



Product:	Roxul[®] Stonewool	P.D.S 2
Type:	INDUSTRIAL SLAB	
Name:	TYPE 590 (for use up to 750^o C)	Page 1 of 4

Description

Roxul Stonewool Type 590 is a high quality rigid mineral wool slab specially impregnated to provide maximum service temperature.

Applications for Roxul Stonewool Type 590 can be used for thermal and acoustic insulation on boilers, vessels, tanks, hot ducts, where both high temperature and mechanical vibration are present.

Delivery Schedule – see AIS price list.

Thickness	Dimension	Pieces per Pack	M ² per Pack
25	1200 x 600	12	8.64
30	1200 x 600	10	7.20
40	1200 x 600	7	5.04
50	1200 x 600	6	4.32
60	1200 x 600	5	3.60
65	1200 x 600	4	2.88
70	1200 x 600	4	2.88
75	1200 x 600	4	2.88
80	1200 x 600	3	2.16
90	1200 x 600	3	2.16
100	1200 x 600	3	2.16

All sizes are available to order but may be subject to minimum quantity requirements.

Product Performance and Properties

Density: >110 kg/m³ (nominal):- being delivered density according to ASTM C612 - 93

Service Temperature: Maximum continuous service temperature on plain surface 750°C (1380°F).

Thermal Conductivity (typical data): Tested in accordance with DIN 52612

Mean Temp °C	50	100	150	200	250	300	350
K value W/m. K	0.038	0.044	0.052	0.062	0.074	0.088	0.108



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Type:	INDUSTRIAL SLAB	
Name:	TYPE 590 (for use up to 750^o C)	Page 2 of 4

**Corrosion Resistance:
Chemical Neutrality:** Roxul Stonewool Type 590 base mineral wool is chemically neutral and will neither cause nor promote corrosion.

**Corrosion Resistance:
Water Leachable Chlorides:** Roxul Stonewool Type 590 base mineral wool has a very low content of water leachable chloride, approximately 6 ppm so it can be safely used on austenitic stainless steel. Meets the requirements for use over stainless steel in accordance with ASTM C795.

Fire: Roxul Stonewool Type 590 slab is non combustible when tested according to international standards e.g. ASTM E-136-82, DIN 4102, BS476 Pt4-1970, ISO 1182 and IMO A 799 (19).

Moisture Resistance Water: Roxul Stonewool Type 590 slab base material is highly water repellent, non hygroscopic and non capillary. When tested to BS 2972 Section 12 Roxul Stonewool absorbs approximately 1.0% by volume of moisture (complete immersion test).

Moisture Resistance Vapour Diffusion: Water vapour diffusion resistance factor of $\mu = 1.3$. This low value means that water vapour can pass through and cool without condensing.

**Moisture Resistance:
Absorption from the air:** Roxul Stonewool absorbs very little water from the air. Tests show at relative humidity of 90% for 30 days the hygroscopic water content is around .004 volume per cent. The water vapour absorption (vapor sorption) in accordance with ASTM C/10 4/C 1104 m is $\pm 0.02\%$ (vol).

Moisture Resistance Capillarity: Roxul Stonewool Type 590 fibres and fibre coating repels water and prevents capillarity.

Melting Point: Melting point of Roxul Stonewool fibre is over 1000°C (1800°F)

AUSTRALASIAN INSULATION SUPPLIES PTY LTD	PRODUCT DATA SHEET	REVISION: 2
		DATE OF ISSUE: Nov 02
		CHKD: BH APPV: IRS



Product:	Roxul[®] Stonewool	P.D.S 2
Type:	INDUSTRIAL SLAB	
Name:	TYPE 590 (for use up to 750⁰ C)	Page 3 of 4

Specific Heat: Roxul Stonewool specific heat factor is 0.84 kJ/kg per degree centigrade.

Calorific Value: Roxul Stonewool Type 590 slab has a low organic matter content giving a low caloric value of around 600 kJ/kg.

Biological Properties: Roxul Stonewool Type 590 material contains no nutrients and therefore provides no basis for growth of fungi, moulds or bacteria, nor does it attract insects, rodents or vermin.

Acoustic Properties: Roxul Stonewool Type 590 mineral wool base material when measured according to ISO 354 and applied directly to the wall surface at a thickness of 50mm gives the following sound absorption values:-

H _z	125	250	500	1000	2000	4000
50mm	0.21	0.69	1.06	1.08	1.04	1.09
100mm	0.81	1.00	0.96	1.01	1.03	1.09

Durability: Roxul Stonewool mineral wool has been proven in services for over 50 years in all types of exposure and as such will give effective protection for the lifetime of the equipment they insulate.

Compatibility: Roxul Stonewool mineral wool is compatible with all materials which it is likely to come into contact in normal industrial and building applications.

Environment: Roxul Stonewool mineral wool presents a very effective ecological profile in all elements of manufacture, recycling use, service life and energy efficiency of material. No CFC's or HCFC's are used in its manufacture.

AUSTRALASIAN INSULATION SUPPLIES PTY LTD	PRODUCT DATA SHEET	REVISION: 2
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		CHKD: BH APPV: IRS



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Type:	INDUSTRIAL SLAB	
Name:	TYPE 590 (for use up to 750⁰ C)	Page 4 of 4

Health & Safety

Industrial Slab 590 is NOT CLASSIFIED as HAZARDOUS according to NOHSC criteria as a consequence of the following events and conclusions about the health effects of long term occupation exposure to mineral wool insulation products.

- Over 50 years of extensive health research on Rockwool products in Europe has resulted in the scientific conclusion that there are no long term health problems from using Rockwool.
- In March 1995 the UK Health and Safety Executive concluded that Rockwool should not be classified as a potential carcinogen.
- Under note Q of the National Occupational health and Safety Commission (NOHSC) publication "List of Designated Hazardous Substances" (NOHSC; 1005-1999) the classification of NON-CARCINOGENIC is to apply.
- Under the European Union Criteria set out in 67/548/EEC a classification of CARC, Cat O applies, ie; "Not classifiable for carcinogenicity."
- Under World Health Organisation (WHO) and its Monographs Programme of the International Agency for Research on Cancer (IARC) it has been concluded that, "Rock (stone) wool are now considered not classifiable as to carcinogenicity to humans (Group 3),

It is recommended that for the handling and installation of Roxul Rockwool that the internationally recognized Material Safety Data Sheet be followed. These are readily available from Australasian Insulation Supplies Pty Ltd.

Technical Advice and Thermal Calculation Service:

Heat transfer calculation for Roxul Stonewool Type 590 insulation systems in thermal design is readily available. AIS technical advisers are ready to give help and advice on any matter connected with insulation or products manufactured by Roxul[®]

For further information and technical advice on insulation contact:



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