

# Stonewool Insulation for Thermal, Acoustic and Fire Safety Applications in Buildings & Industries



## **ROCKINSUL RB Slabs**

### Rockwool India Pvt Ltd

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# ROCKINSUL RB Slabs

- ROCKINSUL RB Slab are semi-rigid and rigid boards manufactured from stable stone fibres bonded with a thermosetting resin binder.
- ROCKINSUL RB Slabs are capable of withstanding extreme temperatures up to 750 °C and are light weight, strong, resilient, easy to handle, and easy to cut to suit intricate shapes.

### Standard Dimensions

Thickness (mm)	Width (mm)	Length (m)
25 to 125	600	1.0 to 1.2

### Standard Density & Thickness

Density (kg/m <sup>3</sup> )	Thickness (mm)
48	50 - 200
64	40 - 150
80	25 - 125
96	25 - 100
120	25 - 100
144	25 - 100
160	25 - 75
200	25 - 50

Non-standard sizes may be available on request

### Facing Types

ROCKINSUL RB Slabs for building and Industrial Applications are available unfaced, or with a facing of

- Glass fibre reinforced Aluminium foil / Kraft paper laminate (FSK)
- ALG
- Black Glass Tissue (BGT).



### PERFORMANCE

#### Working Temperature

Up to 750 °C

At temperatures in excess of 230 °C a limited migration of binder may occur in the insulation in contact with the hot face. This does not impair the insulation performance.

#### Thermal Performance (K Value)

The thermal conductivity of ROCKINSUL RB Slabs as per ASTM C177, 518, IS 3346 is displayed below:

Mean Temperature °C	Thermal Conductivity in W/m.k for the following densities in kg/m <sup>3</sup>								
	48	64	80	96	100	128	144	160	200
25	0.036	0.035	0.035	0.034	0.034	0.034	0.034	0.036	0.037
35	0.038	0.036	0.037	0.043	0.036	0.036	0.036	0.037	0.038
50	0.042	0.038	0.038	0.037	0.037	0.039	0.039	0.040	0.040
100	0.051	0.046	0.044	0.043	0.043	0.046	0.046	0.047	0.047
150	0.059	0.054	0.053	0.050	0.051	0.052	0.051	0.052	0.053
200	0.074	0.064	0.062	0.059	0.060	0.060	0.059	0.061	0.062
250	0.088	0.072	0.070	0.068	0.069	0.070	0.069	0.070	0.072
300	0.101	0.091	0.086	0.081	0.082	0.082	0.081	0.082	0.083
350	0.120	0.109	0.102	0.095	0.095	0.091	0.091	0.092	0.093

#### Thermal Performance (R Value)

Thickness (mm)	Thermal Resistance (m <sup>2</sup> .K/W) at 50 °C mean temp. for following densities in kg/m <sup>3</sup>								
	48	64	80	96	100	128	144	160	200
25	-	-	-	0.676	0.676	0.641	0.641	0.625	0.625
50	1.190	1.316	1.361	1.351	1.351	1.282	1.282	1.250	1.250
70	1.786	1.974	1.974	2.027	2.027	1.923	1.923	1.875	-
100	2.381	2.632	2.632	2.703	2.703	2.564	2.564	-	-
125	2.976	3.289	3.289	-	-	-	-	-	-
150	3.571	3.947	-	-	-	-	-	-	-
200	4.762	-	-	-	-	-	-	-	-

These are typical values subject to normal manufacturing and testing variances.

#### Acoustic Performance

ROCKINSUL RB Slab achieve excellent acoustic performances (sound absorption coefficients, sound insulation, and impact sound isolation) when tested in accordance with various relevant ASTM standards.

ROCKINSUL RB Slab achieve Noise Reduction Coefficient (NRC) value up to 0.95, when tested in accordance with ASTM C423.

#### Fire Safety Performance

Unfaced ROCKINSUL RB Slabs are non-combustible when tested in accordance with IS 3144, BS 476 (part 4), ISO 1182 and ASTM E136 and are classified as Class A1, in accordance with European norms.

Unfaced, FSK and ALG-faced ROCKINSUL RB Slab have the following fire safety rating achievements;

1. Class 1 surface spread of flame in accordance to BS 476 (part 7)
2. Class 0 in accordance to the BS 476 (part 6 & 7) and to British Building Regulations.
3. Surface burning characteristics in accordance to ASTM E84 / UL 723
  - a. Fire Spread Index : Less than 25
  - b. Smoke Developed Index : Less than 50



#### Moisture Absorption Performance

ROCKINSUL RB Slabs absorb less than 1% by volume when tested in accordance with BS 2972, ASTM C1104 / 1104 M, and do not absorb moisture from ambient air or from water by capillary action. Only water under pressure can enter into stonewool insulation products; however, it quickly dries out due to the open cell structure.

When tested in accordance with ASTM E96, FSK-faced RB Slab achieve water vapour permeability of ≤0.02 perm, ALG-faced RB Slabs achieve zero water vapour permeability.



#### Applications

ROCKINSUL RB Slab are used for thermal acoustic insulation of building roofs, interior walls, floor & HVAC Duct insulation where fire safety is primary concern.

ROCKINSUL RB Slabs are used for thermal and acoustic insulation in industrial applications where fire hour rating are required.



#### Handling and Storage

Products are to be stored in a well-lit, dry and protected area. They are to be kept in the original packaging, at elevated positions above the ground or on as slab, and away from the walls, in order to avoid any penetration of moisture and dust or foreign contamination. If stored outside and an open area, packages should be protected with a polyethylene film, canvas or other similar type of covering.



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