

FIRE RATING MATERIAL FIXING NOTES



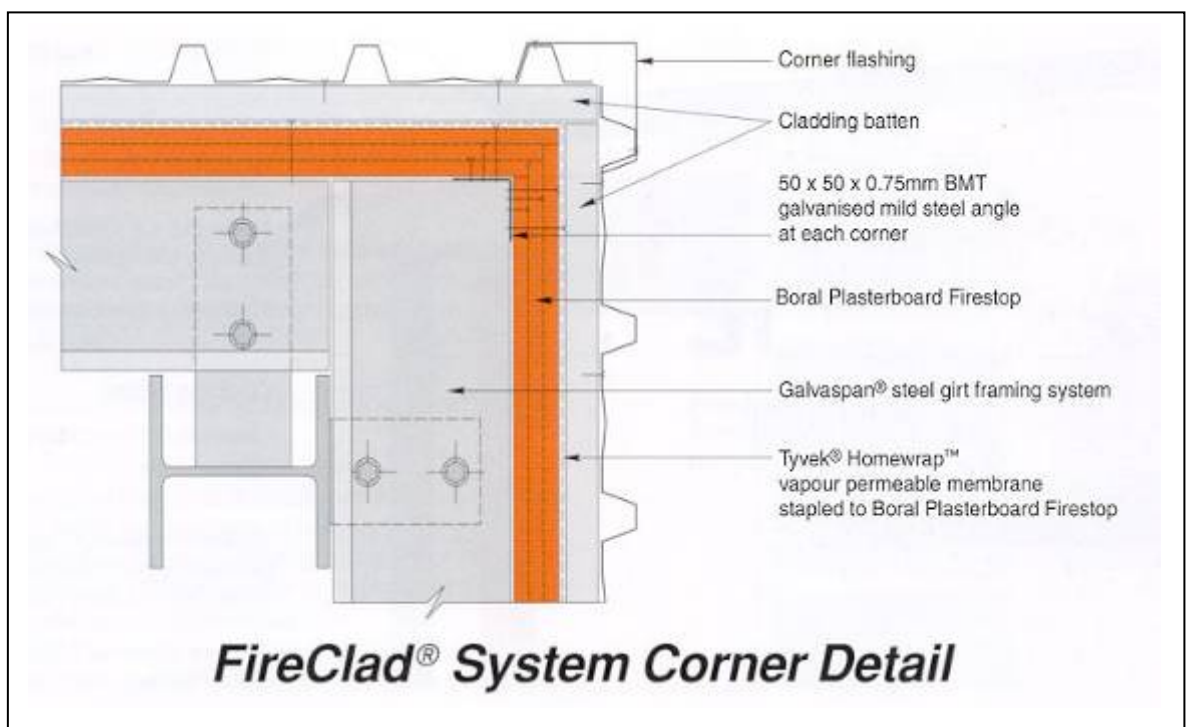
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External Wall Systems

We've used FireClad® as the example here

You can see by the diagram how the fire rated plasterboard is screwed (first layer, then other layers are adhered to the first layer) to the girt (usual 50mm lapping of fire rated plasterboard joints ensures continuity of FRL - for number and thickness of sheets, see wallboard section). After attaching the sheets a sheet membrane is fitted, then the batten and finally the metal cladding.

The corner plan below shows fixing details

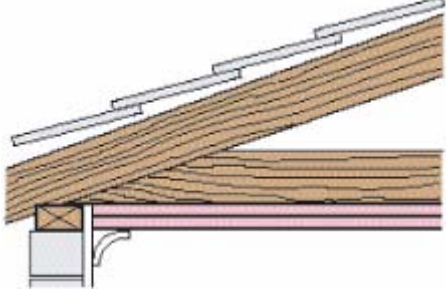
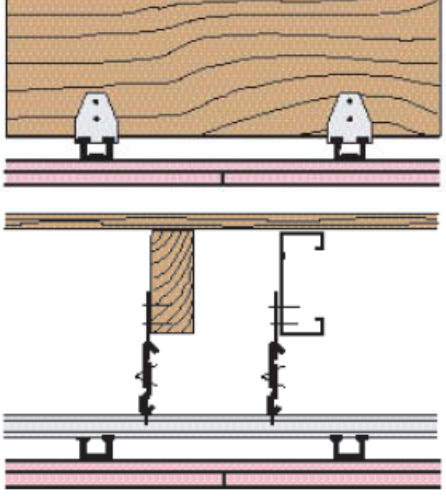
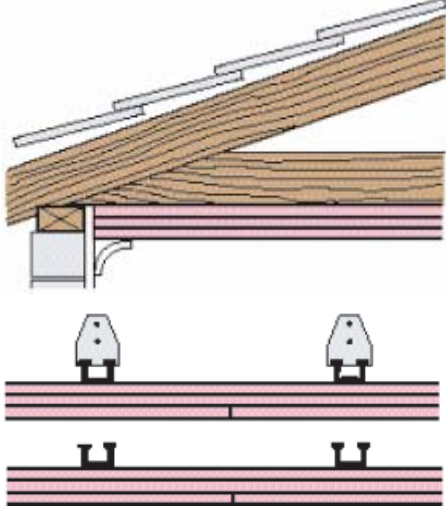


