



Uniclass L5:P2:N32	EPIC E1: X2: Y421
CI/SfB	Rf9 (K2)+(K3)

VERMICULUX®

The Reliable Fire Protection System for Structural Steelwork

INTRODUCTION

VERMICULUX® is a lightweight non-combustible board specially designed to provide fire protection to structural steelwork. Up to 240 minutes fire resistance can be achieved depending on the thickness of material used and the dimensions of the beam or column being protected.

It is easy to work using normal woodworking tools and is supplied with two rebated edges to allow cross joints to be made without the need for noggings, cover strips or adhesives. Fixed by edge screwing boards together, VERMICULUX® is fast and economic to install.

VERMICULUX® can also be used to construct fire resisting ducts.

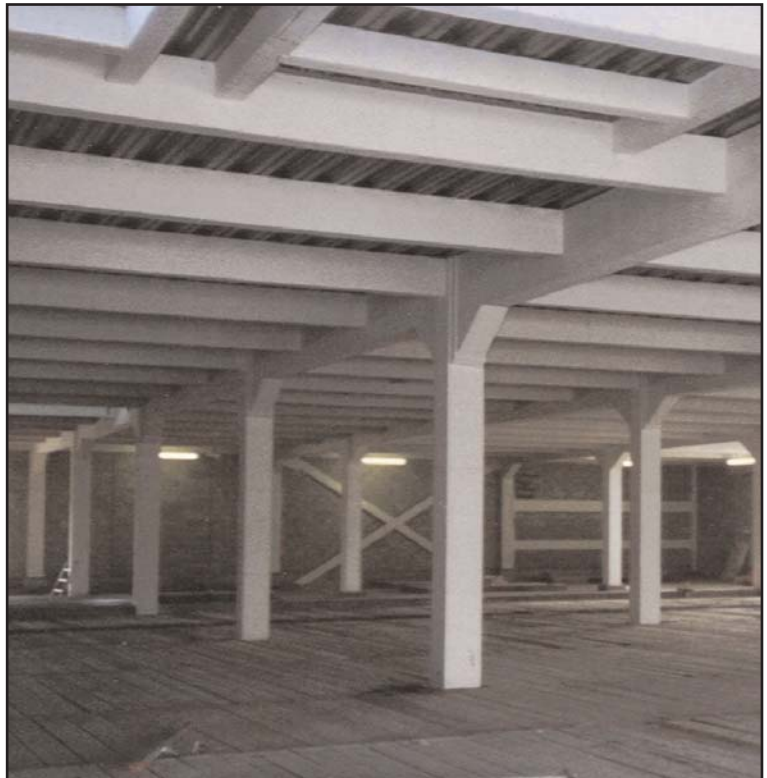
DESCRIPTION

VERMICULUX® is a low density calcium silicate board containing vermiculite and reinforced with selected fibres and fillers. It is formulated without any inorganic fibres.

VERMICULUX® is off-white in colour with a sanded finish on both faces. It can be left undecorated or can be easily painted. It is resistant to moisture, will not disintegrate, warp or swell and can be installed at any time during the building programme, even before external walls have been completed and the building closed in.

Moisture will not dissolve out soluble materials and the fire performance characteristics are not degraded by age or moisture. Untreated surfaces will absorb water and cause some loss of strength, which is fully recovered on drying.

VERMICULUX® is rigid and robust but edges and corners should be protected where impact damage may occur.



Structural steel column and beam casing

VERMICULUX® is supplied in the sizes shown in table 1. The boards are rebated on the same side along two opposite edges, to provide a 16mm wide half-lap which eliminates the need for noggings, cover strips or adhesives. The large range of thicknesses available allows selection of the most economic board to meet given periods of fire resistance.

Table 1 Nominal Sizes

Thicknesses (mm)	20, 25, 30, 35, 40, 45, 50, 55 or 60
Widths (mm)	1220
Lengths (mm)	1220
Nominal Weight (kg/mm/m ²)	0.55

TYPICAL APPLICATIONS

VERMICULUX® is designed to provide fire protection to structural steelwork without the use of adhesives or the need to prime or clean the steel. It is also suitable for the construction of ducts and duct casings. Four sided protection to columns is achieved by forming a box around the column which is fixed by simply edge screwing the boards together. When casing a beam or column exposed on two or three sides, the VERMICULUX® is fixed to steel angles.

Full details of constructions and the thicknesses of VERMICULUX® required to provide given periods of fire protection to particular structural sections are available from Promat UK Limited Technical Services Department.

PERFORMANCE

Fire

Non-combustible to BS 476: Part 4 1970; Class 1 surface spread of flame to BS 476: Part 7: 1987; Class 0 to the Building Regulations.

VERMICULUX® can provide up to 240 minutes fire protection to structural steelwork depending on the thickness of material used and the A/V factor.

This is calculated from the fire exposed perimeter and the sectional area of the steelwork to be protected.

Minimal emission of toxic smoke or gases in the event of a fire.

Effect of Moisture

Excellent dimensional stability. Resistant to high humidities. It will absorb water causing some loss of strength but this is fully recovered on drying.

Moisture has no permanent effect on the performance of the board as it will not degrade the board or dissolve out any ingredients. It does not cause efflorescence.

VERMICULUX® can be fixed at any time in the building programme even before external walls have been completed and the building made weather tight.

Thermal

Coefficient of linear expansion 4×10^{-6} per °C.
Thermal conductivity 0.13 W/mK.

Biological

Resistant to attack by insects or vermin. Rot resistant.

Chemical

Unaffected by brine and chlorine, resistant to low concentrations of most acids and alkalis.
Surface pH value 7–10.

Compatibility

Compatible with all common building materials; non-caustic and will not promote corrosion; will not affect bituminous compounds; when in contact with unanodised aluminium the latter should be protected.

HEALTH AND SAFETY

VERMICULUX® is formulated without any inorganic fibres and no special precautions are necessary in handling or working. When using power saws or sanders in a confined space, dust extraction equipment is recommended to control dust levels. VERMICULUX® is not load bearing.

TECHNICAL INFORMATION

For full details of applications, properties, cutting, fixing and decoration contact Promat UK Limited Technical Services Department. Telephone 01895 463400, fax 01895 463401.

QUALITY MANUFACTURE

VERMICULUX® is marketed by Promat UK Limited. The manufacturing and production systems of the company operate under a rigorous quality management system, independently certified as complying with BS EN ISO 9002.



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