

SIDERISE Stonewool slabs

Rigid, semi-rigid and flexible slabs

Versatile thermal acoustic insulation slabs are high quality resin bonded slabs that can be used for thermal, acoustic and fire insulation.

Application

The SIDERISE Stonewool slab range is used for thermal, acoustic and fire insulation in multiple applications including floors, walls, roofs and industrial applications.

The product range consists of high quality resin bonded slabs in a variety of thicknesses and densities.

They are manufactured in a variety of thicknesses and densities to suit most requirements.

Specialist sizes and thicknesses are available to special order.

Benefits

- Excellent thermal, acoustic and fire insulation
- Water repellent
- Resists high temperatures
- Easy to handle and install
- Cost effective
- No maintenance
- Black or white tissue and aluminium foil facings available



**Fire, thermal and acoustic
insulation specialists**

Product description

SIDERISE Stonewool slabs comprise high quality stone wool manufactured to provide effective thermal insulation, fire resistance and superior acoustic performance in all areas of the building. The materials have been developed and tested at various thicknesses to meet the thermal and acoustic performance requirements listed in Tables 3 and 4.

SIDERISE Stonewool slabs range from 45 to 160 kg/m³.

Dimensions

Standard slab sizes and thicknesses are listed in Table 1. Other densities and thicknesses by special order.

Table 1 - Types and densities available

Slab type	Density kg/m ³	Standard size (mm)	Standard thickness* (mm)
RW45	45	1200 x 1000	25, 50, 75, 100
RW60	60	special order only	special order only
RW75	75	1210 x 1000	25, 50, 75, 100
RW80	80	special order only	special order only
RW110	110	1220 x 1000	25, 50, 75, 100
RW140	140	special order only	special order only
RW160	160	1220 x 1000	25, 50, 75, 100

*Other thicknesses may be available on request, please ask Customer Services.

Performance and properties

Table 2 - Resistance to compression

Slab type	Stress required to produce 10% compression (kN/m ²)	Stress required to reach elastic limit σ_e (kN/m ²)	Displacement at 5 kN/m ² stress
RW45	3.0	3.5	16.5
RW60	6.7	6.1	7.0
RW80	12.9	9.2	5.5
RW100	16.4	11.3	4.6
RW140	28.2	26.1	4.2

Tested in accordance with BS EN 826: 1996 NB Elastic limit occurs between 6 and 12% deformation.

Fire performance

SIDERISE Stonewool slabs (un-faced) are rated 'non-combustible' for Reaction to Fire and classified as 'A1' to EN 13501-1 in accordance with European and UK Building Regulations.

Please note: Faced options can also be tested for their Reaction to Fire performance - please contact Technical Services for more information.

Optional Finishes

Surface finishes are available on request:

- Non-woven Black tissue (60gsm)
- Non-woven White tissue (35 or 50gsm)
- SIDERISE re-enforced aluminium foil

This is subject to ordering volumes, please contact Customer Services for more information.

Water resistance

SIDERISE Stonewool slabs are highly water repellent and non-hygroscopic.

Thermal performance

Table 3 - Thermal conductivity (industrial applications)

Mean temp °C	Values (W/mK)				
	RW45	RW60	RW80	RW100	RW140
50	0.040	0.039	0.038	0.037	0.037
100	0.050	0.047	0.045	0.044	0.044
150	0.063	0.058	0.055	0.054	0.051
200		0.070	0.066	0.064	0.060
250			0.079	0.075	0.070
300				0.088	0.081
350				0.104	0.093
400				0.122	0.106

Tested in accordance with BS 874: 1973. Cold face temperature 40°C.

Acoustic performance

SIDERISE Stonewool works in two distinct ways to reduce noise, either by impeding the transmission of sound through an element of the structure or by absorption of sound at the surface.

The structure of the fibres in **SIDERISE Stonewool slabs** make them ideal for use as a sound absorber, with characteristically high coefficients over a wide frequency range.

Noise absorption is expressed as a factor between 0 and 1.0. The more sound that a surface absorbs, the higher its absorption coefficient.

The absorption coefficients shown below are typical values achieved by un-faced SIDERISE Stonewool products. They have been obtained from a comprehensive range of measurements made over a number of years.

Please note: Differences in coefficients of less than 0.05 are not significant.

Table 4 - Absorption coefficients for selected SIDERISE Stonewool slabs

Slab type	Thickness (mm)	Mounting	Frequency (HZ)					
			125	250	500	1K	2K	4K
RW60	50	Direct	0.11	0.60	0.96	0.94	0.92	0.82
RW60	75	Direct	0.34	0.95	1.00	0.82	0.87	0.86
RW100	30	Direct	0.10	0.40	0.80	0.90	0.90	0.90
RW100	30	300 mm gap	0.40	0.75	0.90	0.80	0.90	0.85
RW100	75	Direct	0.40	0.75	0.90	0.80	0.90	0.85
RW140	50	Direct	0.20	0.75	0.90	0.85	0.90	0.85
RW140	50	300 mm gap	0.65	0.55	0.75	0.85	0.75	0.85

Applications

SIDERISE Stonewool slabs are suitable for a wide range of thermal, acoustic and fire insulation requirements both within buildings and for industry.

Buildings

The products can be used in external walls (metal frame, rainscreen, timber frame), facade systems (rendered facade, ventilated facade rainscreen cladding), flat roof (metal deck - warm roof, standing seam), HVAC (ducts - acoustic), intermediate floors (metal joists, timber joists), internal and separating walls (internal walls light framed partitions, metal frame, timber frame), separating floors (timber floating floor).

Industrial uses

Thermal and acoustic for boilers, ducts and vessels, particularly in the chemical, petrochemical and power generating industries.

Generally, for furnaces, ovens, calorifiers, hot-water boilers, storage tanks, drying equipment and air conditioning plant.

Standards

SIDERISE Stonewool slabs are manufactured in the UK and conform to BS EN 13162: 2001. Thermal insulation products for buildings - factory made mineral wool (MW) products - specification.

Additional information

The safety of SIDERISE Stonewool stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC: stonewool fibres are not classified as a possible human carcinogen.

A Safety Data Sheet is available from SIDERISE and can be downloaded from www.siderise.com to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

Environmental

SIDERISE Stonewool slabs are environmentally friendly.

Relying on entrapped air for its thermal properties, we are proud to say that SIDERISE Stonewool insulation does not contain (and has never contained) gases that have ozone depleting potential (ODP) or global warming potential (GWP).

- They contain no Volatile Organic Compounds (VOCs) and no very Volatile Organic Compounds (vVOCs)
- Zero Ozone Depleting Potential
- Zero Global Warming Potential
- Recyclable

Sustainability

As an environmentally conscious company, SIDERISE promotes the sustainable production, fabrication, distribution and use of insulation and is committed to a continuous process of environmental improvement.

All **SIDERISE Stonewool slabs** provide outstanding thermal protection as well as four added benefits:

- Fire resistance
- Acoustic comfort
- Sustainable materials
- Durability

**Developing insulation solutions
for over 40 years**

