GIB® News

Issue two
2018

Understanding the evolving needs of our current and future customers.

- Base compound comparison.
- New systems offer cost savings.
- GIB® tape helps the plight of the honey bee.

NEW GIB® HEALTHCARE DESIGN GUIDE SHOWING SECTOR EXPERTISE

SERVICE

by Clara Sumner
Partnership Manager – Industry Associations

Designing walls and ceilings within a school, a hospital or a terrace home? There's a GIB® system for it. Unsure how to approach noise control in an apartment, or fire in a shopping centre, or seismic in a commercial office? We have the information, systems and details you need for any sector you work in.

GIB® systems have traditionally been ordered by function: noise control, reverberation control, wet areas. This is still the clearest and most efficient way for us to order our vast range of systems and solutions, but as a single project may require noise control, fire and reverberation control, it can mean that the designer has to use a number of our system books to get the right systems for their job.

Understanding that this can take time, we have started a programme of developing sector solution guides to provide design guidance for walls and ceilings specific to that sector, collate relevant systems from a range of our literature, and develop new targeted systems. In 2017 we released the GIB® Terrace Home Guide, and this month we release the GIB® Healthcare Design Guide.

Healthcare facilities are some of the most important and heavily used buildings in the country.

It is essential then that designers and contractors have the right information to make the best decisions about specification and installation to ensure these buildings are well designed to perform now and into the future.

GIB® systems from our Noise Control Systems and Fire-Rated Systems literature that were particularly appropriate for healthcare and hospitals have now been pulled together into a single place to make it easier and faster to find the right system for the job.

Additionally, as the requirements and expectations of healthcare facilities changed, we found there were opportunities to develop new systems that would be particularly suited to environments that may require a range of responses for mould resistance (high hygiene), impact resistance (gurneys in corridors) and noise resistance (for privacy and rest).

The GIB® Healthcare Design Guide also details design considerations such as acoustics in hospital environments, impact, crash rails and overlays, and surface abrasion resistance. With case studies of Burwood Hospital and the Elective Surgery Unit at North Shore Hospital, as well as an expert perspective from acoustician Dr Jeremy Trevathan, this aims to be a useful and much used prompt for those in the healthcare design sector.

For further information visit gib.co.nz or call the GIB® Helpline 0800 100 442.

LOOKING TOWARDS THE FUTURE

FORWORD

by Simon Cooper
General Manager

I would like to think that Winstone Wallboards has a demonstrated history of developing new products, systems and services to meet the ever-changing needs of our market. But more so than ever, we need to embrace the pace of change and understand the evolving needs of our current and future customers.

Our Auckland manufacturing site in Penrose is nearing 50 years in age. While we have continued to heavily invest in the site over all those years, we think the time has come for us to consider a new plant, on a new site, to provide us with the capability we need into the future.

As with any investment of this scale, it is important we do our homework prior to formally committing and this is what we are doing now. The new location, the capacity of the plant, how to improve our product performance and reduce our environmental footprint – these, among others, are key questions that need to be answered. We need to be mindful of emerging technologies, such as additive manufacturing (3D printing), autonomous vehicles and even the potential of artificial intelligence, to ensure that any new site is capable of adopting these technologies when they reach the appropriate levels of maturity.

With our 'crystal ball' we also have to be thinking about what new products and service solutions the market may need in the years to come to make sure we can adapt our operations on the new site to handle ever-evolving requirements.

So while the construction of a new facility is an extremely exciting prospect for our business, it is a huge responsibility to get it right and that is what we are currently focused on. We do not yet have a confirmed new location or a timeframe but will update you on progress when we can.

Until then, be assured that we still have the capability, and the capacity, to service the market in the immediate years ahead.

GIB TOUGHLINE® AQUA THE NEW NAME OF GIB SUPERLINE®

GIB® Toughline® Aqua — 13mm TE/TE

PRODUCT

by Edwin Zijderveld
Product Manager

GIB Superline®, the 5-in-1 plasterboard, is in the process of being renamed GIB Toughline® Aqua.

GIB Toughline® Aqua has been specially developed for situations that require multiple performance characteristics including impact, fire, noise, bracing, water and mould resistance.

Like GIB Toughline®, GIB Toughline® Aqua, is a 13mm thick high density plasterboard with a continuous fiberglass mesh embedded inside the back face of the board. This gives the board increased impact resistance and reduces repair costs. GIB Toughline® Aqua has the additional benefit of a water resistant core containing special polymers to help prevent steam and moisture penetration.

Winstone Wallboards recommends the use of GIB Toughline® Aqua in situations where both impact and water resistance are required. By employing both GIB Toughline® and GIB Toughline® Aqua together, specifiers and contractors can utilise the most efficient and cost effective board for the purpose, with water resistance only in areas that require that additional performance.

GIB Toughline® Aqua can also be used as a multiple performance plasterboard to cover a wide range of performance situations, particularly for instances where a contractor would prefer fewer boards on site and higher performance generally across the project.

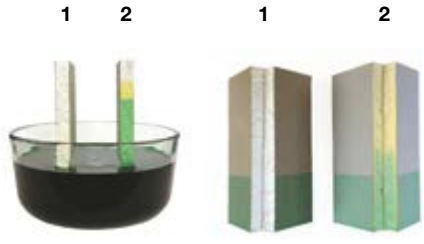
The performance of GIB Toughline® Aqua is equivalent to GIB Superline®, and any specifications that specify GIB Superline® can use either GIB Superline® or GIB Toughline® Aqua as the product name transitions in the market.

