



Promat UK Limited

**National Building Specification -
DURASTEEL[®]**

To complete the clause, select the appropriate wording from below.
Highlighted text can be 'dragged and dropped' to save typing.

K11 RIGID SHEET FLOORING / SHEATHING / DECKING / SARKING / LININGS / CASINGS

796 METAL STUD PARTITIONING SYSTEM

Promat UK Limited Wall Linings

DURASTEEL® Lined Partitions

DURASTEEL® is a composite panel of fibre reinforced cement mechanically bonded to punched steel sheets on both outer surfaces. It is classed as 'non-combustible' to BS 476: Part 4: 1970 and is both highly impact and moisture resistant.

DURASTEEL® fire and impact resistant barriers provide a cost effective fastrack solution to the problem of compartmentation of large warehouses and fire resistant enclosures, rooms, ceilings, cable trunking and the like.

Dimensions/ specification:

Thickness: 9.5 mm.

Length: 2000, 2500 mm.

Width: 1200 mm.

Weight: 21 kg/m²@ 6% moisture content.

Surface spread of flame to BS 476: Part 7: 1987: Class 1.

Building Regulations, England and Wales: Class 0.

Average dry flexural strength: 84 N/mm².

Finish: Self finished in either galvanised or stainless steel.

Basic range of high performance barriers, designed for use in heavily trafficked commercial and industrial buildings:

STI 240 Metal Stud: 80 x 60 x 3 mm cold rolled steel channels at top and bottom of frame, fixed to structure at 500 mm centres. Vertical channels fixed to top and bottom frames at 1200 mm centres fixed to cold rolled angle cleats welded / bolted to channels, with horizontal channels at board joints.

DURASTEEL® panels screwed to one side of framework at nominal 250 mm centres along board edges.

Overall width of barrier: 89.5 mm.

Maximum height of barrier: 6000 mm. For heights above 6000 mm, seek advice from Promat's Technical Services Department.

Fire resistance: 240 minutes (integrity only).

Estimated sound reduction: Rw 30 (dB).

Nominal weight: 27 kg/m².

STI 240/60 Metal Stud: 80 x 60 x 3 mm cold rolled steel channels at top and bottom of frame, fixed to structure at 500 mm centres. Vertical channels fixed to top and bottom frames at 1200 mm centres fixed to cold rolled angle cleats welded / bolted to channels, with horizontal channels at board joints. 100 mm wide x 9.5mm DURASTEEL® cover fillets screwed to both sides of framework. DURASTEEL® panels screwed to both sides of framework at

nominal 250 mm centres along board edges.

Overall width of barrier: 118 mm.

Maximum height of barrier: 6000 mm. For heights above 6000 mm, seek advice from Promat's Technical Services Department.

Fire resistance: 240 minutes (integrity); 60 minutes (insulation).

Estimated sound reduction: Rw 35 (dB).

Nominal weight: 51 kg/m².

STI 240/120 Metal Stud: 150 x 60 x 3 mm cold rolled steel channels at top and bottom of frame, fixed to structure at 500 mm centres. Vertical channels fixed to top and bottom frames at 1200 mm centres fixed to cold rolled angle cleats welded / bolted to channels, with horizontal channels at board joints.

Infill insulation to comprise of 3 no. layers of 50 mm thick mineral wool (80 kg/3, with staggered vertical joints (minimum 300 mm overlap).

DURASTEEL® panels screwed to both sides of framework at nominal 250 mm centres along board edges.

Overall width of barrier: 169 mm.

Maximum height of barrier: 9000 mm. For heights above 9000 mm, seek advice from Promat's Technical Services Department.

Fire resistance: 240 minutes (integrity); 120 minutes (insulation).

Estimated sound reduction: Rw 44 (dB).

Nominal weight: 58 kg/m².

