WALL
Fire resistance

VANPANEL® WALL

Profiled wall systems, Insulated with fire resistant rockwool insulation

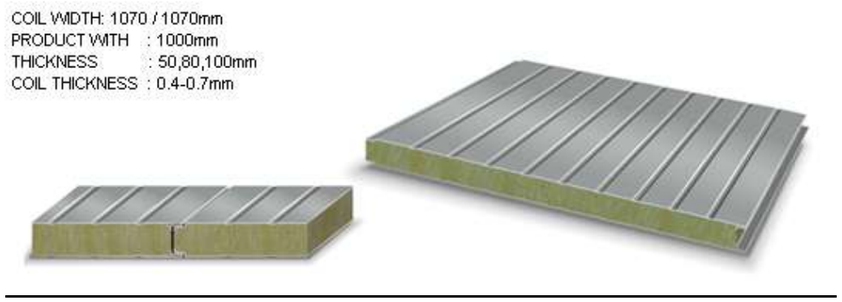
Self-supporting metal panel system insulated with,rockwool for wall and partition applications. The VANPANEL® WALL panel consists of two micro-ribbed steel sheets, with an insulation core of orientated fibre high density rockwool, arranged perpendicularly to the plane of the panel and positioned in strips, laid longitudinally with off-set joints and transversely compacted, in such a way as to completely fill the space between the metal facings.

Maximum panel lenght: L = 15,000 mm.

External and internal sheet

The following materials can be used:
- Prepainted galvanised steel
- Prepainted Aluminium Alloy

Nominal thickness: 0.40 – 0.70 mm Paint: Polyester, PVF2



Insulation

Rockwool, density: 80 - 100 kg./m^3
Thickness: 50 - 80 - 100 mm.

Reaction to fire

Non combustible when tested in accordance with BS-476 part - 4 and ASTME-136. Class I, when tested in accordance with BS-476 part 7 and ASTME -84. Fire Resistant with integrity up to 240 min. and insulation up to 196 min,when tested as per BS-476 part-20.

Table of safe spans

Values guaranteed with steel sheets, thickness 0.5 + 0.5 mm. The spans ***l*** in metres, as a function of a uniformly distributed load p (daN/m^2), deflection limit: f < 1/200 of the span.

S mm	K Kcal m2 h C	K Watt m2 C	Panel weight kg/m2 0.5 + 0.5		MULTI SPAN P (daN/m2) 40	60	80	100	120	150	MULTI SPAN 40	60	80	100	120	150
50	0.65	0.75	14.4	l =	4.38	3.58	2.73	2.18	1.82	1.45	3.92	3.20	2.46	1.96	1.64	1.31
80	0.42	0.49	17.4	l =	5.55	4.53	3.92	3.51	2.93	2.34	4.96	4.05	3.51	3.14	2.64	2.11
100	0.34	0.4	19.4	l =	6.21	5.07	4.39	3.58	3.58	2.94	5.55	4.53	3.93	3.51	3.21	2.64

VAN INTERNATIONAL - P.O.BOX 40424 SHARJAH - UAE - TEL: (009176) 5340553 - FAX: +9716 5340540

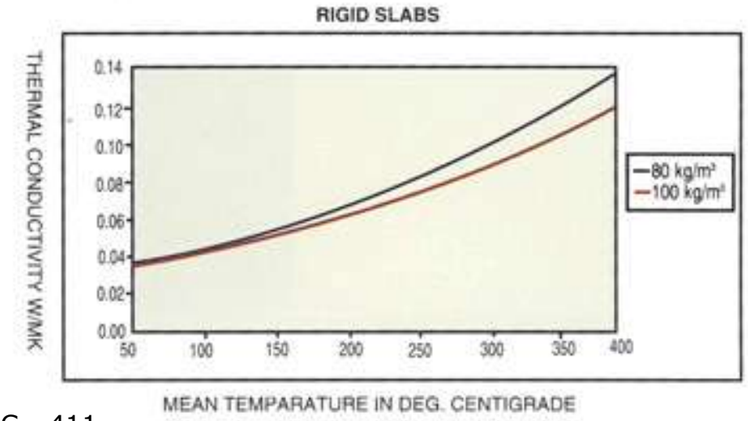
ROCKWOOL INSULATION CONFORMANCE

STANDARD CONFORMANCE	
-	*ASTM C 612 "Standard Specification for Mineral Fiber Block and Board Thermal Insulation"*
-	*BS 3958 Part 5 "Specification for bonded man-made mineral fiber slabs.*
-	*ASTM C 795 "Standard Specification for Thermal Insulation for use in contact with austenitic stainless steel"*
-	*Can be used to satisfy BS 5422 "Method for specifying thermal insulating materials for pipes, tanks, vessels, ductwork and equipment"*

