

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.



Technical Data:

Phonotherm 200	RG 550	RG 700	
Material	CFC- HCFC and formaldehyde-free polyurethane hard foam material		
Raw density	550 ± 50 kg / m³	700 ± 50 kg / m³	dep. on thickness
Bending strength*	>5 N / mm²	>7 N / mm²	dep. on thickness
Modulus of elasticity*	>450 N / mm²	>450 N / mm²	dep. on thickness
Screw withdrawal resistance*	>600 N	>750 N	dep. on thickness
Thickness swell* after 24 h in water	approx. 1 %	approx. 1 %	Intern.
Water absorption* after 24 h in water	approx. 5 %	approx. 5 %	Intern.
Dimensional change* after 24 h in water	approx. 0,46 %	approx. 0,4 %	Intern.
Thermal conductivity ₁₀	approx. 0.076 W / (m·K)	approx. 0.10 W / (m·K)	EN 12 667 / DIN 52 612
Fire behaviour	Building material class B2 non-flammable drop free	Building material class B2 non-flammable drop free	DIN 4102
	Class E	Class E	DIN EN 13501-1
Residual moisture	approx. 5 %		
Thickness tolerance, not sanded	± 0.4 mm		
Thickness tolerance, sanded	± 0.2 mm		
Thermal stability	- 50 °C to + 100 °C		
Resistance against ageing	resistance against putrefaction and non-rotting		

* values measured for a 15 mm board thickness.

Special sizes and laminations are possible in principle. We can tailor the boards to suit most of your needs. This would require a detailed discussion and drawings, if possible. Please contact us for information.

Dimensions:

Standard sizes:		2400 x 1350 mm
		3600 x 1350 mm
Thicknesses:	RG 550 kg / m³	from 15 mm to 60 mm
	RG 700 kg / m³	from 10 mm to 50 mm

Other sizes and thicknesses are available on request.

The advantages:

- economical
- moisture resistant
- does not age or rot
- resists roots
- good thermal insulation properties
- very good resistance to chemicals
- recyclable
- biologically and ecologically harmless, resistant against fungi and rot
- easy to work

Examples of applications:

- Inserts for refrigerated trailers
- Core material for wet doors
- Core material for bathroom furniture
- Profiles for façade structures
- Core material for work tops for kitchens, bathrooms, clean rooms, canteens and laboratories
- Re-inforcement of sandwich panels for mounting of fixture, screws etc.
- Core material for lockers in public baths
- Insulator for marine decks

Environmental protection:

The created waste 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 working. 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-drill screws. Phonotherm® 200 can be screwed, the material can be milled, ground and drilled and can be glued together.

Gluing:

Gluing of butt joints of boards, cuts and strips is simple, using 2-component polyurethane adhesives for instance. Single or 2-component polyurethane adhesives are suitable for gluing of surfaces. For assistance please enquire about your specific application.

Storage and transport:

Die 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 31.12.2012. Please request the new version as from 01.07.2011.