10°C and supply good ventilation. In hot, dry conditions, place shielding devices over room openings to prevent drafts. Do not apply joint treatment over hot surfaces. Lightly wet down floors if room humidity is too low. Avoid practices listed under "Causes" above.

BOARD DEFECTS

Delamination

Separation of the paper ply from the main body of the paper. Paper still adhered to the core with weak inter ply bond. Continuous strips or in the form of blisters.

Peeler

Paper liner coming away cleanly from the core with no paper adhesion. Caused by:

Calcinated (over dried) board

Also occurs when the plasterboard is damp

End Split

Peeling or splitting 50-100mm from end of sheet. Usually caused by soft board at the knives during the manufacture of plasterboard.

Blisters

Intermittent splitting of the core and paper.

Shoulder

The thickness of the board at the inner edge of the taper is greater than that in the field of the board itself.

Cupped or Hooked Edges

Scalloped or hooked. Taper does not have regular profile.

Can be caused during manufacture or incorrect storage of the board edge on damp concrete surfaces.

Soft Edges

Soft core or calcinated due to over drying of the edge.

Damp due to storage on damp concrete surfaces.

COMPOUND DEFECTS

Grit

Small pieces of raw material or contaminant that show up when the compound is trowelled.

Seeding/Lumps

Small lumps of hard compound that can form towards the end of a compounds working time. Can be due to contamination, over mixing, dirty tools, or particles of dry compound left in the mixing bowl.

Inconsistent Set Time

Setting compounds having a different set time to those stated on the bag. There are a number of probable causes including contamination, particles of dry compound left in the mixing bowl, variable water temperature, over mixing and retempering and inappropriate product storage.

Variable Viscosity

Compound thickening throughout the working time of the compound.

Shrinkage

The compound shrinks back into the joint when it dries. Caused by thick coats of compound, not allowing the compound to dry between coats and using incorrect mixing ratios.

Staining (Prior to decoration)

A dark grey stain (caused by the jointing compound) down the centre of the joint.

For further advice please contact the GIB® Helpline 0800 100 442.

Checking/Cracking

Description

Small splits or star shape cracks on paint film surface.

Cause

Joint or Topping Compound not fully dry before paint application.

Paint not fully dried before next application.

Paint applied too thick.

Incorrect paint used.

Remedy

Remove paint or coating, allow joint compound to fully dry and reapply paint as per manufacturers instructions.

Peeling/Flaking

Severe cracking.

Description

Large flakes that adhere loosely to the surface.

This problem is an extension of cracking and the causes and remedies are the same.

Sheen Variation

Description

A differential in gloss levels over the whole area of the wall. This variation can be greater on nail holes and joints, and is highlighted by the use of semi and full gloss paints.

Cause

Nail holes and joints not sealed and undercoated correctly.

Joint compound not fully dry before paint application.

Burnish marks caused by rubbing or washing the wall.

Incorrect sealer used which does not equalise surface absorption of primer and compound.

Remedy

Sand back and allow joint compound to fully dry before applying a sealer coat. Then apply correct paint system as per the manufacturers instructions.

Prevention

Use correct paint system and apply as per manufacturers instructions.

Fibre Raise Adjacent to Joint Areas

Description

A shadow adjacent to the stopped area.

Cause

Commonly encountered with spray applied sealer and top coats which have not been lightly sanded back between coats.

Also common where alkyd sealers are used and not sanded back before the application of top coats.

Prevention

Lightly sand between all coats.

Discolouration

Description

Patches of ivory or light yellow discolouration.

Cause

Use of water based wallboard sealers on old 'yellowed' plasterboard which has been exposed to sunlight for longer than 3 weeks.

Prevention

Use a pigmented oil based wallboard sealer.

Remedy

Apply a pigmented oil based sealer compatible with and over discoloured top coats. Apply top coats as usual.

For any further advice relating to paint problems please contact the paint manufacturer.