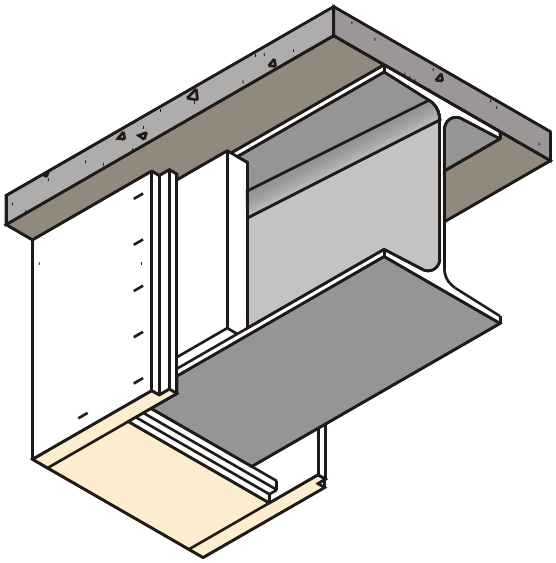
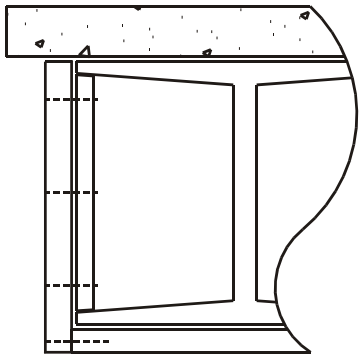
VERMICULUX® Structural Steel Protection
Staple and Nogging Fix





ENCASEMENT: 4-SIDED BEAM CASINGS
3-SIDED COLUMN AND BEAM CASINGS
2-SIDED COLUMN AND BEAM CASINGS

Using staple fixing and nogging supports for fire exposure of up to 120 minutes, and an A/V factor up to 260m^{-1} (box protection). The maximum dimensions of steel section protected by staple fixing and nogging support systems are 700mm deep and 325mm wide.

Board thickness: Thickness of VERMICULUX® boards (to provide 120 minutes fire protection) is from 20mm to 35mm.

Framing: VERMICULUX® noggings, 100mm wide x 20mm thick, are installed between the toes of the flanges of the steel section at nominal 600mm centres. Alternate noggings coincide with the rebated joints between the 1220mm long web boards. The web boards are fixed to the noggings with 10mm crown x 1.63mm staples at 100mm nominal centres. The minimum penetration of the fixings into the noggings is 20mm.

Fixing: Board To Board: 10mm crown x 1.63mm steel staples at 100mm nominal centres. The length of the staples must be sufficient to penetrate at least 28mm into the edges of the board.

Notes: The nogging support system may be used for other configurations including:

4-sided beam casings
3-sided column casings
2-sided column and beam casings

If it is also required to provide fire insulation across the beam or column in order to maintain compartmentation to the criteria of BS 476: Part 22: 1987 (maintaining insulation to average temperature rise of 140°C, maximum temperature rise 180°C), then the *minimum* thickness of the Vermiculux board on each side of the beam or column must be as follows:

Fire resistance – minutes	Board thickness - mm
60	20
90	25
120	30

Thicker board may be required to provide the required period of fire protection to the steelwork in terms of the loadbearing capacity to BS476: Part 21:1987

AUTHORITY: **BRE Assessment report number: CC88497**

Promat UK Limited
Technical Service Department
The Sterling Centre, Eastern Road
Bracknell, Berkshire RG12 2TD
Tel: 01344 381 400
Fax: 01344 381 401
E-mail: technicaluk@promat.co.uk