

ADDITIONAL INSULATION CHARACTERISTICS



High fire resistance (EI30 – EI60 min)

The new insulation core includes rock mineral wool, which with its non-combustibility and high melting point (above 1,000°C) contributes to the improved fire resistance of doors (Class EI30 – EI60 min). This means that DRS Sound Supreme Board is suitable for fire resistant doors.



Good thermal conductivity (0,077 W/mK)

The usage of the newly developed insulation core in door systems, due to the excellent thermal performance of rock mineral wool (prevents convection, stops radiation and limits the conduction of heat through insulation material), helps reduce energy consumption and creates a desirable indoor climate, therefore making a valuable contribution to combating climate change.



Advanced mechanical properties and surface hardness of insulation core

The new insulation core guarantees excellent stability as it has high compression strength, maintains its integrity and does not change shape or fluctuate in dimensions (length or width), regardless of changes in humidity or temperature. Due to the hardness of the insulation core surface it has a solid adhesion power with other materials.



Environmental solution

The newly developed core is non-hazardous for both personal health and for the environment. It is based on a composition of highly recyclable materials, which makes it in line with future technology trends preferring ecologically oriented materials, reducing the consumption of thermal energy sources and at the same time reducing environmental pollution.



Quality without compromise

Knauf Insulation DRS Sound Supreme Board meets all standard requirements (VOC, TOC) for the insulation of wooden door systems. Superior characteristics like excellent sound insulation, good fire protection, high thermal conductivity, advanced mechanical properties and ecological orientation define it as a premium quality solution. RAL and EUCEB certificates for rock mineral wool as a main component of the board have also been acquired.



KNAUF INSULATION, d.o.o.,
Škofja Loka, Trata 32,
4220 Škofja Loka, Slovenia

Phone: +386 (0)4 5114 000
E-mail: oem@knaufinsulation.com

www.oem.knaufinsulation.com

WEBSITE



LINKEDIN



DRS SOUND SUPREME BOARD

INSULATION CORE FOR SUPERB SOUND INSULATION OF WOODEN DOOR SYSTEMS



HEALTH AND ENVIRONMENT

Our mission is to **challenge** conventional thinking and **create** innovative insulation solutions that shape the way we live and build in the future, with **care** for the people who make them, the people who use them and the world we all depend on. The incorporation of our insulation solutions from mineral wool makes it possible to build healthy and comfortable living spaces as its properties improve the microclimate in a room and, at the same time ensure excellent thermal, sound and fire protection. Knauf Insulation products are also ecologically oriented, as they reduce the consumption of thermal energy sources, thereby reducing environmental pollution.

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challenge.
create.
care.

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Insulation core for superb sound insulation of wooden door systems

PERFORMANCE

- **SOUND PERFORMANCE**
Superb sound insulation properties of up to 43 dB
- **FIRE PERFORMANCE**
Excellent fire resistance (classes EI30 - EI60)
- **MECHANICAL PERFORMANCE**
Advanced mechanical properties, dimensional stability and surface hardness of insulation core

Knauf Insulation is a leading European manufacturer of door insulation and supplier to some of the world's largest door producers. We offer our clients a complete range of mineral wool insulation products. Our strategy and partnership with our customers is based on continuous, innovative product development, in order to deliver premium solutions with proven expertise.

As maintaining a high quality of life requires increasingly strict standards and as European requirements for sound insulation to protect people and/or the environment (standard SIST EN ISO 717-1) are becoming more and more strict, sound insulation and preventing sound pollution are becoming more and more important.

This fact and our awareness that rock mineral wool, due to its structure, provides a highly effective barrier to noise and significantly dampens sound, led Knauf Insulation to develop a new, state of the art patented product: a **high-performance insulation core**, made of various ecologically oriented materials (so called "composite board"), **delivering our customers superb sound absorption for wooden door systems. We call it KNAUF INSULATION DRS SOUND SUPREME BOARD.**

ADVANTAGES FOR DOOR PRODUCERS

- **Easy to process**
– well suited to machinery for sawing and routing
- **Suitable for veneering and laminating**
– all types of surface finishes are possible (foils, veneers, melamine, painting, staining).
- **Easy profiling and edging**
– almost all edge designs and profiles are possible.
- **Mechanical fastenings possible**
– the composite core accepts screws, staples and nails well. Composite cores are also suitable for use with dowels.