For further information contact your Area Sales Manager or call the GIB® Helpline on 0800 100 442.

BELOW: The difference between GIB Toughline® Aqua and standard plasterboard after a two-hour soak test in green dye.

1 **GIB Toughline® Aqua** (previously GIB Superline®)

2 **Standard Plasterboard**



GIB-COVE® SHIPPING AND HANDLING TIPS

PRODUCT HANDLING

by Cath Montgomery
Product Manager

Top tips to ensure that GIB-Cove® arrives on site in the best possible condition.

- Always have GIB-Cove® top stowed.
- Always use packaging protection to protect the edges from strapping and damage.

- The best way to carry GIB-Cove® is to use a two person lift with the GIB-Cove® on its edge. This prevents the lengths sagging which could damage the GIB-Cove® and result in post installation issues.

- Carrying stacks of a maximum of 5 lengths at a time ensures that the GIB-Cove® is fully supported to avoid sag.

Follow these simple techniques to ensure you get the best possible results from your GIB-Cove®.

For further information contact your local Area Sales Manager or call the GIB® Helpline on 0800 100 442.

JERRY HIRST
National Sales and Channel Manager

We are pleased to announce that Jerry Hirst will be re-joining Winstone Wallboards on an interim basis as the National Sales and Channel Manager. Jerry is a familiar figure with Winstone Wallboards staff and customers, having spent over 19 years with us in this role before moving to ITM. Jerry's interim appointment means that we are able to provide sales leadership and customer support continuity whilst we go through a robust recruitment and transition process for a permanent National Sales and Channel Manager.

CLARA SUMNER
Partnership Manager – Industry Association

Comercially savvy and adept at creating strong relationships, Clara will bring a national focus to Industry Associations, Installers, and the Rest Home sector. Clara has over 20 years' experience at Winstone Wallboards and has a great understanding of our business while maintaining existing relationships with many key customers. As part of her new responsibilities, Clara will continue to manage some of the key accounts she currently holds and therefore, her existing role will not be replaced.

MITCH SANSON
Partnership Manager – Group Home Builders

Mitchell Sanson has been appointed to the role of Partnership Manager – Group Home Builders. Mitch has been with Winstone Wallboards for over 18 months and during this time has built strong relationships and credibility with our customers. His practical experience and calm approach of dealing with customers' needs will support our Group Home Builders to be well looked after.

GETTING SPECIFICATION JUST RIGHT

SERVICE

by Nicole Stock
Market Manager
Commercial

Goldilocks didn't want the porridge that was too hot nor too cold, but only the bowl that was just right. It's the same with plasterboard. You don't want to pay for performance beyond what you need, but equally, you don't want systems that underperform.

Our strategy has always been about optimising the performance of the board to the situation, so we have a range of plasterboards with specific performance characteristics to allow targeted and cost effective use in wall/ceiling systems.

Here's an example: imagine a residential house. You need additional density and stiffness for bracing some walls, but these aren't in a bathroom or another wet area. Why would you use a plasterboard with multiple performance which has wet area protection when this is unnecessary and simply adds cost? A better solution is to target performance – use GIB Braceline® GIB Noiseline® where you need it and leave GIB Aqualine® to those areas that require wet area protection.

Like Goldilocks, we are always searching for solutions that are just right. We are focused on finding the best value for our customers. Take that residential example from above: because we have optimised our bracing calculations (and developed a handy bracing calculator to make doing those calculations a breeze) instead of needing to use GIB Braceline® GIB Noiseline®, by utilising new bracing units such as GS2 Nom and GS1, in most situations, you would likely be able to use GIB® Standard only, saving you cost and reducing the number of boards and waste on site. Now that's optimising design.

THE GO-TO HANDBOOK FOR DTS IS NOW AVAILABLE

DELIVERY SERVICES

by Grant Glover
Supply Chain
Development Manager

The GIB® Delivered to Site service operates in greater Auckland, Hamilton, Tauranga and Christchurch areas and specialises in plasterboard placement on site. With a variety of vehicles to suit delivery options and extra labour available on request to carry the board where you need it to save you time and money.

A new, updated DTS Service Guide has recently been launched so that you have a single, go-to resource for all the key DTS information from delivery areas to detailed explanations of specialised deliveries that would require extra labour, hints on how to ensure your site is 'plasterboard ready' and tips on making ordering easy.

In addition to the service guide, we also have a new updated 'Is your Site Plasterboard Ready' brochure that will be available for builders with information about site checks, extra delivery charges and getting your site 'plasterboard ready'.

Download the 'Delivered to Site Service Guide' from gib.co.nz/assets/uploads

MY PLASTERBOARD HAS THE 'CHICKENPOX'

TALKING TRADE

by Graeme Robertson
Senior Technical Advisor

Homeowners are often both alarmed and disappointed to see fastener heads 'popping up' in their nice new plasterboard walls and ceilings. Looking like little bumps directly over the screw heads, they can be extensive and ugly!

Fastener popping is actually commonly encountered, not only in plasterboard, but also in timber decking, claddings and long run roofing. The quintessential 'squeaky floor' is also most likely the result of fastener popping. It has been around ever since we started building with timber framing.

