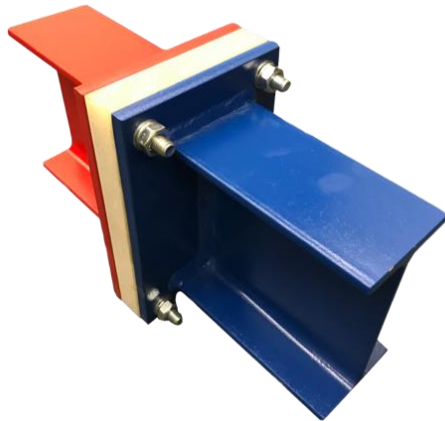


**PLAKA – THERMO BREAK TB RFs**

Thermal break material

REF 07.08.03 - Version V02 – 19/07/2023

**Description**

THERMO BREAK TB RFs is a high-performance thermal pad, used for the thermal decoupling of a steel structure.

THERMO BREAK RFs is used between both horizontal and vertical connections of internal and external elements to prevent thermal losses and thermal/cold bridging.

This thermal break material is characterized by a high permissible compression strength. THERMO BREAK RF is characterized by a high allowable compressive load and has also been designed to maintain its structural performance in the event of a fire.

THERMO BREAK RF responds with its intrinsic properties to requirements related to fire as well as those of heat loss and energy performance in buildings.

**Application fields**

THERMO BREAK RFs can be used in a wide variety of applications where there is a structural requirement for thermal insulation:

- Steel to steel
- Steel to concrete/masonry
- Steel to timber
- Concrete to concrete

THERMO BREAK RF are used in new build and renovation projects in the following building elements:

- Structural frames
- Façade system connections to primary frames
- Balconies
- External staircases
- Isolation of sub-structure and basement elements
- Connection of external to internal primary building elements
- Man-Safe systems
- Connections to existing structures
- Roof plant enclosures - columns
- Roof parapets

©Copyright protected

This sheet, written with great care, supersedes all previous versions. The technical information on the design, models, illustrations, design values and specifications are believed to be accurate. We make no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with non suitable use of this product. We reserve the right to modify the contents of this form without prior notice.

**PLAKA – THERMO BREAK TB RFs**

Thermal break material

REF 07.08.03 - Version V02 – 19/07/2023



**Properties**

The material combines the properties of a high ultimate load and high thermal insulation. It is composed of inorganic materials and a high-temperature polymer.

The composite material is non-flammable and is designed for use over a very wide temperature range. It has an excellent insulating effect and very high compressive strength. Compared with cement fibre materials, it can withstand higher mechanical loads and variable loads.

TB RFs must be firmly clamped, and the entire surface loaded.

Material properties		
	Utilisation temperature 20°C	Utilisation temperature 200°C
Characteristic compressive strength, $f_{ck}$ EN ISO 604	400 N/mm <sup>2</sup>	250 N/mm <sup>2</sup>
Design compressive strength, $f_{cd}$ ( $\gamma_M = 1,25$ )	320 N/mm <sup>2</sup>	200 N/mm <sup>2</sup>
Thermal conductivity $\lambda$ DIN 52 612	0,30 W/m.K	0,35 W/m.K
Flexural strength EN 63	200 N/mm <sup>2</sup>	50 N/mm <sup>2</sup>
Fire rating	A2,s1,d0	
Maximal service temperature	Long-term: 400°C ; Short-term: 600°C	
Specific weight	2,1 g/cm <sup>3</sup>	
Linear coefficient of thermal expansion Direction X and Y	10.10 <sup>-6</sup> K <sup>-1</sup>	
Direction Z DIN 53 752	170.10 <sup>-6</sup> K <sup>-1</sup>	
Flexural modulus of elasticity EN 63	40000 N/mm <sup>2</sup>	6000 N/mm <sup>2</sup>

**Dimensions**

Material dimensions	
Thickness	5, 10, 15, 20 & 25 mm*
Max. length	240 cm
Max. width	120 cm

\*Two plates maximum can be provided for applications where thicknesses greater than 25mm are required.