

General Description

VICUTUBE® is a non-combustible board in which the unique cellular structure of vermiculite is maintained and controlled by a pre-treatment process. This gives excellent thermal insulation properties with dimensional stability at high temperatures. It is used extensively for the fire protection of structural steel elements in buildings to provide up to 240 minutes fire protection. It may also be used to protect sheet metal ducts and for the construction of smoke extract ducts (VICUVENT®).

A health and safety data sheet is available from the Promat Technical Department and, as with any other materials, should be read before working with the board. The board is not classified as a dangerous substance so no special provisions are required regarding the carriage and the disposal of the product to landfill. They can be placed in an on-site skip with other general building waste which should then be disposed by a registered contractor.



Typical Mechanical Properties

Flexural strength, $F_{rupture}$ (BS EN 310: 1993)	N/mm ²	0.8
Compressive strength (average, perpendicular on board face) (BS5669: Part 1: 1989)	N/mm ²	0.95

Applications

- Structural steel
- Plastics drainage and water supply pipes

General Technical Data

Product generic description					Vermiculite board		
Material class					Non-combustible to BS476: Part 4.		
Surface spread of flame					Class 1 to BS476: Part 7.		
Building regulations classification					Class 0		
Nominal density at EMC* (average)					kg/m ³	405	
Thermal conductivity (approximately) at 20°C (ASTM C518: 1991)					W/m ² K	0.16	
Coefficient of expansion					m/mk	16 x 10 ⁻⁶	
Length x width tolerance of standard boards					mm	- 0 + 10	
Surface condition					Smooth, oatmeal texture and colour.		
Thickness (mm) of casing to provide fire resistance level (BS476: Part 21 and AS1530: Part 4)				Hp/A	Steel wall thickness (mm)	Outside diameter of circular hollow section (mm)	
30 minutes	60 minutes	90 minutes	120 minutes				
30	30	50	–	335/275	3.2/4.0	48	<p>*EMC: Equilibrium moisture content. **Other sizes are available upon request. The properties in above tables are mean values given for information and guidance only. If certain properties are critical for a particular application, it is advisable to consult your nearest Promat Technical Department. Please note, the density of VICUTUBE® decreases as the thickness of the board increases. The above figures are nominal weights for reference and guidance purposes only. Please consult the Promat Technical office for information concerning the specific weight of any particular thickness for any application.</p> <p>NOTE: For circular hollow section wind bracings, use the thicknesses at the left table to a maximum of 30mm, 40mm and 50mm for 60 minutes, 90 minutes and 120 minutes of fire resistance level respectively.</p> <p>VICUTUBE® is manufactured under a quality management system certified in accordance with ISO9001: 2000 Certification and in accordance with the environmental standards of ISO14001. For further technical information, please consult Promat.</p> <p>GENERAL NOTE: WHEN MACHINING, AIRBORNE DUST MAY BE RELEASED. AVOID CONTACT WITH SKIN AND EYES. USE DUST EXTRACTION. RESPECT REGULATORY OCCUPATIONAL EXPOSURE LIMITS FOR TOTAL INHALABLE AND RESPIRABLE DUST. FOR MORE INFORMATION PLEASE CHECK THE MATERIAL SAFETY DATA SHEET APPLICABLE TO THIS PRODUCT, AVAILABLE UPON REQUEST.</p>
30	30	40	50	225	5.0		
30	40	50	–	330/270	3.2/4.0	60	
30	30	40	50	220	5.0		
30	40	50	–	325/265	3.2/4.0	76	
30	30	40	50	215	5.0		
30	40	50	–	325/260	3.2/4.0	89	
30	30	40	50	210	5.0		
30	40	50	–	285	3.6	114	
30	30	40	50	210/170	5.0/6.3		
30	30	40	50	205/165	5.0/6.3	168	
30	30	30	40	135/110	8.0/10.0		
30	30	40	50	205/165	5.0/6.3	219	
30	30	30	40	130 to 55	8.0 to 20.0		
30	30	40	50	165	6.3	245	
30	30	30	40	130 to 55	8.0 to 20.0		
30	30	40	50	160	6.3	273	
30	30	30	40	130 to 45	8.0 to 25.0		