

# FIRE RATED FLOOR/CEILING SYSTEMS – SECTION 3.1



## Timber Frame

JANUARY 2006

SPECIFICATION NUMBER	LOADBEARING CAPACITY	FIRE RESISTANCE RATING	LINING REQUIREMENTS	STC	IIC	SYSTEM WEIGHT APPROX
GBFC 60	LB	60/60/60	1 layer 16mm GIB Fyreline®	39	32	46kg/m <sup>2</sup>

### FLOOR FRAMING

Floor Joists must comply with NZS 3604 and be a minimum of 200 x 50mm spaced at 600mm maximum. Solid strutting is required at 1800mm centres.

Nogs fixed on the flat to receive the ends of flooring material shall be 100 x 50mm minimum.

Nogs fixed on the flat to receive GIB® linings shall be 75 x 50mm minimum spaced at 600mm for joists at 600mm or at 1200mm for joists at 400 or 450mm.

Nogs/framing is required at the perimeter of the fire rated ceiling.

### FLOORING

Minimum flooring shall be nominal 20mm thick particle board or minimum 17mm thick structural plywood fixed to the joists in accordance with the manufacturers' specifications.

**Note:** If tongue and groove sheet flooring is used, verification of performance must be obtained from the supplier of the flooring system.

### CEILING LINING

1 layer of 16mm GIB Fyreline® shall be fixed at right angles to the underside of the floor joists.

All joints must occur on joists, solid strutting or nogs.

Sheets shall be touch fitted.

### FASTENING THE LINING

#### Fasteners

51mm x 7g GIB® Grabber® High Thread Drywall Screws.

#### Fastener Centres

150mm centres around the perimeter of each sheet.

Single screws at 200mm centres along each joist and at the centre of each nog.

Place fasteners 12mm from sheet edges.

### WALL/CEILING JUNCTIONS

The internal angle between the ceiling and walls must be protected by GIB-Cove® adhered with GIB-Cove® Bond, or boxed corners (square stopped) filled and taped in accordance with the publication entitled "GIB® Site Guide".

### JOINTING

All fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with the publication entitled "GIB® Site Guide".

### CEILING BATTEN ALTERNATIVE

Where NZS 3604 permits 150mm joists, these may be used with continuous 75 x 50mm ceiling battens at 600mm centres, running across the joists (battens may also be used to level the ceiling in renovation work).

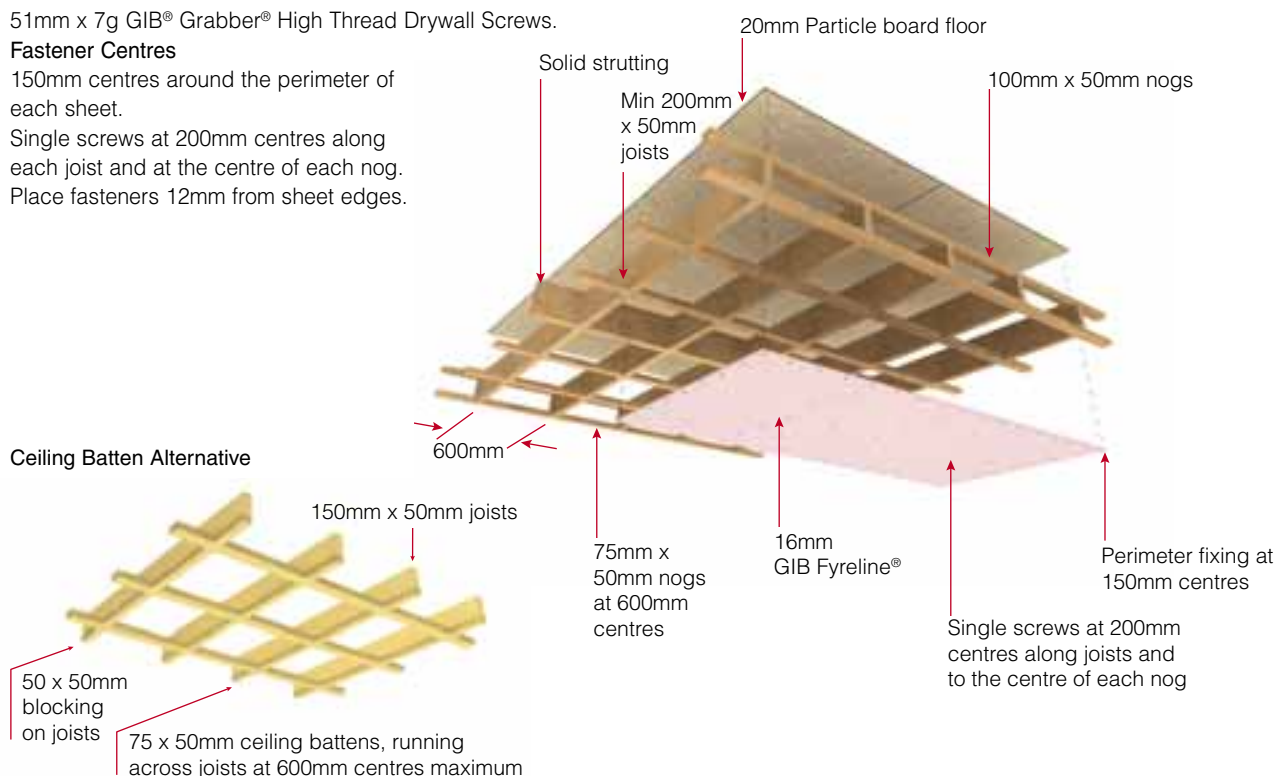
When joists are spaced at 600mm, 50 x 50mm blocking between the ceiling battens is required under all joists.

When joists are spaced at 400mm, blocking on joists is required behind lining joints at 1200mm centres only.

When joists are at 450mm, nogs are required **between the battens** at 600mm centres (or at 1200mm centres when battens are spaced at 450mm or less)

Nogs/framing is required at the perimeter of the fire rated ceiling.

The lining shall be fixed at right angles to the underside of the battens.



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow system specifications.