SOUND INSULATION COMPARISON TEST
(No insulation vs. Rock Mineral Wool vs. Sound Supreme Board)



BENEFITS

- **Thermal insulation properties;** composite boards have excellent thermal conductivity properties.
- **Excellent fire resistance;** composite boards boast a high European fire resistant ratings of EI30 – EI60.
- **Superb acoustic performance;** due to its structure composite boards are able to significantly reduce sound.
- **Energy saving material;** lower energy consumption and reduced CO₂ emissions.
- **Vapour permeability;** owing to their structure composite boards are vapour permeable.
- **Water repellent;** composite boards are permanently water repellent.
- **Permanently stable dimensions;** composite products maintain their integrity, and do not change shape or fluctuate in dimensions (length or width), regardless of changes in humidity or temperature.
- **Resistant to microorganisms;** composite boards remain clean and hygienically sound, are non-hygroscopic, rot-proof, and will not sustain vermin nor encourage the growth of fungi, mould or bacteria.
- **Ecologically oriented;** composite boards are non-hazardous for both personal health and for the environment. Products are based on a composition of highly recyclable materials.

Description

KNAUF INSULATION DRS SOUND SUPREME BOARD (DRS SSB) is a new insulation board, produced with a unique and patented technological process, specially developed for wooden doors' insulation core. It is based on a composition of rock mineral wool and other ecologically oriented materials, which enable **superb sound insulation (up to 43 dB – depending on the core layers and density)** in combination with **excellent fire resistance (EI30 – EI60)** and thermal insulation. The state of the art insulation core can be prepared as a single-, double- or multi-layer board with **a full-core thickness of only 11 – 50 mm** and is custom designed according to customers' specifications and requirements.

Application

- Insulation core **for multifunctional wooden doors** in the leisure, hospitality, education, health, housing and media/broadcasting markets and in all other places **where high sound performance factors are required**, providing maximum comfort, good working conditions and a pleasant environment.
- Insulation core **for entrance wooden doors** where **high sound performance factors** in combination with **excellent thermal conductivity and high fire resistance** are required, providing sound, thermal and fire insulation of different facilities for maximum comfort, good working conditions and a pleasant environment.

Product range of DRS Sound Supreme Board

	SSB 50	SSB 65	SSB 80	SSB 90	Unit
Density	500	650	800	900	kg/m ³
Thickness range	16 – 50	16 – 50	11 – 50	11 – 50	mm
Thermal conductivity – declared	0.077	0.092	0.100	0.120	W/mk



Standard dimensions (Product customized according to the needs of customer):

- **Density:** 500 – 900 kg/m³
- **Thickness:** 11 – 50 mm
- **Standard dimensions:** 2,170 × 1,270 mm, 2,170 × 960 mm

KNAUF INSULATION DRS SOUND SUPREME BOARD Excellent sound insulation for wooden doors

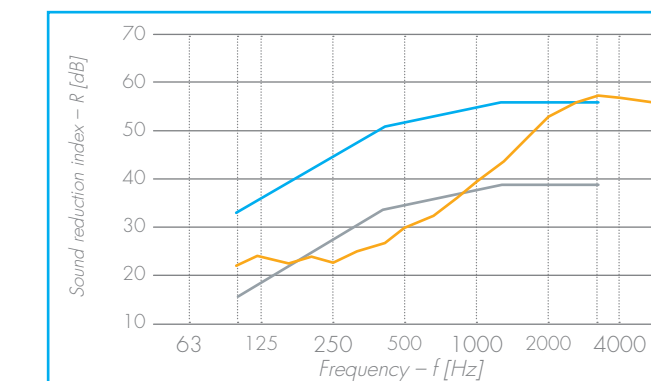


The structure of the rock mineral fibres and other materials in a precisely defined composition of the insulation core make doors particularly good at reducing sound (**superb sound insulation up to 43 dB**). It satisfies the sound insulation requirements of SIST EN ISO 717-1 in several sound insulation classes; therefore **outstanding sound performance characteristics** of doors can be achieved.

Different sound insulation classes can be achieved, depending on the thickness (11 – 50 mm), density and number of layers.

