



A non-combustible board in which the unique cellular structure of vermiculite is maintained by a pretreatment process. This gives excellent thermal insulation properties with dimensional stability at high temperatures. It is used extensively for the fire protection of structural elements in buildings such as steel beams and columns, to provide up to 4 hours fire protection. It may also be used to protect sheet metal ducts and for the construction of smoke extraction ducts.

Available in 2 grades:

- VICUCLAD® 900R Tested up to 3 hours
- VICUCLAD® 1050R Tested up to 4 hours

The versatile material is also produced in semi-circular sections known as VICUTUBE, which is used to protect circular steel sections and plastic pipes.

VICUCASE is a system in which VICUCLAD® is supplied within a pre-formed steel sheet casing to provide an attractive finish. This finish is available in a choice of colours and is suitable for beam and column protection.

#### Applications

- Structural steel
- Ventilation and smoke extraction ducts
- Electrical & Mechanical services enclosures
- Fire rated doors

#### VICUTUBE Standard Size & Thickness

Internal diameter (mm)	Tolerance (mm)	Wall thickness (mm)			Tolerance (mm)		
		30	40	50			
48	-2 to +5			√	+2 to -1		
60		√	√	√			
76		√	√	√			
89		√	√	√			
114		√	√	√			
140		√	√				
168		√	√				
194			√				
219		-2 to +6	√	√			+2 to -1
245				√			
273			√				

Standard format (mm): Semi circular x 667mm long

#### VICUBOND WR

A ready-to-use, one part non-combustible cement for fixing VICUCLAD® boards to structural steel work and to adjacent boards. It may also be used for gap filling. Delivered in semi liquid per 10 litre drum. Allow 1 litre for each 1.5m<sup>2</sup> of 25mm VICUCLAD® board. Other thicknesses require a pro-rata amount.

#### Acoustic Performance

Sound Absorption	Measured on 25mm VICUCLAD® boards backed by 25mm air space							
	125	250	500	1000	2000	4000		
Frequency (Hz)								
Sound absorption coeff.	0.25	0.25	0.20	0.25	0.35	0.30		
Sound Insulation	Measured on 30mm VICUCLAD® fixed to 50 x 75mm soft wood frame							
	100	200	500	1000	2000	4000	Average	Insulation index Rw
Frequency (Hz)								
Sound reduction (dB)	19	20.8	24.8	28.5	34.5	38.4	26.5	29 dB
Sound Insulation	Measured on 30mm VICUCLAD® fixed each side of 50 x 75mm soft wood frame with 75mm air space							
	100	200	500	1000	2000	4000	Average	Insulation index Rw
Frequency (Hz)								
Sound reduction (dB)	18.5	31.5	41.0	47.7	52.6	61.9	41.6	44 dB

NOTE: All physical properties values detailed herein are averages based on standard production. The figures detached herein can change dependent on the test methods used. If a particular value is of prime importance for a specification requirement, please contact Promat Technical Department.

#### General Technical Data

Surface condition	Smooth, oatmeal texture and colour	
Chemical condition	Inert and unaffected by the majority of fumes, acids and alkalis	
Neutral designation	Fibre and asbestos-free vermiculite	
Material class	Non-combustible, according to BS 476: Part 4	
Surface spread of flame	Class 1 to BS 476: Part 7	
Building regulations classification	Class 0	
Dry density (average)	kg/m <sup>3</sup>	405
Thermal conductivity (20°C)	W/m K	0.16
Electrical resistivity (500Vde)	KΩm	51 at 47% moisture, 10 when dry
Coefficient of expansion (20-600°C)	m/mk	16 x 10 <sup>-6</sup>
Specific heat (200-600°C/average)	J/kg°C	1250
Pests and mould formation	Immune to insect and vermin attack. Will not support mould or fungi growth	
Durability	In excess of 40 years	
Standard thickness VICUCLAD® 900R	mm	18-40
VICUCLAD® 1050R	mm	45-80
Tolerance for length/width up to 40mm		+6 -0
45-80mm		+10 -0
Standard sheet size	mm	610 x 1000
Flexural strength F <sub>rupture</sub>	N/mm <sup>2</sup>	0.8
Compressive modulus	N/mm <sup>2</sup>	0.95