

SonoTec, sound insulation cork

The perfect solution for sound insulation

NEW
to our product range



Technical advantages

- Sustainable material
- High load bearing capacity
- Hidden installation
- Easy to use
- Impermeable to water and gas due to component-specific requirements

Product properties

- Material
The SonoTec soundproof cork is a combination of the components cork and natural rubber. This product is suitable for the application of vibration damping where very high isolation values are required and can be used as invisible insulators (pads/strips) with a low resonant frequency and medium to low load.
- Load absorption
Different loads have to be absorbed when decoupling the timber vertical truss from the concrete. These are located in the 0,1 N/mm² - 3 N/mm² stat. permanent load range. A timber beam (C24 softwood) may only be loaded up to 2,5 N/mm² (characteristic) perpendicular to the grain. Our products cover load cases from 0,1 N/mm² - 3 N/mm² ab. The cork can thus be used both in lightweight and solid construction with cross-laminated timbers.
- Noise reduction
The SonoTec sound insulation cork can reduce noise by up to 40 dB.



SonoTec, sound insulation cork

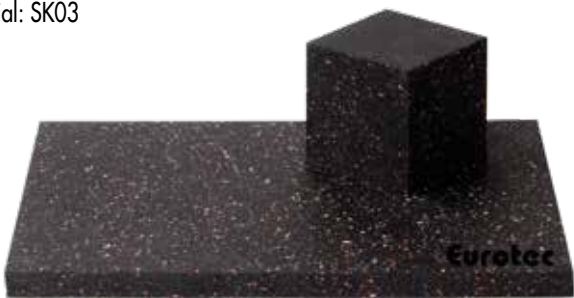
Material: SK02



Art. no.	Name	Dimensions [mm]	Material thickness [mm]	PU
945305	SK02	80 x 1100	6	20
945306	SK02	100 x 1100	6	20

SonoTec, sound insulation cork

Material: SK03



Art. no.	Name	Dimensions [mm]	Material thickness [mm]	PU
945307	SK03	80 x 1100	6	20
945308	SK03	100 x 1100	6	20

SonoTec, sound insulation cork

Material: SK04



Art. no.	Name	Dimensions [mm]	Material thickness [mm]	PU
945309	SK04	80 x 1100	6	20
945310	SK04	100 x 1100	6	20