If the plasterboard has been installed as per our recommendations, any popping is more than likely due to timber shrinkage.

How does that work?

The maximum moisture content of timber framing at the time of lining must not exceed 18%. A building inspector will help check this by testing a few areas. It can be very difficult to get it to this level with New Zealand's cool, wet winters.

After a building is enclosed, timber framing will find its equilibrium moisture content at around 10 - 12% in Summer or 13 - 16% in Winter. When the moisture content within the framing alters by +/- 3%, the cross-sectional dimension of the timber framing may vary by around +/- 1mm. Therefore when timber shrinks, the shaft of the fastener pops out the surface of the plasterboard or leaves a bulge of compound on its surface.

The screw is not undoing itself, the timber is shrinking away from the head. Extreme weather conditions (a long hot dry summer following a wet winter construction period) can however exacerbate shrinkage in a new house and thus the extent to which popping occurs.

Pops that occur after at least one month's heating cycle are a good indication that timber shrinkage is the cause.

Ensuring that, once occupied, the home is well ventilated and not closed off for prolonged periods with heavy reliance on heat pumps will help to minimise popping.

The MBIE Guide

The Ministry of Business and Innovation published a 'Guide to tolerances, materials and workmanship in new residential construction 2015' document (available on their website) which makes mention of the following in relation to popped fasteners:

Acceptable:

— Popping of fixings (where the outlines of fixings are visible under the finish) that occur over a period of time after handover that does not break the surface and is not visible from normal viewing position. (refer to the Guide for an explanation of this position).

Not Acceptable:

— Popping that is visible from 'normal' viewing position in Level 4 and 5 finishes at handover. (Most new homes are finished to Level 4.)
— Popping that breaks the surface.

Treatment:

Before fixing 'pops' the house framing needs to reach its equilibrium moisture content. Given that most 'pops' occur following winter builds, we recommend to wait with repairs for a full year, or after the next summer and winter heating cycle.

Additional screws are placed 50mm away from the popped fastener which is then driven below the surface. The mounded stopping compound is removed, and new coats are applied ahead of re-decoration.

For further information view the 'Best Practice Series No 6 & 7' on gib.co.nz/assets/uploads or call the GIB® Helpline on 0800 100 442.


GIB
Best Practice Series
No 6 - Minimise fastener popping

7 THINGS TO CONSIDER TO REDUCE FASTENER POPPING

As substrate movement is the biggest contributing factor to popping, it's important to adhere to the following guidelines. The GIB® Site Guide requires the moisture content of timber framing to be 18% or less at the time of lining.

We recommend a lower moisture content (12% or less) if air conditioning, heat pumps or central heating are to be installed as the equilibrium moisture content of the timber could be as low as 8% once the systems are fully operational.

We know this is a real challenge during wet winter months however remember that a 5% moisture change can result in a 1mm dimensional movement in timber. It is therefore essential that the moisture readings are taken accurately and that the timber treatment and temperature 'correction' factors are applied to achieve accurate readings.

01. **Use metal ceiling batten** – They provide a stable substrate for plasterboard ceiling linings as they are non-responsive to the effects of moisture or humidity. Regular users of metal batten systems consistently have fewer call-backs for movement related ceiling defects such as peaking or cracked joints and popped fasteners. The use of 10mm GIB® Standard plasterboard with GIB® Rondo® metal ceiling battens have been well proven to be a cost effective ceiling lining system in residential housing.
02. **Use screws** – GIB® Nails can be used for fixing to timber wall framing. However, screws are the preferred method for fixing plasterboard as pops are fewer and less pronounced. First, for the same holding power, screws are typically shorter than nails, so there is less wood between the screw tip and framing face to shrink. And secondly, it takes higher pressure to force the plasterboard along a threaded shank than it does to slide it along a smooth one.
03. **Ensure linings are flush with framing** – Whenever the back of the plasterboard is not held tight and secure against the face of the framing substrate by the head of the fastener, a potential fastener pop exists.
04. **Fasteners minimum of 200mm from adhesive** – If fasteners are applied through or adjacent to a daub of adhesive, popping can occur as the adhesive dries and pulls the plasterboard closer to the framing substrate. Ensure fasteners are fixed a minimum of 200mm from a daub of adhesive.
05. **Insert control joints** – This is particularly important with large open plan rooms or where corridors enter a large space. As best practice, control joints should be designed and installed wherever there is a risk of structural movement (e.g. large rooms, long walls, entry to large rooms and mid-floor level in stairways).
06. **Metal perimeter channel with square stopping for wall/ceiling junction** – Where you intend to square-stop the wall/ceiling junction, design to replace any nominal 140mm ribbon plate with a conventional 90mm ribbon/top plate so that either a GIB® Rondo® 340 channel or GIB® Rondo® NZ18 angle can be fitted to the perimeter. This means the perimeter screws are penetrated into the steel, not the timber. Alternatively, GIB-Cove® will generally cover these at-risk fasteners.
07. **Allow adequate drying time** – Ensure your winter construction programme accounts for sufficient time for framing to adequately dry steadily and evenly once the building is closed in. While you can't beat natural airflow, colder months may require the use of artificial heating. LPG burners emit water as a by-product of combustion. This is detrimental to drying of a structure. Where possible use other liquid fuel burners, or electric heaters. The important consideration is that plasterboard linings should only be installed when the moisture in the timber framing is less than 18% (or lower if air conditioning, heat pumps or central heating are to be installed).

