

# Hoesch Thermodach

## Technical information



A company of  
ThyssenKrupp  
Steel

**ThyssenKrupp Bausysteme**



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# ThyssenKrupp Bausysteme: Hoesch Thermodach

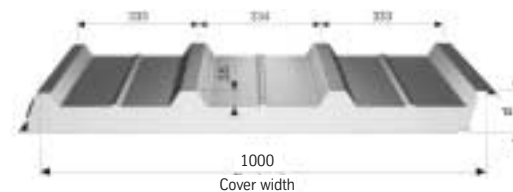
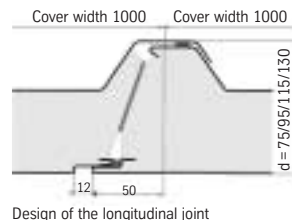
## General, technical data and corrosion protection

### 1. GENERAL

With their Hoesch Thermodach product, ThyssenKrupp Bausysteme offer building owners a sandwich element, which has been successfully used for decades and which convincingly combines the requirements for tightness and thermal insulation with functional reliability and low cost.

According to the provisions of the official approval, Hoesch Thermodach is subject to a constant in-house production control and to external supervision. The marking of these building elements meets the conditions imposed by approval no. Z-10.4-345 and ensures the user of consistent quality and excellent material properties. Furthermore, the quality criteria of RAL-GZ 617 are complied with.

### 2. TECHNICAL DATA



Designation of building element	Element thickness d	Material thickness		Max. length supplied	Weight	Thermal resistance R*	Heat transfer coefficient U*	Thermal resistance R <sub>D</sub> **	Heat transfer coefficient U**
		Outer sheet <sup>1)</sup> t <sub>N</sub>	Inner sheet <sup>1)</sup> t <sub>N</sub>						
	mm	mm	mm	m	kg/m <sup>2</sup>	m <sup>2</sup> K/W	W/m <sup>2</sup> K	m <sup>2</sup> K/W	W/m <sup>2</sup> K
Hoesch Thermodach	75	0.50	0.40	24	9.9	1.89	0.49	1.85	0.56
	95				10.7	2.78	0.34	2.75	0.38
	115				11.5	3.66	0.26	3.65	0.29
	130				12.1	4.32	0.22	4.30	0.24

<sup>1)</sup> Other material thicknesses for steel cover sheets on request. Officially approved, certificate no. Z-10.4.-345.  
\* Calculating acc. to EN ISO 6946 \*\* Calculating acc. to EN 13 165 taking account of the joints acc. to prEN 14 509.

### 3. CORROSION PROTECTION

Low-cost corrosion protection of the outer sheet is obtained without additional coil coating by using **GALVALUME®** (AZ 185). With a coating weight of 185 g/m<sup>2</sup>, **corrosion class III** to DIN 55982-8 is achieved.

If coloured roofing is required, outer sheets with a metallic deposit can be provided with an additional plastic coat applied in the coil coating process. The high-grade metallic layer on the inner surface consists of:

#### **GALFAN®**

95% zinc plus 5% aluminium layer weight 255 gr/m<sup>2</sup>

Galfan provides better corrosion protection than conventional hot-dip galvanising. For coloured cover sheets, the following coating systems are available.

Code designation	Coating systems	Nominal layer thickness (mm)	Corrosion protection class DIN 55928-8
<b>PLADUR® SP</b>	SP Polyester	25	III
<b>PLADUR® DU</b>	DU Polyester	15	II

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## Thermal insulation / insulating core, design information

### 4. THERMAL INSULATION / INSULATING CORE

The insulating core made from closed-cell polyurethane rigid foam **free from HCFC**, with its excellent thermal insulation, connects the cover sheets made from coil coated steel sheet in a

shear resistant manner. The high shear resistance is essential for the good load-bearing capacity of the elements.

### 5. FIRE PROTECTION

The building materials have been awarded class B1 (hardly inflammable), in accordance with DIN 4102-1, which is the best possible level for this material combination according to German standards. The elements are resistant to flying sparks and radiated heat as per DIN 4102

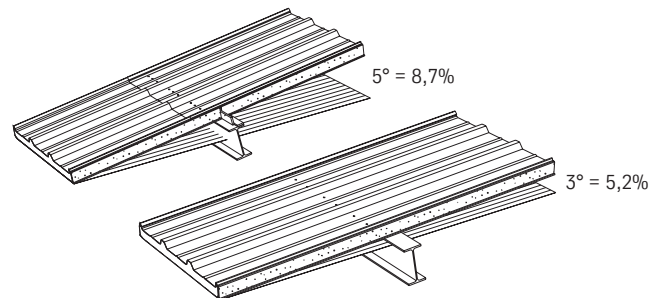
(test certificate issued by the MPA NRW no. 230094181) and comply with the requirements for "hard roofing" (Premium Guidelines of the Association of Property Insurers). Sandwich panels with a PUR core layer demonstrably do not contribute to the spread of fire.

### 6. DESIGN INFORMATION

#### Roof slope

It is recommended that the following minimum roof slopes are observed:

- roofs without a cross joint and without roof apertures  $3^\circ = 5.2\%$
- roofs with a cross joint or with roof apertures  $5^\circ = 8.7\%$

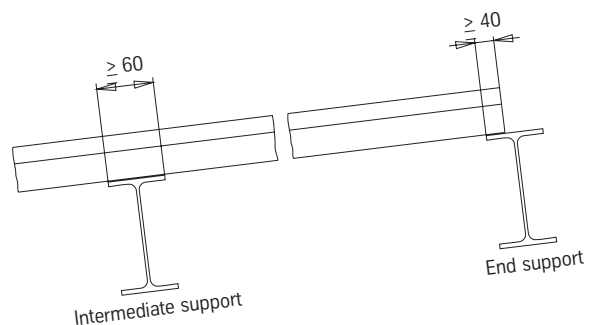


#### Supporting widths

Based on the official approval, the following applies:

- Intermediate support:  $\geq 60$  mm
- End support:  $\geq 40$  mm
- Cross joint:  $\geq 85$  mm

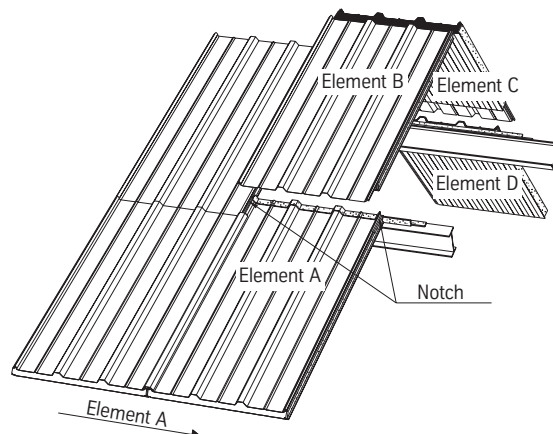
The information in the structural analysis and in the detailed drawing is determining.



#### Element cross joint

In the case of roof lengths (ridge/eaves)  $> 20$  m, cross joints are necessary. When ordering, please take into account that there are:

- elements on the eaves side, i.e. element A or D
  - elements on the ridge side, i.e. elements B or C
- The elements on the ridge side may be ordered with a foam-free zone.



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