

Spheretex SN



Description

Sphere.tex SN corresponds to the standard quality sphere.tex in all quality and delivery parameters. The SN quality, however, is additionally flexibilised mechanically, rendering the material very soft and resulting in excellent drapeability.

Difference

The difference to sphere.tex is an additional mechanical process, rendering the material more flexible and drapable. This allows sphere.tex SN to be easier laminated into complicated shapes.

Applications

The very soft and flexible setting makes the material particularly suitable for hand lay-up. But sphere.tex SN is preferably employed also in closed moulds, when overlapping and creases have to be avoided with a complicated shape. The mechanical flexibilisation also results in quicker resin absorption and easier deaeration.

Processing

Sphere.tex SN is largely processed similar to the other laminate materials on the basis of chopped strand mats, woven rovings or stitched bonded fabrics. The same work methods and tools can be used. sphere.tex is a core material and is always covered with external top layers made of pure GRP. In the open moulding processes (hand-layup, sprayup) one or several layers of glass/resin (old: Carbon or aramid) are initially placed in a negative mould in accordance with the design specifications.

It is recommended to initially wet the bottom of the subsequent sphere.tex SN layer with resin, this because of the high material density and thickness brought about by the embedding of the microspheres. This can be done outside the mould or inside the mould by folding over the bottom. The partly impregnated sphere.tex SN is then placed on

the wet laminate surface and wetted with the necessary residual amount of resin. The impregnated sphere.tex is then ventilated in the usual manner using vent rollers.

It must be ensured that the sphere.tex SN is impregnated until fully saturated. Oversaturation is not possible because any excess resin can be used for the subsequent top layers made of pure GRP.

The special feature of sphere.tex SN – compared with core materials made of foam material, BALSA or honeycomb – is the possibility that the entire laminate can be produced wet in wet in one operation. This creates a unique laminate homogeneity.

In closed moulding processes (wet pressing, RTM, vacuum process, injection process, autoclaves) sphere.tex SN is treated like a normal layer of glass fibers or similar. It must merely be ensured that the applied pressure is limited especially with wet pressing to avoid destroying the sphere.tex SN structure. This can be done for instance by limiting the distance of the press tools with the help of spacers. Sphere.tex SN can be processed with all popular thermoset resin types. (unsaturated UP, vinyl ester, PU, epoxy, acrylic, phenolic resin).

Most applications make use of UP or vinyl ester resins. sphere.tex SN contains bonding agents, soluble in styrene, so that, comparable with chemically bonded chopped strand mats, softening of the fiber structure and an increase of the drapeability occurs following contact with styrene.

A third processing method of sphere.tex SN is the manufacture of Prepreg, in that the material is pre-impregnated with Prepreg resins at the factory and delivered to the manufacturer of corresponding

finished parts in a "B-condition". However, it must be ensured that the limited temperature and compressive strengths of the thermoplastic microspheres is taken into account during the subsequent pressing and curing process.

Delivery specifications

Thickness values:

Standard : 1 mm, 1.5 mm, 2 mm, 3 mm

Other core thicknesses can be attained by combining several layers.

Widths:

Standard : 125 cm

Special widths up to a max. of 2.70 possible on request

Fiber proportion per material thickness:

Standard :

1 mm approx. 80 gr/m²

1.5 mm approx. 104 gr/m²

2 mm approx. 170 gr/m²

2 mm approx 290 gr/m²

3 mm approx. 300 gr/m²

Special weaving structures and area weights are possible on request.

Delivery unit:

Standard roll material:

1.0 / 1.5 mm = 100 running meter

2 mm = 67.5 running meter

3 mm = 67.5 running meter

Special delivery units possible on request.

**Importers and
Distributors:**



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