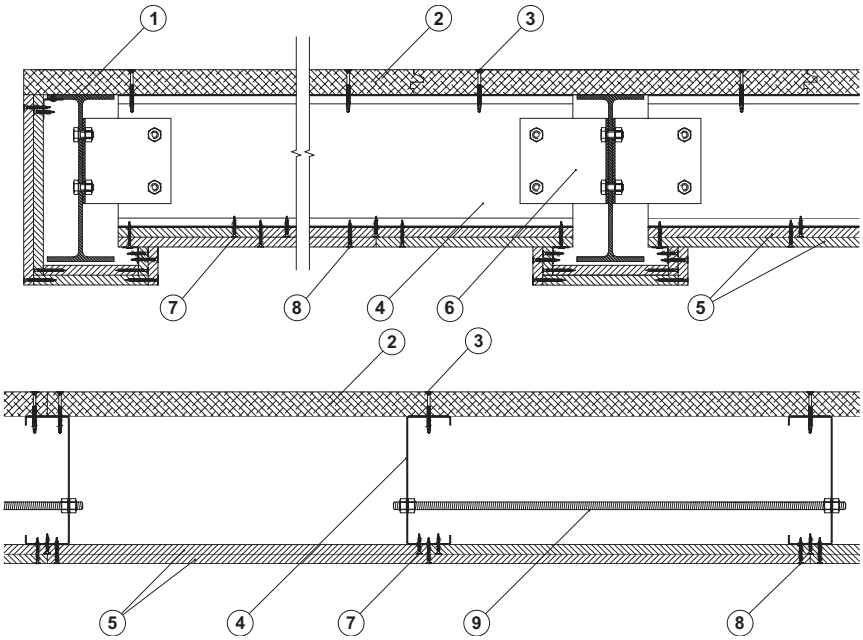

SUPPORTING STEEL FRAME

The supporting steel framework of the mezzanine floor (1) (including the columns) should be fire protected for a period equal to, or greater than that required for the mezzanine floor itself. This may normally be achieved using 2 x 15mm PROMATECT®-250 for section factors of up to 140m^{-1} for 120 minutes, or section factors of up to 350m^{-1} for 90 minutes. For further details on the requirements for protecting structural steelwork, refer to the Promat Fire Protection Handbook.

COLD ROLLED JOISTS

Galvanised steel channel joists designed in accordance with BS 5950-5 (4) at maximum 600mm centres. Joists down to 172mm deep may be used depending upon the spanning and loading requirements. The maximum floor loading should not exceed 80% of the maximum design load calculated from the joist manufacturers loading labels for the chosen joist size.

Joists may be inset cleated (6) to the supporting beams (as shown) to maximise headroom, or designed with top cleats where the joists oversail the beams, using cleats of minimum 3mm thickness and fastened with minimum two M12 bolts. The lower web of each pair of joists (8) is connected at mid-span by a steel threaded rod tie bar, nuts and washers. These are typically M12.

FLOORING

38mm thick x 600mm wide Flooring Grade P6 Chipboard to BS EN 312:1997, T&G on two long edges (2), designed to BS 6399-1:1996 for loadings up to 5.0kN/m^2 UDL; laid perpendicular to the joists and fixed using 60mm Timberdeck winged self-drilling screws (3) at 300mm centres (2 fixings per board at each joist position). Board joints to coincide with joists, and staggered between panels.

CEILING

Two layers of 15mm thick x 2500mm x 1200mm PROMATECT® 250 boards (5), are fastened to the underside of the steel joists. Boards are laid parallel to the joists with joints coincident with the joists, and are staggered by at least 600mm between layers. Transverse board joints are staggered by at least 300mm between layers and fastened using minimum 32mm (first layer) (7), and 41mm (second layer) (8), using self-drilling drywall screws at nominal 200mm centres in both layers. Cover strips to transverse joints are not required.

NB: Consult mezzanine joist manufacturers for joist sizes and centres, appropriate to the loading requirements of the mezzanine floor.

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