FRL	Description	Sketch
Non load bearing steel stud walls		
-/60/60	One layer 13mm fire rated plasterboard applied vertically or horizontally with noggings, to both sides of steel stud wall framing.	
-/60/60	One layer 16mm Fire rated plasterboard applied vertically or horizontally with noggings, to both sides of steel stud wall framing.	
-/90/90	One layer 13mm Fire rated plasterboard applied vertically to one side and two layers to the other side of steel stud wall framing - first layer vertical, second layer vertical or horizontal with cavity infill of glasswool batts. Fire tested penetrations only.	
-/90/90	One layer 16mm Fire rated plasterboard applied vertically to both sides of steel stud wall framing with cavity infill of glasswool batts. Fire tested penetrations only.	
-/90/90	One layer 16mm Fire rated plasterboard applied vertically to one side and two layers to the other side of steel stud wall framing - first layer vertical, second layer vertical or horizontal. Fire tested penetrations only.	
- /120/120	Two layers 13mm Fire rated plasterboard applied to both sides of steel stud wall framing - first layer vertical, second layer vertical or horizontal.	
- /120/120	Two layers 16mm Fire rated plasterboard applied to both sides of steel stud wall framing – first layer vertical, second layer vertical or horizontal.	
- /60/60	One layer 16mm Fire rated plasterboard applied vertically to both sides of steel stud chase wall system comprising two parallel frames constructed from 64mm x 0.75BMT studs.	
- /60/60	One layer 16mm Fire rated plasterboard applied to both sides of a steel stud chase wall system comprising two parallel frames constructed from 64mm studs and braced between each second pair of adjacent studs. Bracing spaced at 600mm centres.	
- /120/120	Two layers 16mm Fire rated plasterboard applied to both sides of a steel stud chase wall system, comprising two parallel frames constructed from 64mm studs and braced between each second pair of adjacent studs. Bracing spaced at 600mm centres.	
LOAD-BEARING STEEL STUD WALLS		
60/60/60	<i>Note: Rated from sheeted side only</i> Two layers 16mm Fire rated plasterboard applied to the fire exposed side of steel stud wall framing at 600mm centres - cladding on other side optional - wall frame must be separately designed for loading at ambient temperatures.	

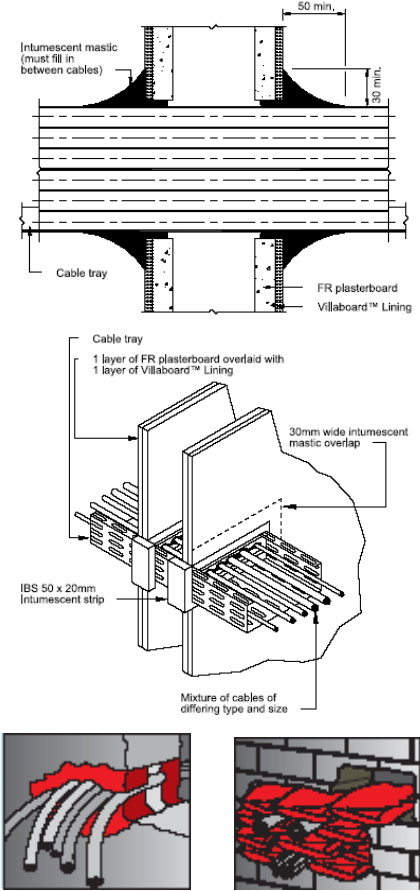
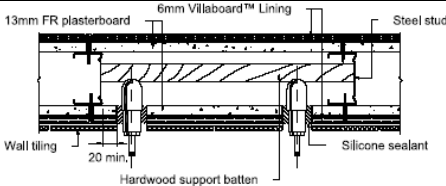
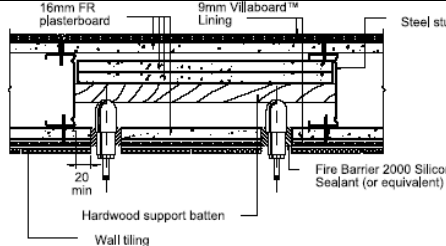
FRL	Description	Sketch
NON LOAD-BEARING TIMBER STUD WALLS		
- /60/60	One layer 13mm Fire rated plasterboard applied to both sides of timber wall frame.	
- / 60/60	One layer 16mm Fire rated plasterboard applied to both sides of timber wall frame - with the butt joints on opposite sides of the wall staggered by 600mm.	
- /90/90	One layer 16mm Fire rated plasterboard applied vertically to both sides of timber stud wall framing with cavity infill of glasswool batts. Fire tested penetrations only.	
- /90/90	One layer 16mm Fire rated plasterboard applied to one side and two layers to the other side of timber stud wall framing with the butt joints on opposite sides of the wall staggered by 600mm. Fire tested penetrations only.	
- /120/120	Two layers 13mm Fire rated plasterboard applied to both sides of timber stud wall framing with the butt joints on opposite sides of the wall staggered by 600mm, no insulation.	
- /120/120	Two layers 16mm Fire rated plasterboard applied to both sides of timber stud wall framing with the butt joints on opposite sides of the wall staggered by 600mm, no insulation.	
NON LOAD-BEARING TIMBER STUD CHASE WALLS		
- /60/60	One layer 16mm Fire rated plasterboard applied to both sides of a timber stud chase wall system comprising two parallel frames constructed from nominal 75mm x 50mm studs at 600mm centres and braced between each second pair of adjacent studs.	
LOAD-BEARING TIMBER STUD WALLS		
60/60/60	One layer 16mm Fire rated plasterboard applied to both sides of 90x35mm F5 studs at 450-600mm centres.	
90/90/90	Two layers 13 m m Fire rated plasterboard applied to both sides of 90x35mm F5 studs at 450-600mm centres.	
LOAD-BEARING TIMBER STUD WALLS USING RESILIENT MOUNTED FURRING CHANNEL		
60/60/60	One layer 16mm Fire rated plasterboard applied to both sides of 90x35mm F5 timber studs at 600mm centres. Sheets on one side fastened to MBS C29 furring channel fixed to ST001 resilient mounts.	
60/60/60	One layer 16mm Fire rated plasterboard both sides of 90x35mm F5 studs at 450-600mm centres. Sheets on one side fastened to resilient channels at 450mm centres.	

