

# **REI 60 Minute PROMATECT®-XS Steel Joisted Mezzanine Floor System** (Load-bearing Capacity, Integrity and Insulation) Date: 15/04/2025 Version: 1.0

**Technical Data Sheet No: 179** 

FIRE PERFORMANCE: REI 60 minutes in accordance with the criteria of BS EN 1363-1:2020 and BS EN 1365-2:2014



CLASSIFICATION REPORT No: EUI-24-B-000673 SPECIFICATION REFERENCE: MZ PXS REI60 001S



#### SUPPORTING STEEL FRAME

The supporting steel framework of the mezzanine floor (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 15mm Promatect®-XS for section factors up to 200m<sup>-1</sup> for 60 minutes. For full details of the mezzanine floor system and for the requirements for protecting structural steelwork, please contact Promat Technical Services department.

#### **COLD ROLLED JOISTS**

Galvanised steel channel joists designed in accordance with BS EN 1993-1-1 UK National Annex to Eurocode 3 at maximum 600mm centres for loadings up to 5.0kN/m<sup>2</sup>. Joists minimum 141mm x 54mm x 1.3mm (web x flange x gauge) based on a 3m span. Larger joists for greater spans are permissible, provided that the maximum bending moments and shear forces do not exceed those of the original fire test. Consult the mezzanine joist manufacturer for joist sizes and centres, appropriate to the loading requirements of the mezzanine floor and the span of the joists.

Joists may be inset cleated to the supporting beams (as shown above) to maximise the headroom or designed with top cleats where the joists oversail above the beams.

The lower web of each pair of joists is connected at mid span by a steel threaded rod tie bar, nut, and washers. These are typically M12.

# **FLOORING**

38mm thick x 600mm wide flooring grade P6 Chipboard T&G to both long edges, design to BS EN 1991-1-1 Eurocode 1 for loadings up to 5.0kN/m<sup>2</sup>; laid perpendicular to the joists and fixed using M5.5 x 60mm Timberdeck winged self-drilling screws at maximum 300mm centres (two per board at each joist location). Board joints to coincide with joists and are to be staggered by minimum 600mm.

#### CEILING

15mm thick x 2500mm x 1200mm Promat PROMATECT®-XS boards, fastened parallel to the joists (with staggered transverse joints) using M3.5 x 32mm self- drilling screws at maximum 200mm centres.

# **COVER STRIPS**

15mm thick x 120mm wide Promat PROMATECT®-XS cover strips are placed over the transverse joints between the joists, tightly fixed into position with chisel point staple fixings (35mm x 10.5mm x 1.5mm) at maximum 100mm centres.

1	15mm Promat PROMATECT®-XS Boards	5 Minimum 38mm T&G Flooring Jointed P6 Grade Chipboa	rd
2	15mm x 120mm wide Promat PROMATECT®-XS Coverstrip	6 M5.5 x 60mm timberdeck winged self-drilling screws at maximum 300mm centres	
3	Minimum 141mm x 54mm x 1.3mm (web x flange x gauge) channel joists at maximum 600mm centres	7 Minimum M3.5 x 32mm CSK Self Drilling Screws at maximum 200mm centres	
4	Primary Structural Steel Frame	8 Chisel Point Staples 35mm x 10.5mm x 1.5mm at maximum 100mm centres	



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