FOR MORE INFO VISIT GIB.CO.NZ OR CALL THE GIB® HELPLINE ON 0800 100 442 — JUNE 2017

NEW SYSTEMS OFFER COST SAVINGS

LITERATURE

by John Kitchen
Architectural / Commercial Lead

Twenty-one new single layer GIB Noise Control® systems have been released. There are options for timber frame walls, double frame timber walls, steel frame walls, double steel frame walls and GIB® Rondo® Quiet Stud® walls employing a range of 13mm and 16mm GIB® plasterboards suitable for intertenancy and commercial projects. This breadth of system offering adds significant functionality and choice to the GIB Noise Control® System range.

Two layer noise control systems have traditionally been Winstone Wallboards' view of best practice for noise control because multiple layers tend to give some buffer against on-site installation issues, and mass can be cumulatively added.

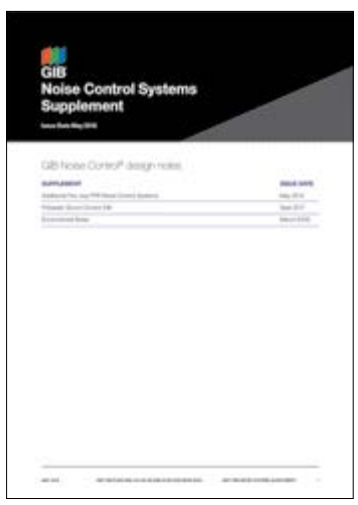
As we developed the GIB® Healthcare Design Guide, we challenged ourselves to further optimise GIB® solutions, developing new systems that were particularly targeted to this sector, though would also have wider use in a range of commercial and intertenancy applications.

Our product development team spent significant time in the acoustic laboratory testing and comparing different boards and configurations to produce a range of additional GIB Noise Control® systems that employ only a single layer of plasterboard either side of a wall to give noise control options for both intertenancy (above 55 STC) and sub-intertenancy (below 55 STC). These systems are all based on real test results and are designed for the New Zealand Building Code.

Reducing the material leads to cost savings, while also maintaining adequate performance. Particularly for healthcare situations, where sub-intertenancy systems (lower than NZBC intertenancy requirements of 55 STC) offer good privacy and sound reduction properties while minimising cost, the range of systems adds real function and options to our full GIB® range. It should be noted that single layer systems do put more impetus on correct installation, and while material costs are reduced, associated labour costs can increase.

The new GIB® single layer Noise Control systems have been added to the GIB Noise Control® supplement, a live document available on our website which collates any updates, changes and new information relevant to GIB Noise Control® Systems between updates to the GIB Noise Control® Systems literature. In addition to the new single layer Noise Control Systems, we are moving towards giving specific system codes to systems that utilise alternative GIB® plasterboards. For instance, this update includes a range of systems that utilise GIB Toughline® (or GIB Toughline® Aqua) and are given a unique system code, rather than requiring the specifier or contractor to use the GIB® alternative tables to substitute in different GIB® plasterboards. This gives you more certainty, accuracy and confidence that the specification is understood and will be installed correctly.

Download the 'GIB Noise Control® Systems Supplement' from gib.co.nz/assets/uploads
For further information call the GIB® Helpline on 0800 100 442.


GIB
Noise Control Systems Supplement

THE BEST OF BOTH WORLDS

SEISMIC TESTING

by Hans Gerlich
Senior Engineer

In commercial construction the use of preferred materials, ease of construction and improved seismic resilience can readily be achieved by combining aspects of two common construction techniques.

Seismic resilience and floor deflections

We frequently receive enquires from designers and commercial contractors asking how to detail gypsum plasterboard partitions to achieve better seismic resilience and to accommodate floor or beam deflections.

Winstone Wallboards is working with other industry partners, including members of the Association of Wall and Ceiling Industries (AWCI) and the University of Canterbury (UoC), on the development and testing of details aimed at minimising earthquake damage to non-structural elements (NSE) in commercial construction.

Gypsum plasterboard lined partitions can be very stiff once fully taped and plaster stopped. When building floors move relative to each other during an earthquake (called 'inter-storey drift'), partitions that cannot follow the displacement can suffer damage such as broken glass, cracked plaster stopping and even plasterboard sheets fracturing or 'popping off' framing.

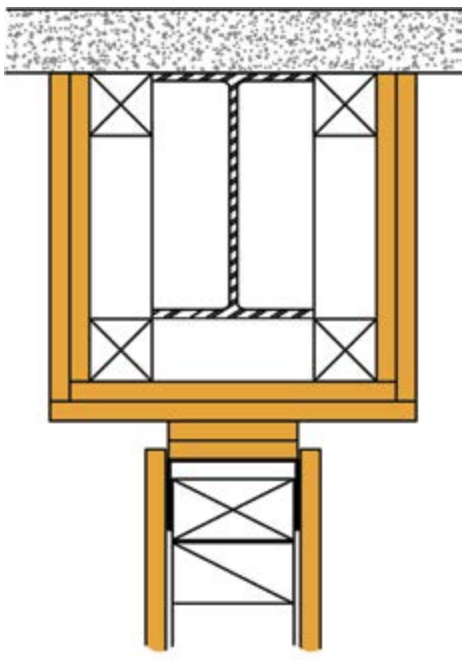
One way to accommodate movement and minimise damage to gypsum plasterboard partitions is to provide regular relief joints, particularly in longer walls, and to disconnect the partition from the slab above by placing framing in deflection tracks.

