

SphereCore SBC



Description

Sphere.core SBC is a newly developed mat consisting of volumised short glass fibers.

The basic material possesses similar characteristics to sphere.core S. The basic material will be compressed through a special process and kept compressed through a stitchbonding process.

This compression reduces the cavities between the glass fibers and the microspheres by approximately 50% per volume compared with the sphere.core S quality, resulting in a considerable reduction of the resin absorption so that the specific weight is only around 420 – 440 kg/m³ after impregnation and complete saturation with resin.

Because of this low specific gravity and the high strength parameters of the material after curing of the impregnated resin, sphere.core SBC can be excellently used as substitute for core materials based on plywood, BALSA, PVC foam etc. Owing to the perfect laminate homogeneity and the extremely high strength parameters, the external top layers can be designed significantly thinner for sandwich designs and yet the physical parameters are higher than those with sandwich designs produced by using plywood, BALSA or PVC foam.

With identical laminate thicknesses, the physical parameters of a laminate produced with sphere.core SBC are far superior to the laminates with core materials made of PVC foam or BALSA.

Laminates produced with sphere.core SBC in the core area are not classic sandwich laminates where “alien” core materials are bonded together with external top layers made of pure GRP, but have the characteristics of a homogenous total laminate produced according to the wet in wet method.

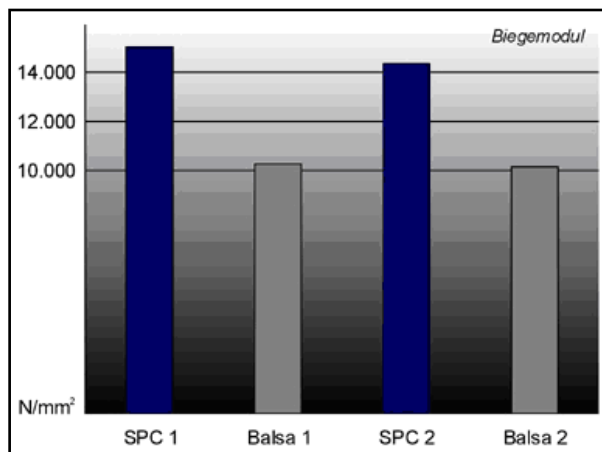
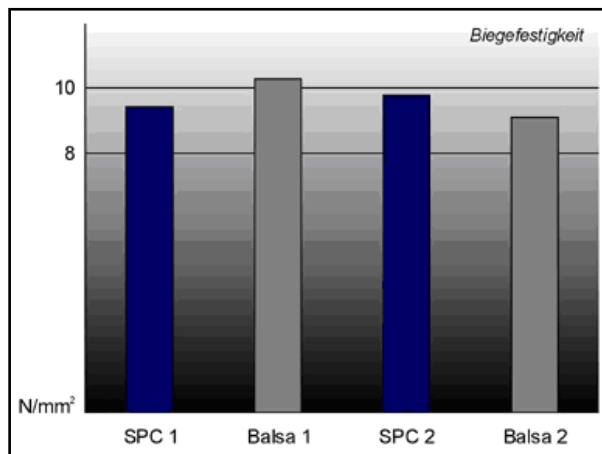
A laminate with sphere.core SBC has particularly good characteristics in terms of extremely low

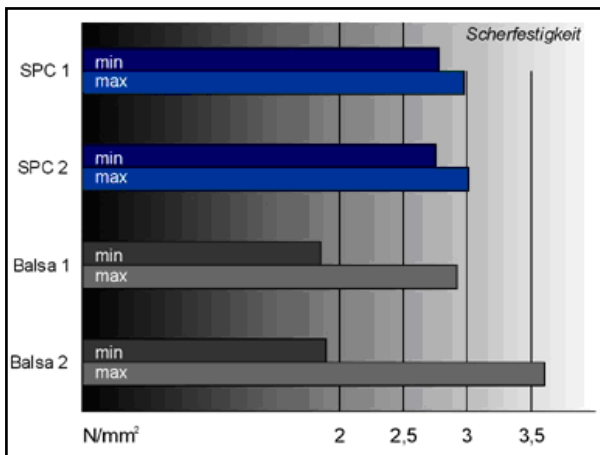
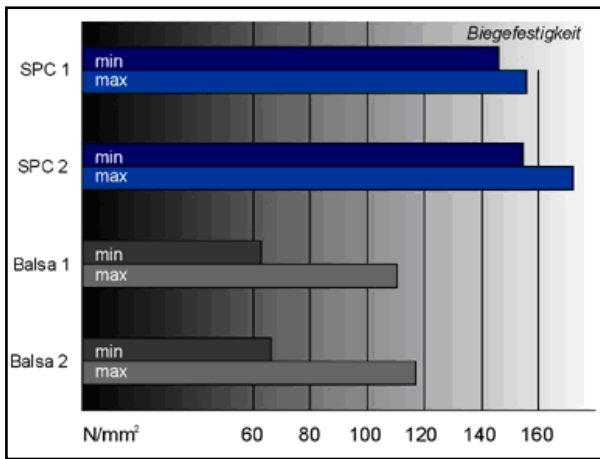
moisture absorption, which is in the area of the values of normal GRP laminates.

Difference

Completely saturated with resin, sphere.core SBC has by far the lowest specific weight of all sphere.tex products. sphere.core SBC is produced in 6, 8, 10 mm and has the greatest material thickness of all spheretex qualities.

Please compare the following graphics:





Processing

sphere.core SBC is processed by hand-layup similar to classic chopped strand mats or woven rovings. Because of the increased material thickness (standard: 6 mm, 8 mm, 10 mm) impregnation should be done from both sides, by initially wetting the bottom (approx. 50%), and subsequently placing this wet side on the bottom cover laminate and adding the remaining resin quantity from the top. Impregnation can take place outside or inside the mould. It must be ensured that the material is impregnated until fully saturated. UP resin is mostly used, the styrene content of which softens the material after impregnation and makes possible the processing of even complex shapes without creases.

However, vinyl ester, PU, acrylic, epoxy or phenolic resins can also be used.

Delivery specifications

Sphere.core SBC is manufactured in standard thicknesses of 6, 8 and 10 mm.

Applications

By using sphere.core SBC it is possible to produce laminates having similar characteristics in terms of low specific weight and flexural strength as classic sandwich laminates using plywood, BALSA, PVC foam.

However, a sphere.core SBC laminate does not constitute a conventional sandwich where a core material is bonded together with external top layers but a homogenous full laminate produced according to the wet in wet method.

It is exactly these characteristics that result in the high physical superiority of sphere.core SBC laminates.

Importers and Distributors:



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