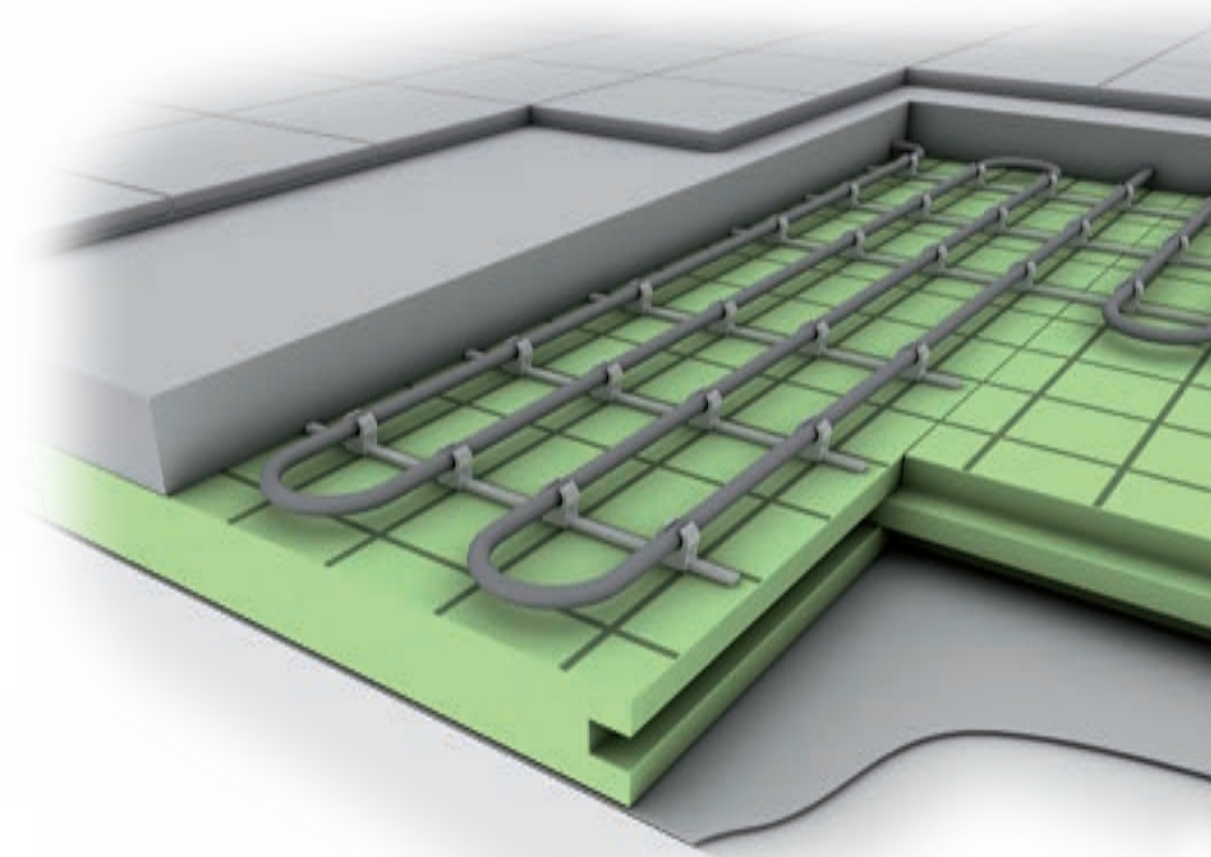


Styrodur® 2500 CNS— Insulation for Underfloor Heating Systems





Advantages

- Easy to cut and furnished with a pre-printed grid (10 x 10 cm) serving as a practical laying aid for floor heating systems
- Fast and economical laying with circumferential tongue and groove system
- Improved joint seal through secure tongue and groove connection (the installation of a protective foil will be unnecessary in most cases)
- Excellent thermal insulation properties, thermal conductivity λ_D 0.031-0.035 W/(m·K)
- High compressive strength (up to 300 kPa)
- Durable and resistant to decay
- Free of deformation and compressive strain
- Environmentally friendly due to the use of air as cell gas

Styrodur® 2500 CNS – The Thermal Insulation Board for Underfloor Heating Systems

Styrodur® 2500 CNS is a new insulation board specially designed for flooring applications and is made of BASF's green, extruded rigid polystyrene foam.