PROPERTIES	**TEST METHOD**
DENSITY LENGTH WIDTH THICKNESS WEIGHT	ASTM C 303 BS 2972 Section 3
SERVICE TEMPERATURE	ASTM C 447/ C 411 & DIN 52271
NON - COMBUSTIBILITY	BS 476 Part 4 & ASTM E 136
FIRE RESISTANCE	BS 476 Part 20 & ASTM E 119
BURNING CHARACTERISTIC	ASTM E 84
THERMAL CONDUCTIVITY	ASTM C 177 / C 518, ISO 8302/ISO 8301 EQUIVALENT TO BS 874, DIN 52612
ACOUSTICAL PROPERTIES	BS 3638/ISO 354 ASTM C 423 - Sound Absorption ASTM E 90 - Sound Transmission Loss ASTM E 413 - Sound Transmission Class
COMPRESSION RESISTANCE	ASTM C 165
CHEMICAL ANALYSIS CHLORIDE FLUORIDE pH	ASTM C-871 BS 2972 Section 21 AGIQ135
CORROSION TEST	ASTM C 692 (Pre-production Corrosion Test)
SHOT CONTENT	ASTM C 1335 / BS 2972 SECTION 14
WATER ABSORPTION	ASTM C 209 SECTION 14 / BS 2972 SECTION 12
WATER VAPOUR SORPTION	ASTM C 1104 / C 1104 M
WATER VAPOUR TRANSMISSION	ASTM E 96/ E 96M
ODOR EMISSION	ASTM C 1304
LINEAR SHRINKAGE	ASTM C 356
RIGIDITY AND FLEXIBILITY CLASSIFICATION	ASTM C 1101 / 1101M

Thermal Conductivity: in accordance with BS 874, Equivalent ASTMC 177/C 518 and DIN 52612 standards.

Mean Temp °C	k-value W/mk 80 kg/m3	k-value W/mk 100 kg/m3
10	0.033	0.033
50	0.038	0.037
100	0.046	0.044
150	0.054	0.052
200	0.066	0.061
250	0.080	0.072
300	0.096	0.084
350	0.115	0.098
400	0.134	0.118



Service Temperature: Can withstand temperature up to 750 º C when tested in accordance with DIN 52271 and ASTMC - 411

Acoustical Properties: Typical sound absorption figures are shown below in accordance with BS 3638 & ISO 0354:

Hz	70 kg/m3	100 kg/m3
125	0.22	0.23
250	0.62	0.66
500	0.91	1.05
1000	1.00	1.07
2000	1.00	1.05
4000	0.98	0.97

Compatibility: Compatible with all forms of material with which it is likely to come in contact in normal industrial and building applications.

Moisture: Water-repellent, non-hygroscopic, non-capillary, and does not absorb any moisture from air,Moisture has no effect on stability of slabs. Water absorption test certificate conducted under BS 2972 : Section 12 and ASTMC 209 are available upon request.

Chemical Neutrality: Chemically neutral with a pH value of 7.3 when tested in accordance with BD 2972 : Section 22 and ASTMC-871. It will neither cause nor promote corrosion. It meets the requirements of the standard specification for use over austenitic stainless steel as per ASTM C - 692 (Corrosion) test and ASTM C -871 (Chemical Analysis). It contains low level of chlorides when tested in accordance with BS 2972 : Section 21 and ASTMC 871.

Biological properties: Rot-proof, non-hygroscopic, will not sustain vermin and will not encourage growth of bacteria, mould or fungi.

Physical properties: Asbestos free and shot content is very low when tested as per ASTM C 612 and BS-2972