STI 240/240 Metal Stud: 80 x 60 x 3 mm cold rolled steel channels at top and bottom of frame, fixed to structure at 500 mm centres. Vertical channels fixed to top and bottom frames at 1200 mm centres fixed to cold rolled angle cleats welded / bolted to channels, with horizontal channels at board joints. Two layers of 100 mm wide DURASTEEL® cover fillets screwed to both sides of framework. Cover fillet required on perimeter framework. Infill insulation to comprise of 3 no. layers of 40 mm thick mineral wool (140 kg/3), with staggered vertical joints (minimum 300 mm overlap). DURASTEEL® panels screwed to both sides of framework at nominal 250 mm centres along board edges.

Overall width of barrier: 188 mm.

Maximum height of barrier: 6000 mm. For heights above 6000 mm, seek advice from Promat's Technical Services Department.

Fire resistance: 240 minutes (integrity); 240 minutes (insulation).

Estimated sound reduction: Rw 46 (dB).

Nominal weight: 72 kg/m².

STI 240 Metal Stud Ceiling Lining: 150 x 60 x 3 mm or 80 x 60 x 3 mm (dependant on span) cold rolled steel channels at 1200 mm centres fixed to structure. Channel noggings at 2500 mm centres fixed to main channels. DURASTEEL® panels screwed to underside of framework at nominal 250 mm centres along board edges.

Overall width of barrier: 89.5 mm; 159.5 mm.

Maximum span: Seek advice from Promat's Technical Services Department.

Fire resistance: 240 minutes (integrity only).

Estimated sound reduction: Rw 30 (dB).

Nominal weight: 27 kg/m².

The ceiling lining may also be specified in clause K40/130.

Services Encasements: Galvanised cold rolled angle sections fixed at 500 mm centres to brick, dense block or concrete structure (2 or 3-sided encasements). DURASTEEL® panels screwed to angles at nominal 250 mm centres along board edges. Joints between adjacent panels supported with galvanised steel plate.

4-sided encasements supported by a separate steel hanger system, comprising galvanised threaded rod and 6 mm thick angle bearers, are constructed in a similar manner.

Consult Promat UK Ltd's technical literature for details. Promat can also provide a design and specification advisory service, including advice on the suitability of these boards for the proposed application and it is recommended that they be consulted early in the design process.

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System reference:

DURASTEEL® Fire Barrier Partition. Ref: STI 240 Metal Stud. / STI 240/60 Metal Stud. / STI 240/120 Metal Stud. / STI 240/240 Metal Stud.

DURASTEEL® Fire Barrier Ceiling Lining. Ref: STI 240 Metal Stud Ceiling Lining.

DURASTEEL® Fire Barrier Services Encasements.

Framing:

Studs: 80 x 60 x 3 mm cold rolled steel channels, / 150 x 60 x 3 mm cold rolled steel channels, at 1200 mm centres.

Channels: 80 x 60 x 3 mm cold rolled steel channels, / 150 x 60 x 3 mm cold rolled steel channels, to top and bottom of partition and fixed to structure at 500 mm centres.

OR (for services encasements):

Supporting framework: Galvanised cold rolled angle sections fixed to structure at 500 mm centres. Joints between adjacent panels supported with galvanised steel plate.

Cavity insulation: 3 layers of 50 mm x 80 kg/m³ mineral wool. / 3 layers of 40 mm x 140 kg/m³ mineral wool. (for STI 240/120 and 240/240 only)

Linings: 9.5 mm thick DURASTEEL® panels fixed to framework at 250 mm centres along board edges.

Finishing: Galvanised DURASTEEL® panels. / Stainless steel DURASTEEL® panels.

Head movement allowance: (seek advice from Promat's Technical Services Department)

Other requirements:

100 mm wide DURASTEEL® cover fillets screwed to channel framework. (STI 240/60)

2 no. layers of 100 mm wide DURASTEEL® cover fillets screwed to channel framework. (STI 240/240)

Fire resistance:

240 minutes (integrity).

240 minutes (integrity); 60 minutes (insulation).

240 minutes (integrity); 120 minutes (insulation).

240 minutes (integrity); 240 minutes (insulation).