Fitted with a grid-shaped matrix (10 x 10 cm) on the surface of the board and a tongue and groove system, it provides various practical advantages during installation beneath floor heating systems in addition to an improved thermal insulation performance.

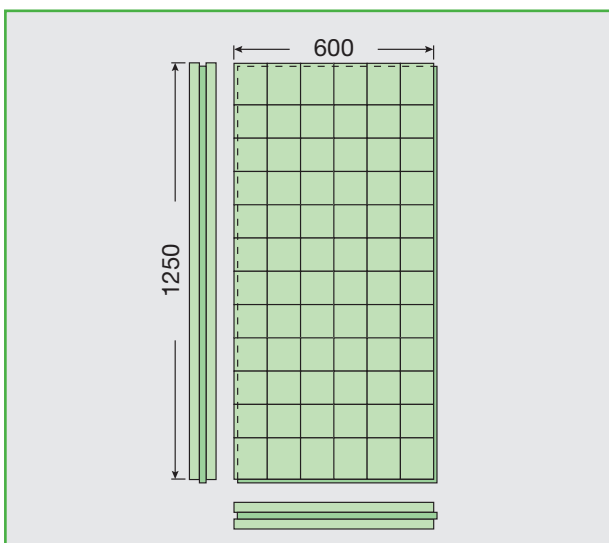


Fig. 1: Styrodur® 2500 CNS board with tongue and groove system and surface grid (10 x 10 cm).



A substantial contribution to environmental protection

As the largest chemical corporation in the world, BASF occupies a leading position in the research and development of environmentally sound insulation solutions. BASF was the first and still is the only company that has voluntarily committed itself to exclusively market XPS free of CFC, HCFC, and HFC. Styrodur C merely contains air as cell gas. Simply environmentally sound.

Areas of application

Styrodur 2500 CNS is applicable for use underneath any floor heating system as well as beneath different types of screed in single and multiple dwelling units, as well as new and refurbished buildings.



Installation instructions

- Install boundary insulation strips around the perimeter (3 mm for screed, 5 mm for floor heating)
- Styrodur® 2500 CNS with tongue and groove system is laid in a single layer on a load-bearing base
- Please contact the manufacturer of the floor heating system for suitable fasteners

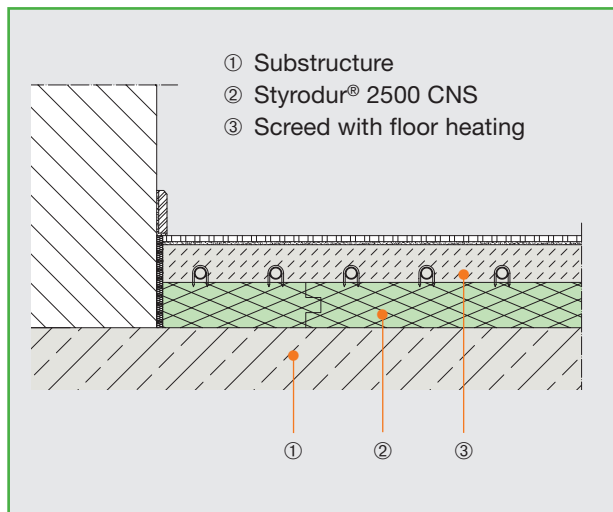


Fig. 2: Floor structure with Styrodur® 2500 CNS and floor heating.

Styrodur® 2500 CNS in combination with a levelling layer

In cases of uneven floors, existing pipes and other installations, a levelling layer can be installed in combination with Styrodur 2500 CNS. This combination improves the thermal insulation properties of the floor construction.

