

## Technical Bulletin: Lining Concrete and Masonry Walls

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### Choosing Installation Method

Direct bonding of USG Powerscape® Fiberock® interior linings to concrete or brick masonry walls must only be considered when the concrete or masonry substrate is thoroughly dry and adequately protected against moisture penetration.

Strapping and lining must be used when:

- the concrete or masonry wall is below ground level.
- the concrete or masonry wall is an external wall, unless a proprietary external weather proofing system can be verified as providing weather tightness for the life of the building.
- the concrete or masonry substrate or paintwork is in poor condition.
- the concrete surface is a service core in high rise construction.
- irregularities of more than 10mm exist.

In situations where dampness or rain penetration problems exist, corrective measures must be taken prior to installation of interior linings.

Movement and control joints in the main structure must be carried through the USG Powerscape® interior linings.

Install services prior to installing USG Powerscape® interior linings.

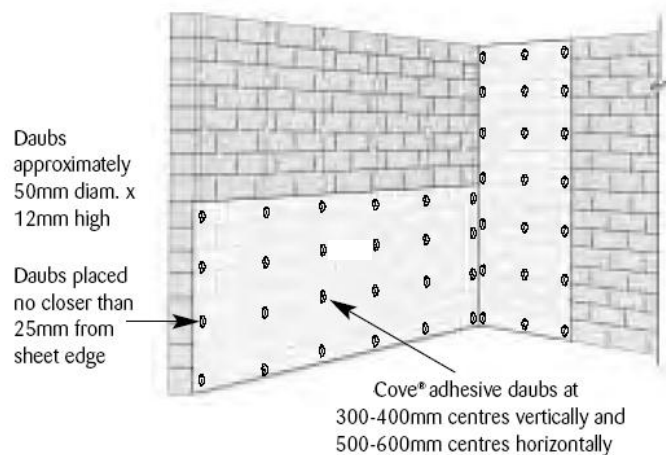
### Direct Bonding

The substrate must be firm, dry, and free of dust, grease, release agents and curing compounds. For information regarding the removal of dust, oil, grease or other agents, consult the concrete or masonry supplier.

A plasterboard cove adhesive is used to bond the USG Powerscape® interior lining to concrete or masonry surfaces. As the cove adhesive is a chemically setting compound, mix only sufficient quantity so that the wall area treated can be covered with a single sheet of USG Powerscape® interior lining and the adhesive maintains its working properties during final positioning of the sheet.

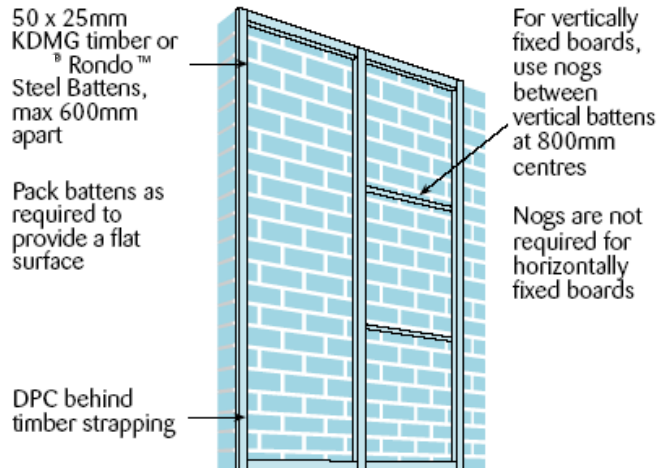
USG Powerscape® interior lining sheets can be fixed vertically or horizontally.

- Determine the sheet position for either vertical or horizontal fixing and mark on wall
- Mix the cove adhesive to a smooth, thick consistency. It must not have a tendency to run.
- Using a broad knife or trowel, apply the cove adhesive daubs approximately 50mm diameter x 12mm thick at 300-400mm centres vertically and 500-600mm centres horizontally. Ensure that adhesive is placed no closer than 25mm from the edge of the sheet to prevent excess adhesive squeezing through the joint.
- Where irregularities up to 10mm occur on the masonry surface, use larger daubs of adhesive to bridge the gap.
- Position the sheet and press into place ensuring full contact with the adhesive. A 10mm gap is required between the bottom edge of the sheet and the floor.
- Obtain true alignment and flatness by using a long straightedge over the surface of the sheet.
- Alternatively, sheets can be fully bonded by spreading adhesive over the entire back surface of the sheet using a notched trowel.



## Strapping and Lining

- Use either nominally 50 x 25 mm timber strapping or metal furring channels
- Moisture content of strapping must be 12-16%
- Fix strapping vertically to the wall surface at a maximum of 600 mm centres, with either a continuous horizontal batten or nogs at the top and bottom of the wall
- Place a damp course strip under timber strapping
- Ensure the strapping is plumb and flat by fixing packing between the strapping and the wall where necessary
- When fixing the lining vertically, place nogs between the strapping at 800 mm centres maximum
- Interlocking nogs are not required when the USG Powerscape® interior lining is fixed horizontally
- Leave a 10mm gap between framing members to allow airflow
- Fixing details are as described for fixing USG Powerscape® interior linings to timber or steel frames



## Cove and Skirtings

- Apply cove or trims to wall and ceiling intersections
- Fix skirtings with masonry nails or adhesive.

## Lining Polystyrene

There are many proprietary polystyrene building systems on the market. The method of direct bonding USG Powerscape® interior linings to polystyrene is similar to bonding to concrete and masonry. It is the responsibility of the polystyrene supplier and installer to ensure that the surface is suitable for direct bonding USG Powerscape® interior linings. Ensure that concrete filled polystyrene blocks are thoroughly dry.

Some solvent based adhesives are totally inappropriate for use on polystyrene and can cause irreparable damage to the substrate. If in any doubt about the suitability of an adhesive, contact the relevant manufacturer for further advice.