Steel stud framing

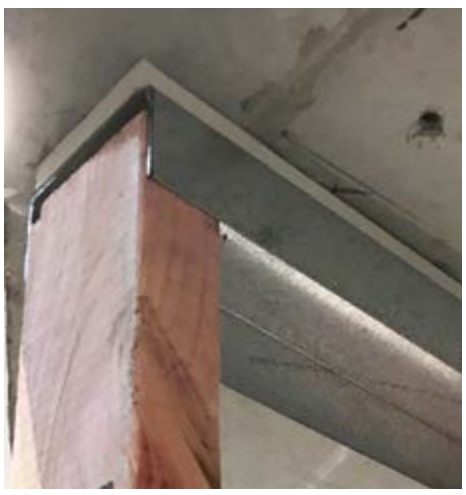
In commercial construction, partitions are often formed using steel studs friction fitted into C-shaped metal top and bottom tracks. To accommodate floor deflections and to allow for thermal expansion of steel studs in fire-rated applications, studs are cut short of full height by a minimum of 15mm for a 3m wall height and this gap is left inside the top track. Linings are fixed to the studs but not to the tracks. This allows lateral and vertical movement of the floor without directly affecting the partition below.

Timber framing

However, when timber framing is specified, designers and contractors often revert back to residential construction techniques and full frames with timber top and bottom plates and nogs are ordered from frame and truss suppliers or constructed and erected on site. This can result in excessive use of materials and difficulties accommodating movement, standing frames, and fitting them into deflection channels. Figure 2 shows an example of common timber framing practice in commercial construction.



ABOVE: Figure 2 - Full timber frames under a steel beam.



Why not steel and timber?

For those who prefer to work with timber, combining the best of both worlds holds promise. Commonly available 92mm x 0.75BMT metal tracks readily accept nominally 90mm timber studs. When using conventional commercial steel framing techniques to install metal top and bottom C-tracks, timber studs can be cut short of full height and friction-fitted. Studs can slide and be located accurately to align with sheet joints. Do not fix linings to the top and bottom tracks so that vertical movement and 'inter-storey drift' can be accommodated. As long as the lining fastener type and length is changed, most non-loadbearing steel frame specifications can be modified to accept timber studs.

Figure 3 shows an example of timber studs in metal tracks. Note the packer above the channel which will be located behind the lining deflection gap to provide backing against the passage of fire.

We hope to be able to communicate more industry progress on the seismic design of non-structural partitions as soon as information becomes available.

Download the 'Gypsum Plasterboard Lined Partitions in Commercial Construction Update' document from gib.co.nz /assets/uploads. For further information call the GIB® Helpline 0800 100 442.

FAR LEFT: Figure 1 - Test specimens under construction at the UoC. **LEFT TOP AND BOTTOM:** Figure 3 - Partition framing using timber studs in metal tracks.

WORKING WITH THE 'TRIFECTA'

TECHNICAL

by Russell Pedersen
Technical Support and Training Manager

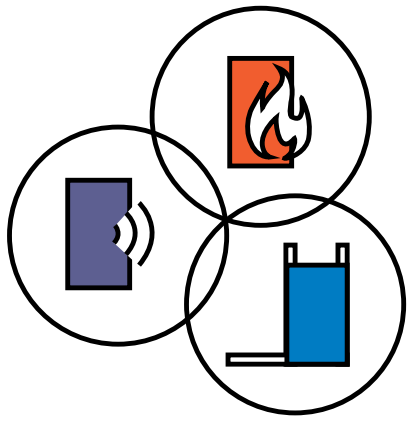
Particularly in the bigger cities, but also in commercial applications, the way we develop our land leads to changes in the increase in complexity in the demands on how we build. Specifically the demands on plasterboard wall systems have become more complex. Recently in the Technical Support and Training Team we have seen a rise in what can be referred to as 'The Trifecta'.

This is where a wall can have not only a Fire Resistance Rating (FRR) and a Noise rating (STC and/or IIC) but also a Bracing demand.

This can be particularly difficult if the system utilises a GIB Rail® as separation as you cannot use the Rail side for bracing. Often there is a bathroom or more specifically a wet area on the other side so options are limited for placement of the bracing. Sometimes, to satisfy New Zealand Building Code stipulations for durability, we find some walls in bathrooms need to have an additional layer of GIB Aqualine® on top of a specified double layer, especially if there are tiles being installed.

For instance, if there is a double layer with Bracing called up, you only need to use one sheet (inner or outer) for the Bracing. Fastener pattern and screw length for each layer, and the impact on the stopping and the finish, can cost more at the end of a project.

In addition to not only the care required, but also the potential cost of each penetration to a wall of this nature, you are faced with a potential drop in your STC result.



When addressing which of the three to tackle first, keep in mind that acoustic is generally an upgrade from fire and most acoustic systems will have a FRR attached to it. As the 'Trump', Bracing will always determine the fastener pattern.

