



COMPACFOAM® - pressure-resistant polystyrene thermal insulation with passive house standard

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Staatspreis Innovation
COMPACFOAM®

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COMPACFOAM® - pressure-resistant polystyrene thermal insulation with passive house standard

Company: COMPACFOAM GmbH

Location: Gerasdorf bei Wien, Austria

Description:

The material COMPACFOAM®, produced with a new, innovative process consisting of commercially expanded polystyrene (EPS), meets the highest requirements for thermal insulation and with its high-strength properties also meets the requirements of high compressive strength and is thus perfectly suited as a material of the future. The fields of application range from window construction to building construction (insulation material) to vehicle construction (eg: caravan construction).

COMPACFOAM is a thermoplastic foam with a density of 100 - 400 kg / m³ based on the polymer polystyrene. Small closed-cell foam balls with a diameter of less than 1 mm are thermally welded together on their cell walls to form a massive block. COMPACFOAM's innovation is to expand this known technology to many times higher densities. This results in unique material properties while at the same time ensuring the safety of a material tested over decades.

Ursprünglich führte ein Auftrag zur Planung und Fertigung von schwimmfähigen Plattformen, die zu Werbezwecken als Badeinseln eingesetzt werden sollten, zur Entwicklung von COMPACFOAM®. Gefordert war ein druckfestes und dennoch leichtes Material, welches großer Beanspruchung standhalten sollte und zugleich über den nötigen Auftrieb verfügen musste.

The product, whose thermal conductivity meets the Passive House standard, is now offered in six different density classes up to 15,000 kN / m², which can be used in a wide range of applications depending on the requirements. The pressure-resistant material can be used to attach external components, such as sun protection elements, fall arrestors or advertising boards, to the building envelope without impairing the thermal insulation. COMPACFOAM® is compatible with most insulating materials and guarantees high resistance to mold and frost due to its low water absorption capacity. The time-dependent deformation is less than 3% of the structural thickness and its breaking elongation ensures a harmless compensation of uneven surfaces of the substrate.

Due to the universal production as bar, block or plate material in various milling and cutting variants individual adjustments can be offered to existing profile geometries or component contours.

Further information [LINK](#).

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