

Technical Information

Phonotherm® 200



Phonotherm® 200 boards are made of high quality CFC- HCFC and formaldehyde-free polyurethane hard foams. In a special composition including the addition of auxiliary materials this material is pressed into high quality boards. Phonotherm® 200 is a functional material that convinces through extraordinary properties. Phonotherm® 200 is moisture resistant and has excellent thermal insulation properties.

Its resistance to moisture makes Phonotherm® 200 very durable and prevents it from rotting. This renders Phonotherm® 200 far superior to conventional wooden boards such as press boards and MDF boards, yet has similar machining properties. Phonotherm® 200 can be machined using normal carbide tools and can even be milled in fine detail without danger of break-out. Phonotherm® 200 is also resistant to chemicals, easy to work and can be laminated and combined with other materials.

BOSIG
Baukunststoffe
GmbH

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DIN EN 13501-1

MPA Dresden



Technical data:

Phonotherm®200	RG 550	RG 700
Material	CFC- HCFC and formaldehyde-free polyurethane hard foam material	
Raw density	550 ± 50 kg / m ³	700 ± 50 kg / m ³
Bending strength ¹	approx. 7,8 N / mm ²	approx. 10,5 N / mm ²
Thermal conductivity λ ₁₀	approx. 0,076 W / m·K	approx. 0,10 W / m·K
Modulus of elasticity	approx. 500 N / mm ²	approx. 750 N / mm ²
Screw withdrawal resistance ²	approx. 650 N	approx. 800 N
Compressions strength ³ at 10% compression	approx. 7000 kPa	approx. 8100 kPa
Thickness swell after 24 h in water	approx. 1 %	approx. 1 %
Dimensional change after 24 h in water	approx. 5 %	approx. 4 %
Humidity-dependent change in length	± 2 mm / m	± 2 mm / m
Elongation coefficient in the range -20 to +60°C	approx. 28,375 · 10 ⁻⁶ /K	approx. 28,375 · 10 ⁻⁶ /K
Water vapour diffusion resistance values μ	approx. 12	approx. 25
Residual moisture	approx. 2 - 4 %	approx. 2 - 4 %
Fire behaviour	Building material class B2 non-flammable drop free Class E	Building material class B2 non-flammable drop free Class E
Thickness tolerance, not sanded	± 0,4 mm	± 0,4 mm
Thickness tolerance, sanded	± 0,2 mm	± 0,2 mm
Thermal stability	- 50°C bis + 100°C	
Resistance against ageing	resistance against putrefaction and non-rotting	

¹ Values measured for a 15 mm board thickness.

² Values measured for a SPAX® T-STAR plus 4,0 x 60

³ Average value at 10% compression, individual values may be less than the permissible value of up to 10%

Dimensions:

Standard board sizes:	2400 x 1350 mm	2400 x 1500 mm
	3600 x 1350 mm	3600 x 1500 mm
Thickness:	RG 550 kg/m ³	from 15 mm - 60 mm
	RG 700 kg/m ³	from 10 mm - 50 mm

Other sizes and thicknesses are available upon request. In principle, special board sizes and thicknesses as well as bespoke parts and laminated boards are possible - we can tailor the boards to suit most of your needs. This requires a detailed discussion based on the intended application, product specification and drawings. Please contact us and we will guide you through the process.

The advantages:

- Economical
- moisture resistant
- does not age or rot
- good thermal insulation properties
- very good resistance to chemicals
- recyclable
- biologically and ecologically harmless, resistant to fungae and rot
- easy to work

Test:

Testing institute	Number	Test method	Results
MPA Dresden	Nr. 05-6-3301-01.1 Nr. 05-6-3301-02.1	Fire behaviour according to DIN 4102, Part 1 (550 kg/m ³ und 700 kg/m ³)	building material class B2
	Nr. 2007-B-2407/1	Fire behaviour according to EN 13501-1	Claas E
MPA NRW	Nr. R-420001975 07-02	Thermal conductivity according to EN 12667	$\lambda = 0,076 \text{ W / m}\cdot\text{K}$
BTU Cottbus	Nr. 08-051-201	Elongation coefficient according to DIN 51045-1	examination report

Environmental protection:

Processing waste of Phonotherm®200 is 100% recyclable. Phonotherm®200 is free of formaldehydes and does not emit physiologically significant quantities of chemical substances.

Processing:

Use conventional tungsten-carbide tipped woodworking machinery for processing. In principle, we recommend an extraction system. The dust created during machining (sawing, grinding, milling) is physiologically harmless and not fibrous. Pre-drill before screwing or use self-drilling screws. Phonotherm®200 offers a good screw hold, the material can be milled, ground and drilled and has excellent bonding qualities.

Gluing:

Gluing of butt joints of boards, cuts and strips is simple, using 2-component polyurethane adhesives. Both single and 2-component polyurethane adhesives are suitable. Please ask for our assistance for your specific application.

Storage and transport:

Phonotherm®200 should be stored dry and on a flat surface. It is not subject to the ordinance on hazardous substances or other storage and transport regulations.

Please note:

The information herein has been compiled to the best of our knowledge, based on our experience and on tests conducted by us. However, it is non-committal and should not be considered a warranty of properties in the meaning of the jurisdiction of the German Federal Supreme Court (BGH). It is our knowledge as of the time of print. Subject to alterations. Due to the versatility of our products, we recommend to try our product for suitability on original materials before approving it for use. Our application engineering department will be happy to assist you. All our products are subjected to stringent quality control. This Technical Fact Sheet supersedes any previous versions and will be effective and valid until the publication of a newer version or until 31.12.2017. Please request the new version as from 01.01.2018.