If you are building and presented with 'The Trifecta' our suggestion is to check the system manuals thoroughly first:

- Plan well in advance, what is being installed, which side and the specific requirements for the relevant demand.
- Fire requires sheets to be touch fitted and usually any joins on a nog, (dwang for you South Islanders) or stud, check if there is any structural steel within the wall or ceiling as this needs to be treated differently.
- Noise needs GIB Soundseal® applied to the perimeter (if double layer this is applied between layers) and don't forget control joints every 12m minimum but this is a full discussion on its own.

If you are a designer in this situation, please consider one of our double wall systems from the GIB Noise Control® Systems book as this will increase the possibility to spread the demand between two walls and lessen the difficulty of services and penetrations.

For assistance with achieving all your requirements, remember the GIB® Helpline on 0800 100 442 is available to guide you on the intricate details of each element of 'The Trifecta'.

CONTEMPORARY STYLING WITH GIB-COVE® DECORATIVE PROFILES

DECORATIVE PRODUCTS

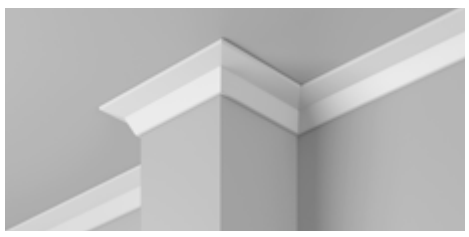
by Cath Montgomery
Product Manager

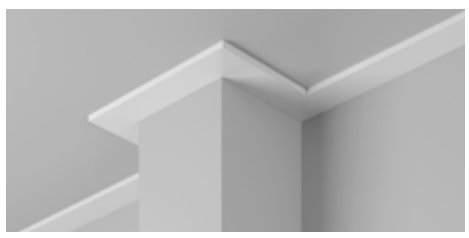
The GIB-Cove® decorative profiles offer a fresh perspective to cove styling. Tenor, Basso, Mezzo and Alto provide modern, sleek and refined options for both new home builds and renovation projects.

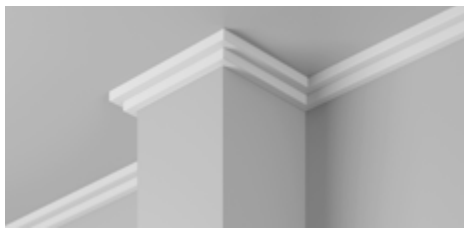
The quick to install and easy to paint GIB-Cove® range not only enhances the interior styling but also creates a stable system that ties walls and ceilings together which minimises the chance of joints cracking. The larger profiles can also be retrofitted over smaller profiles or traditional timber scotias.

Add value and inject style into your next project by installing one of the GIB-Cove® decorative profiles.

For more information view gib.co.nz/products/cove or call the GIB® Helpline on 0800 100 442 to request a brochure.







Mezzo

Sleek architectural lines superbly compliment modern interior design.

- 75mm profile in 3.6m lengths.

Tenor

A modern styling for any room, with simple clean lines that create striking architectural features.

- 90mm profile in 3.6m lengths.

Basso

With a sleek 45° angle, bookended by a double step, Basso provides beautiful, refined and timeless gravitas.

- 90 mm profile in 3.6m lengths.

Alto

The stepped design gives you a clean, crisp symmetry. Perfect for creating a sensation of height and space in a room.

- 50mm profile in 3.6m length.

WORKING WITH CLIENTS ON A NEW BUILD OR HOME RENOVATION?

LITERATURE

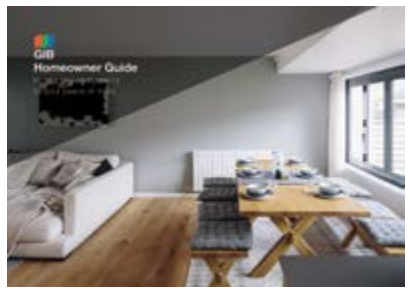
by Sarah Joblin
Marketing Services Coordinator

When you're talking to homeowners about a new build or renovation it's crucial to get the basics right, so you won't want to be without a copy of the new GIB® Homeowner Guide.

It's jam-packed with valuable information about GIB® products and systems – from the importance of using GIB Aqualine® in wet areas, to the great benefits of GIB Noise Control® Systems.

Filled with clever tips and tricks for homeowners, this user-friendly guide gives helpful advice on essential aspects of the home building and renovation process, such as achieving a first-rate finish with GIB Ultraline®, and enhancing interior spaces with decorative features from the GIB-Cove® range.

And for those passionate about sustainability, the guide also outlines the lengths Winstone Wallboards goes to in minimising the environmental impact of their products.



Download your copy at gib.co.nz/homeowner or cll the GIB® Helpline on 0800 100 442.

BASE COMPOUND COMPARISON

COMPOUNDS

by Ian Morrissey
Sales and Training Specialist
Compounds, Accessories

A number of ready mixed compounds can be used as a basecoat, i.e. the first and second coats in a typical three coat plasterboard joint system. However, setting compounds are more commonly used for the first and second coat application. There are good reasons setting compounds are often a better solution for the first and second coat application in New Zealand conditions.

Compound hardening/curing mechanism

Ready mixed compounds cure and harden when they dry and can be referred to as air drying compounds. In contrast, the dry powder setting compounds cure with a chemical reaction that turns plaster into gypsum (when water is added and after the working time has lapsed), and this process is referred to as setting.

Setting compounds harden/cure even in poor drying conditions. Ready mixed compounds rely on good drying conditions to harden/cure.