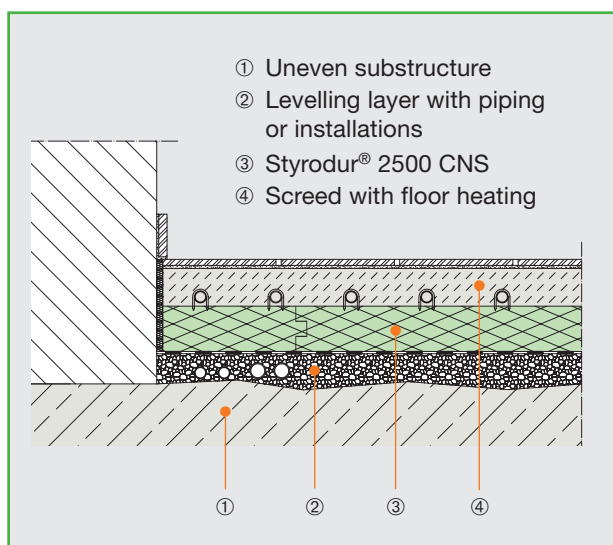


Fig. 3: Floor structure with Styrodur 2500 CNS and a levelling layer.

Technical data Styrodur 2500 CNS

Property	Unit ¹⁾	Code according to DIN EN 13164	2500 C	Standard
Edge profile				
Surface			skin	
Length x width (effective size) External dimensions ²⁾ mm			1250 x 600 1260 x 610 ²⁾	
Density	kg/m ³		33	DIN EN 1602
Thermal conductivity	λ_D [W/(m·K)]		λ_D	DIN EN 13164
Thermal resistance	R_D [m ² ·K/W]		R_D	
Thickness				
	30 mm	-	0.031	1.00
	40 mm	-	0.032	1.25
	50 mm	-	0.033	1.55
	60 mm	-	0.034	1.80
	70 mm	-	0.034	2.05
	80 mm	-	0.035	2.35
Compressive stress or compressive strength at 10% deformation (kPa)				
	30 mm	CS(10\Y)	150	DIN EN 826
	> 30 mm		200	
Compressive creep over 50 years at < 2% deformation (kPa)				
	30 mm	CC(2/1.5/50)	60	DIN EN 1606
	> 30 mm		80	
Compressive modulus of elasticity (kPa)		CM	10,000	DIN EN 826
Dimensional stability: 70°C; 90% r.h. %		DS(TH)	≤ 5%	DIN EN 1604
Deformation behavior: load 40 kPa; 70°C %		DLT(2)5	≤ 5%	DIN EN 1605
Linear coefficient of thermal expansion				
Longitudinal mm/(m·K)		-	0.08	DIN 53752
Transverse		-	0.06	
Reaction to fire ³⁾ Euro Class		-	E	DIN EN 13501-1
Water absorption at long-term immersion % v/v		WL(T)0.7	0.2	DIN EN 12087
Water absorption in diffusion test % v/v		WD(V)3	≤ 3	DIN EN 12088
Water vapor diffusion resistance		MU	150-100	DIN EN 12086
Water absorption after freeze-thaw cycle % v/v		FT2	≤ 1	DIN EN 12091
Maximum application temperature °C		-	75	DIN EN 14706

¹⁾ N/mm² = 1 MPa = 1000 kPa

²⁾ External dimensions from 50 mm thickness 1265 x 615 mm

³⁾ Building material class DIN 4102-B1

Information on Styrodur® C

■ Product brochure: Europe's green insulation

■ Applications

Basement insulation
Load Bearing and Floor Insulation
Wall insulation
Roof insulation
Ceiling Insulation

■ Special themes

Reconstruction and Refurbishment
Thermal insulations of biogas plants

Insulation for under floor heating systems

■ Technical data

Recommendations for application and technical data
Technical data and Assistance data for dimensioning

■ Chemical resistance

■ Styrodur® C-movie: Europe's green insulation

■ Website: www.styrodur.com

Note

The information submitted in this publication is based on our current knowledge and experience at the time of going to press. It does not imply any legally binding assurance. Attention must be paid to the demands of specific applications, especially the physical and technological aspects of construction and building regulations.

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