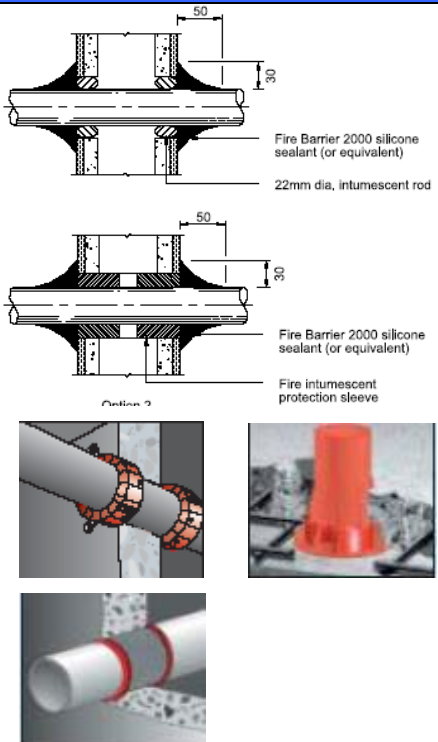
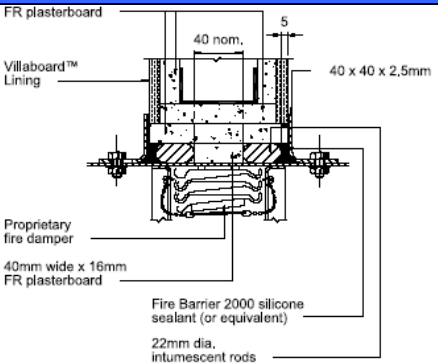
FRL	Description	Sketch
LOAD-BEARING MASONRY AND MASONRY VENEER WALLS		
60/60/60	<p><i>Note: Rated from sheeted side only</i> One layer 10mm Compressed fibrous cement sheeting applied to 90x35mm F5 studs at 450-600mm centres on the occupancy side of 110mm brick veneer wall.</p>	
60/60/60	One layer 16mm Fire rated plasterboard applied to 90mm x 35mm F5 studs at 450-600mm centres on the occupancy side of 110mm brick veneer wall.	
90/90/90	<p><i>Note: Rated from sheeted side only</i> Two layers 13mm Fire rated plasterboard applied to 90x35mm F5 studs at 450-600mm centres on the occupancy side of 110mm brick veneer wall.</p>	
240/120/120	One layer 10mm Compressed fibrous cement sheeting applied vertically to both sides of 110mm concrete hollow block wall – sheets adhered to blockwork with appropriate Masonry Adhesive.	
NON LOAD BEARING VENT SHAFT		
- /90/90	Three layers 16mm Fire rated plasterboard laminated using laminating screws.	
CEILING SYSTEMS		
30/30/30	One layer 13mm Fire rated plasterboard applied to the underside of floor or ceiling joists at a maximum of 600mm centres	
60/60/60	One layer of 13mm Fire rated plasterboard and one layer 16mm Fire rated plasterboard applied to joists or furring channels at 600mm centres.	