Coat thickness

The first and second coats are typically applied relatively thick and a jointing tape is embedded in the first coat to strengthen the joint (see diagram, total joint thickness can be up to 2.3mm). This makes it difficult/slow for moisture to evaporate from these coats and these thicker coats will take longer to dry.

Use setting compounds for large voids

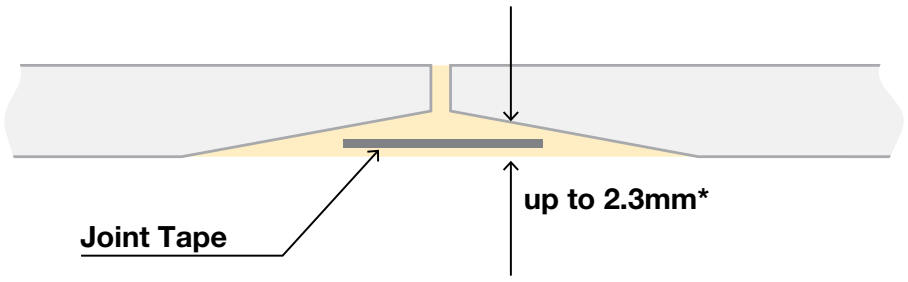
The AS/NZS2589:2007 page 44 standard states “Any voids exceeding 4mm in depth or gaps exceeding 3mm between boards shall be filled with setting tape cement and allowed to set prior to proceeding with jointing.”

Time required to cure/harden

Air drying compounds can take a long time to cure in typical New Zealand drying conditions when applied thick and bedding in a jointing tape. This can take more than two days; see the GIB® Site Guide (Dec 2014, Pg 80) for a table with approximate drying times at various temperatures and relative humidity. Setting compounds chemically cure after the working time has lapsed, regardless of drying conditions. Setting compounds normally also create a stronger joint in comparison to air drying compounds.

Shrinkage

Plasterboard jointing compounds shrink as they cure. The thicker the compound is applied the larger the shrinkage. Air drying compounds generally shrink more than setting compounds. Shrinkage for air drying compounds is higher because it continues to cure and shrink till it is completely dry. In setting compounds most of the shrinkage is completed within two hours after the working time has lapsed, i.e. after the crystalline structure has formed. Minor shrinkage will continue till the compound is completely dry. There should be no more shrinkage before the next coat is applied. Various problems are likely to manifest if shrinkage occurs to a basecoat that has already been covered.



*AS/NZS 2588:1998 page 6

ABOVE: Board taper with depth measurement

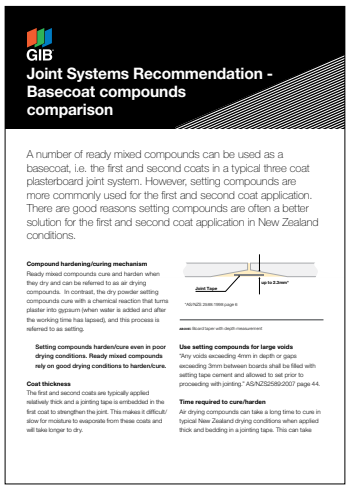
Tape adhesion

Setting compounds provide much better tape adhesion than air drying compounds. Jointing tapes provide critical reinforcing strength to plasterboard joints. Adequate joint strength is particularly important in GIB® Bracing Systems as well as for general durability.

Ambient temperature

Air drying compounds should not be used below a certain temperature (when applied and while drying), typically 10°C is the minimum. The binder/glue in air drying compounds will not coalesce/harden below this minimum temperature and result in a weak joint (i.e. risk cracking especially when used as a basecoat). Setting compounds perform better in cooler temperature. They form a crystalline structure and do not rely on a binder for their strength. If ready mixed compounds are used in cooler temperatures it is recommended to heat the structure uniformly (to around 18°C) and especially when used as basecoats.

For further details visit gib.co.nz/assets/uploads “Joint Systems Recommendations – Basecoat compounds comparison”.


GIB
Joint Systems Recommendation - Basecoat compounds comparison

A number of ready mixed compounds can be used as a basecoat, i.e. the first and second coats in a typical three coat plasterboard joint system. However, setting compounds are more commonly used for the first and second coat application. There are good reasons setting compounds are often a better solution for the first and second coat application in New Zealand conditions.

Compound hardening/curing mechanism
Ready mixed compounds cure and harden when they dry and can be referred to as air drying compounds. In contrast, the dry powder setting compounds cure with a chemical reaction that turns plaster into gypsum (when water is added and after the working time has lapsed), and this process is referred to as setting.

Setting compounds harden/cure even in poor drying conditions. Ready mixed compounds rely on good drying conditions to harden/cure.

Coat thickness
The first and second coats are typically applied relatively thick and a jointing tape is embedded in the first coat to strengthen the joint. This makes it difficult/slow for moisture to evaporate from these coats and will take longer to dry.

Joint Tape
up to 2.3mm*

*AS/NZS 2588:1998 page 6

ABOVE: Board taper with depth measurement

Use setting compounds for large voids
“Any voids exceeding 4mm in depth or gaps exceeding 3mm between boards shall be filled with setting tape cement and allowed to set prior to proceeding with jointing.” AS/NZS2589:2007 page 44.