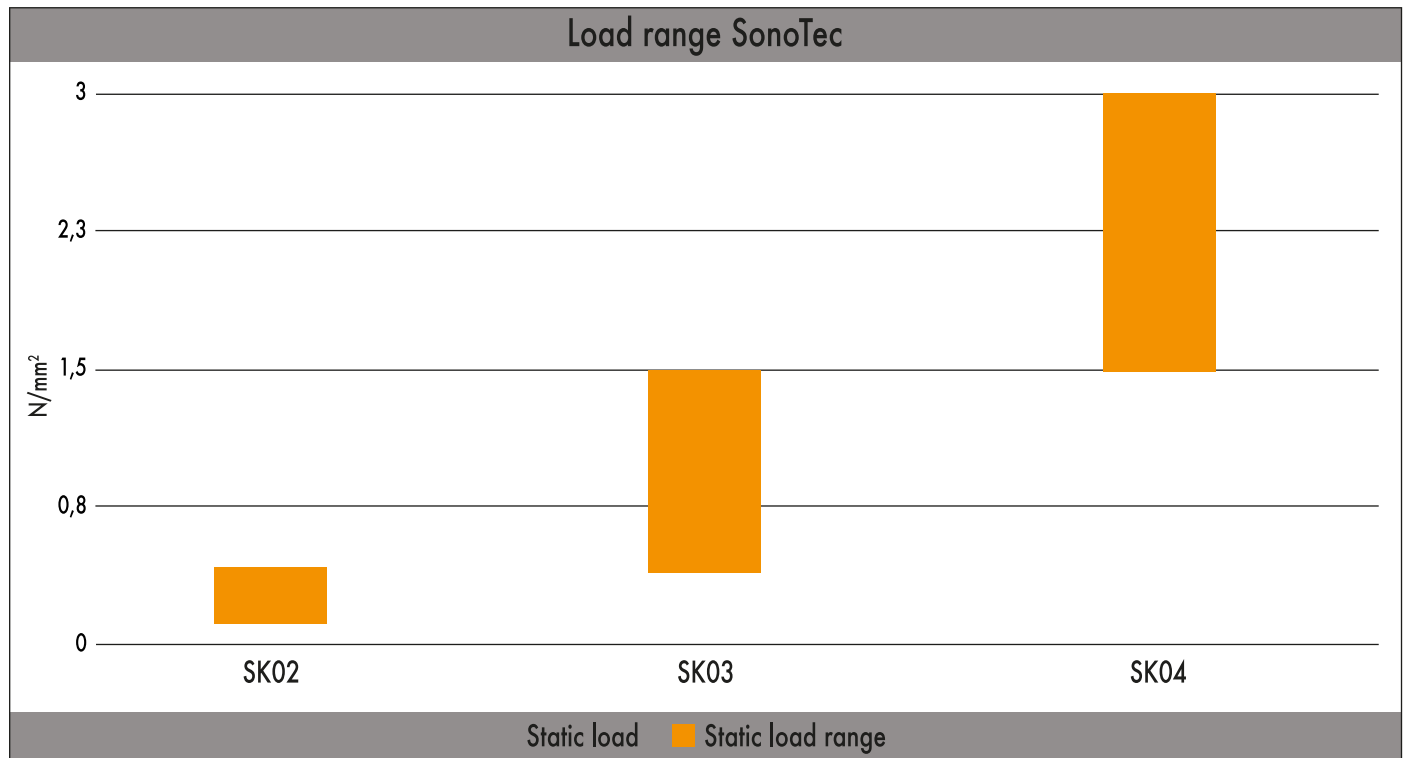
Technical data

	SK02	SK03	SK04
Load ranges [N/mm ²]			
Static	0,1 - 0,4	0,4 - 1,5	1,5 - 3,0
Total	0,6	2,0	4,0
Load peaks	1,5	8,0	10,0
Modulus of elasticity [N/mm ²]			
Static	1,6 - 4,0	5,0 - 13,0	80 - 20,0
Dynamic	3,5 - 8,0	10,0 - 33,0	16,0 - 50,0
Other values			
Temperature [C°] / span width	10/+100	-10/+100	-10/+100
Density [kg/m ³]	700	1100	1125
Shore hardness [shore A]	35 - 50	45 - 60	60 - 80
Break rotatio [%]	> 200	> 300	> 100
Tensile strength [N/mm ²]	> 2,0	> 5,0	> 6,0
23°C / 70 h compression [%]	< 15	< 15	< 15

Determining materials

The diagram below shows what load cases the respective materials are suitable for. The loads are permanently occurring static loads.

Depending on the load calculated by the structural engineer, it is possible to determine the material required for a particular project. Oversizing the sound insulation cork is not recommended, because doing so restricts the noise reduction.





Properties of cork

The cork bark has a honeycomb-shaped cell structure with over 40 million cells per cm^3 . The cells have a high proportion of an air-like gas mixture, which results in the cork's low weight on the one hand and the high compression capacity and elasticity on the other. The cork can therefore be compressed by up to half its size and can return to its original shape after compression.

Almost half of the cork bark is made up of suberin, a non-combustible biopolymer. The substance lines the individual cells and makes them impermeable to liquids and gases. The bark's structure and thickness protect the cork oak from heat, drying out and infections. This natural protective insulation makes cork oak an ideal insulating and sealing material for technical purposes.

Advantages

- Very good sound and thermal insulation
- Impermeable to liquids and gases
- Good resistance to fire and high temperatures
- High frictional resistance
- Compressible and elastic
- Good wear resistance
- Low weight – floats on water
- Hypoallergenic and anti-static – does not absorb dust
- High flexibility – comfortable and soft

Environment

Cork is one of the most natural and environmentally friendly raw materials in the world. Cork oak is also the only tree that can completely regenerate itself after each harvest. The fact that cork can be recycled and reused in new products makes it an ideal raw material with regard to sustainability.

Natural rubber

Alongside cork, natural rubber is another natural and renewable raw material. Natural rubber is a rubber-like substance and is extracted from the milky sap (also known as latex) of the rubber tree. The rubber tree grows in the tropics of Africa, South America and Asia. Natural rubber accounts for around 40% of global rubber production. In contrast, synthetic rubber is made using crude oil as a basis and consumes far more energy during the manufacturing and transport processes.

Natural rubber is made into various products, most of them are used in tyre production. Other applications include seals, binders and mattresses.

Properties of natural rubber

- High level of elasticity
- Good mechanical resistance
- High tear strength
- Water repellent
- Poor electrical and thermal performance
- Weighs less than water