FRL	Description	Sketch
CEILING SYSTEMS		
60/60/60	Two layers of 16mm Fire rated plasterboard applied to joists or furring channels at 600mm centres.	
60/60/60	Two layers of 16mm Fire rated plasterboard applied to appropriate furring channel (at 600mm centres) fixed to resilient mounts.	
60/60/60	Two layers of 16mm Fire rated plasterboard applied to resilient furring channel at 600mm centres.	
90/90/90	Two layers of 16mm Fire rated plasterboard applied to joists or furring channels at 450mm centres.	
90/90/90	Three layers of 13mm Fire rated plasterboard applied to joists or furring channels at 450mm centres.	
120/120/120	One layer of 13mm Fire rated plasterboard and two layers of 16mm Fire rated plasterboard applied to joists or furring channels at 450mm centres.	

FRL	Description	Sketch
CEILING SYSTEMS		
60/60/60	One layer of 13mm Fire rated plasterboard and one layer 16mm Fire rated plasterboard applied to joists or furring channels at 600mm centres. Note: 13mm sheets must be applied first.	
60/60/60	Two layers of 16mm Fire rated plasterboard applied to joists or furring channels at 600mm centres.	
90/90/90	Three layers of 13mm Fire rated plasterboard applied to joists or furring channels at 450mm centres.	

FRL	Description	Sketch
CEILING SYSTEMS		
120/120/90	One layer of 13mm Fire rated plasterboard and two layers of 16mm Fire rated plasterboard applied to joists or furring channels at 450mm centres.	
120/120/120	Three layers of 16mm Fire rated plasterboard applied to joists or furring channels at 450mm centres.	
ELECTRICAL OUTLETS		
60/60/60	<p>i) Penetrations One Side Only</p> <ul style="list-style-type: none"> • Two electrical outlets maximum permitted to penetrate one wall face between adjacent studs. • No baffle or insulation is required in the wall cavity. <p>ii) Penetrations Both Sides</p> <ul style="list-style-type: none"> • Two electrical outlets maximum permitted to penetrate between adjacent studs. • A baffle consisting of one layer of 13mm Fire Resistant plasterboard is required. 	
120/120/120	<p>Penetration One or Both Sides</p> <ul style="list-style-type: none"> • Two electrical outlets maximum permitted to penetrate between adjacent studs. • A baffle consisting of two layers of 16mm Fire Resistant plasterboard. <p>Note: A baffle is also required where the penetration is on one side of the wall only.</p>	

FRL	Description	Sketch
PENETRATIONS – Electrical Cables		
120/120/120	Penetrations may be sealed by using either intumescent strips or sealant or fire rated intumescent pillows and sealant	
PENETRATIONS – Taps.		
60/60/60	i) Tap Penetrations One Side Only <ul style="list-style-type: none"> • Two taps only permitted to penetrate one wall face between adjacent studs. • Taps/pipes must not be supported off the wall linings, rather by a timber batten fixed between the studs. • Minimum distance between penetration edges and studs is 20mm. ii) Tap Penetrations Both Sides <ul style="list-style-type: none"> • Two taps only permitted to penetrate each wall face between adjacent studs, and must be kept clear of the lining sheets. Note: No baffle required in the wall cavity for FRL 60/60/60.	
120/120/120	i) Tap Penetrations One Side Only <ul style="list-style-type: none"> • Two taps only permitted to penetrate one wall face between adjacent studs, and pipes must be kept clear of the lining sheets and baffle. • Provide a baffle consisting of two layers of 16mm Fire Resistant plasterboard the full width between studs. • Baffle to extend 300mm above and below penetrations. • Taps must not be supported by the wall linings, but by a timber batten fixed between the studs. • Minimum distance between penetration edges and studs is 20mm. ii) Tap Penetrations both sides. <ul style="list-style-type: none"> • Not Permitted 	

FRL	Description	Sketch
PENETRATIONS – Pipes		
<p>60/60/60 to 120/120/120</p>	<p>Both steel and copper pipes may fully penetrate a fire rated wall provided the penetrations on each face are sealed with intumescent products as shown in Figure 30 or by using fire collars in accordance with manufacturers' recommendations.</p> <p>The same detail applies for FRL 60/60/60 to 120/120/120 construction</p> <p>PVC pipes with fire collars</p> <p>Metal pipes with intumescent sealant</p>	
PENETRATIONS – Fire Dampers		
	<p>The interface between the wall lining reveal and fire damper frame must be carefully sealed. Typical details shown are typical. See AS1682 for further information</p>	

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