Time required to cure/harden
Air drying compounds can take a long time to cure in typical New Zealand drying conditions when applied thick and bedding in a jointing tape. This can take

SUMMARY

Some air drying compounds can be used as basecoats. They need to be left to dry for the appropriate length of time and not used in cool temperatures. In New Zealand the drying time is typically too long for stoppers (e.g. due to low temperature and/or high humidity). Hence, stoppers normally use setting compounds as their basecoats to create a reliable strong basecoat and joint. Setting compounds allow subsequent coats of compound to be applied more readily in common New Zealand weather conditions. Setting compounds form a stronger joint and are cost effective. Ready mixed compound should only be used as a basecoat with above mentioned caution in mind.

SUPER HOME NATIONAL TOUR

EVENTS

by Gordon White
Market Manager
Residential

The Super Home Movement is a non-profit, industry-led group whose goal is to raise new home building standards to make New Zealand homes healthier and more energy efficient, while also promoting environmental, economic, and socially sustainable practices.

Winstone Wallboards is proud to support the Super Homes National Tour Programme which is helping demonstrate how to build cost effective and energy efficient homes by providing designers, builders and homeowners the opportunity to visit completed Homestar rated homes around the country. The tour will showcase homes using commercially viable and forward thinking building practices and technologies which help make the homes warmer and healthier while continuing to be cost effective.

Winstone Wallboards will be showcasing the GIBFix® Framing System which has been used in a number of the homes, as well as GIB® plasterboards sustainability certifications such as Declare.

To find out more about the Super Home National Tour Programme 2018 visit superhome.co.nz

THE GREEN AND GOOD OF GIB® PLASTERBOARD

SUSTAINABILITY

by Kevin Golding
Sustainability Manager

With so much green wash and conflicting interpretations around what makes a product or a company sustainable, we like to keep it simple.

— GIB® plasterboard is a sustainable, non-toxic, compostable and infinitely recyclable product made from natural gypsum and 100% recycled paper.
— Over the last decade, we have optimised our manufacturing plants to remove Red List nasties from our board. GIB® plasterboards do not use fly ash, a derivative of coal extraction, as a bulk filler* in place of naturally occurring gypsum.
— We know plasterboard waste is an issue in the construction industry and have invested heavily in waste recycling as well as initiatives that reduce waste through better design and take offs.
— We manufacture locally, and are proud that we support jobs and growth within our communities.

*10mm GIB Aqualine® board uses less than 0.7% fly ash as a processing agent, not as a bulk filler.

Our environmental certifications give you confidence that what we say is accurate and verified.

— Global Greentag Certification is one of the world's most robust, trusted and widely recognised ecolabels and we now have Level A certification for most GIB® plasterboards.
— Declare is one of the most advanced sustainability certifications specially verifying the ingredients used in the manufacture of building products. We have Declare certification for a range of GIB® plasterboards.
— Winstone Wallboards is the first plasterboard manufacturer in Australasia to gain an Environmental Product Declaration (EPD).
— All of these certifications support Green Star.

You will qualify for full Green Star points.

But what does this mean for you and your project? Not only can you be assured that GIB® plasterboard is non-toxic and safe to cut, install and live with, but by using GIB® plasterboard in your projects, you will qualify for full Green Star points due to Winstone Wallboards holding an EPD for six or more products.

For further information visit gib.co.nz/sustainability

GIB® TAPE HELPS THE PLIGHT OF THE HONEY BEE

SUSTAINABILITY

by Karen Richter
Marketing Executive

Most of us think of GIB® paper joint tape as the go-to bedding in tape for strengthening joints. But for Taupo's Phillip Haycock, it has become an unexpected lifeline for the New Zealand bee population, currently under threat from the Varroa mite.

Beekeepers across the country have been working on new ways to deliver organic acid miticide into hives to combat the destructive mite. And rural Taupo beekeeper Phillip has come up with an ingenious, and highly effective, solution using GIB® paper joint tape.

"In the past this organic acid was limited in economic viability because it required multiple applications to each hive to be effective. It was extremely labour intensive," says Phillip.

"A core group of us from online beekeeping forum NZbees.net began looking into other ways to deliver the acid, with the aim of creating an environmentally-friendly absorbent product that would store and slowly release it into the hive over a two-month period, as a single and inexpensive treatment."

Phillip's idea – a GIB® paper joint tape laminate – has proved to be extremely effective, and although it is not the only Varroa mite treatment available, it is quickly gaining recognition as being amongst the best.

The Varroa mite (also aptly known as the Varroa Destructor) was first discovered in Southeast Asia in 1904, and then reappeared in Florida in the 1980s. It arrived in New Zealand 18 years ago and has wreaked havoc with our bee population ever since. The tiny parasitic mite sucks the blood out of bees, compromises the overall health of the hive, and spreads viruses from hive to hive.

Phillip's GIB® treatment is one of a number now being used by beekeepers across the country, in a bid to combat the mite. "Before I became a beekeeper I worked in the construction industry. My brother, a

Tauranga plasterer, first introduced me to GIB® paper joint tape and taught me how to bed it in and apply a first coat.

"I always knew there was something special about this GIB® product – but little did I know it would end up playing such a significant role outside of the building industry, benefiting beehives all over the country."

For more information get in touch with the Beekeeping community at nzbees.net

ABOVE: Bee hive from above, with acid laminated GIB® paper joint tape hanging in hive.

GIB®

Get in touch via our website **gib.co.nz**
Call the GIB® Helpline **0800 100 442**