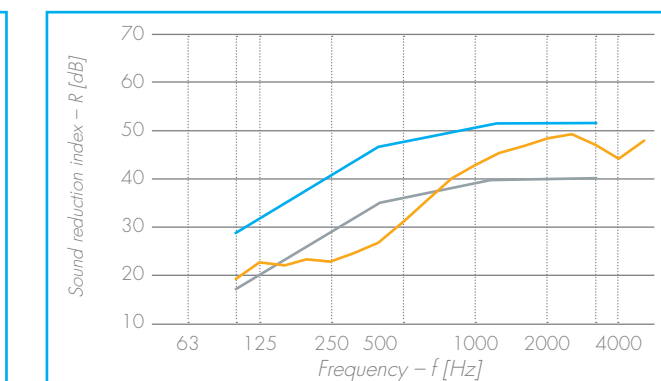
Sound insulation tests

TEST 1: DRS Sound Supreme Board 50/50 (2-layer core)
Dimensions of the specimen: width 1,000 mm × length 2,150 mm × thickness 42 mm
Declared density: 500 kg/m³
Rating according to SIST EN ISO 717-1 (2013):
Rw (C;Ctr) = 35 (-1;-4) dB

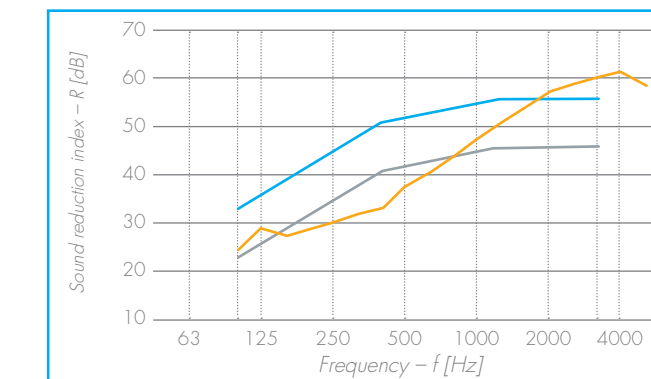


Laboratory measurements of airborne sound insulation according to standard sist. EN ISO 10140-2:2010

TEST 2: DRS Sound Supreme Board 65/65 (2-layer core)
Dimensions of the specimen: width 1,000 mm × length 2,150 mm × thickness 42 mm
Declared density: 650 kg/m³
Rating according to SIST EN ISO 717-1 (2013):
Rw (C;Ctr) = 40 (-2;-5) dB



TEST 3: DRS Sound Supreme Board 50/90 (2-layer core)
Dimensions of the specimen: width 1,000 mm × length 2,150 mm × thickness 42 mm
Declared density: 700 kg/m³
Rating according to SIST EN ISO 717-1 (2013):
Rw (C;Ctr) = 42 (-1;-4) dB



TEST 4: DRS Sound Supreme Board 90/90 (2-layer core)
Dimensions of the specimen: width 1,000 mm × length 2,150 mm × thickness 42 mm
Declared density: 900 kg/m³
Rating according to SIST EN ISO 717-1 (2013):
Rw (C;Ctr) = 43 (-1;-4) dB

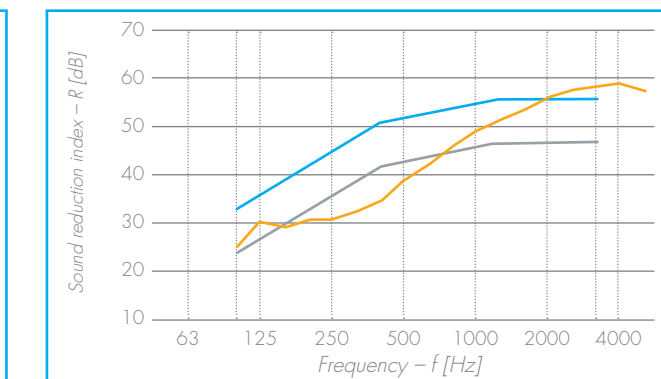


Chart legend: **ORANGE** – Measured curve [dBA] across the frequency range 100 - 5000 Hz; **BLUE** – Reference curve according to the EN 717 standard; **GREY** – Standard curve shifted to measured curve.
Evaluation based on laboratory measurement results. Junctions between the test specimen and the frame of the test opening were sealed. Test specimen consists of two interconnected layers, with no cover boards added.