



Farrat TBF

A High-Performance A2 Fire-Rated Structural Thermal Break Material

Farrat TBF Structural Thermal Breaks

Farrat TBF is a Structural Thermal Break material designed to maintain structural integrity in the event of fire.

Farrat TBF is proven to have high compressive strength at a high temperature and low thermal conductivity, allowing designers to meet multiple building regulations relating to fire, heat loss and energy performance with the one structural thermal break product.

Farrat TBF has been independently fire tested and verified to the following industry standards:

-)] A2,s1,d0 Fire-rated classification to EN 13501-1.
-)] Maintains very high structural performance and compressive strength to 500°C under EN ISO 604.
-)] Compliant for use under Document B Building Regulations for buildings above 18m.

Structural Applications

Farrat Structural Thermal Breaks are used between horizontal and vertical connections of internal and external elements to prevent thermal or cold bridging.

Farrat TBF can be used in a wide variety of applications where there is a structural requirement for thermal insulation:

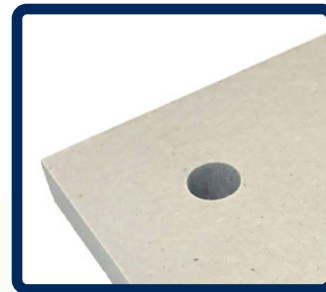
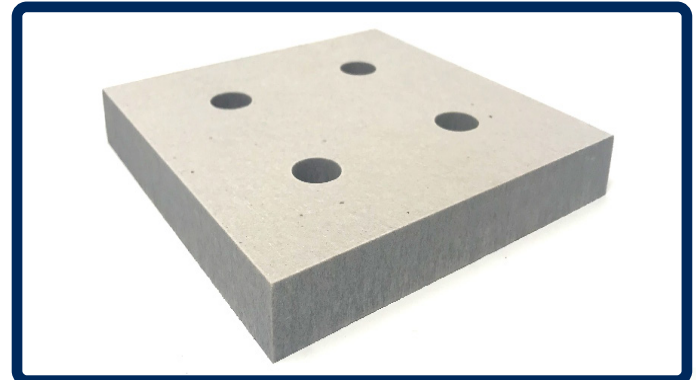
-)] Steel to Steel
-)] Steel to Concrete/Masonry
-)] Steel to Timber
-)] Concrete to Concrete

Common interface details include:

-)] Structural frames
-)] Facade system connections to primary frames
-)] Connection of external to internal primary building elements
-)] Balconies
-)] Staircases
-)] Isolation of sub-structure and basement elements
-)] Man-safe systems
-)] Connections to existing structures
-)] Roof plant enclosures - columns
-)] Roof parapets

Farrat TBF is capable of transferring load in moment and shear connections without creating significant rotation.

Farrat TBF Structural Thermal Breaks should therefore be used anywhere a penetration or transition exists in a building envelope to improve building performance.



Certifications & Accreditations:



Typical Connection Details:



Material Properties

Independent material testing was undertaken in Germany by an Institute with DAkks Certification.

PROPERTIES		FARRAT TBF @ 20°C	FARRAT TBF @ 550°C
Compressive Strength, f_{ck}^* (MPa) Characteristic	EN ISO 604	355	200
Compressive Strength, f_{cd}^{**} (MPa) Design	EN ISO 604	284	160
Elastic Modulus (MPa)	EN 826	5326	4200
Thermal Conductivity, k (W/mK)	EN 12667	0.2	
Fire Rating	EN 13501-1	A2,s1,d0***	
Density (Kg/m ³)	EN 1602	2160	
Colour		Grey	
Thicknesses Available (mm)		5, 10, 15, 20 & 25	
Thickness Tolerance (mm)		+/- 0.5 (TBF 5) +/- 0.7 (TBF 10) +/- 1.05 (TBF 15) +/- 1.4 (TBF 20) +/- 1.75 (TBF 25)	

* BS EN 1990 Equation (D.1)

** BS EN 1993-1-8 (YM2 = 1.25) (UK NA)

*** Farrat TBF Classification of reaction to fire performance in accordance with EN13501-1:2018, Warrington Fire test report No. WF424837: A2,s1,d0 for all thicknesses up to 25mm.

Procurement & Manufacturing

The following information is required for quotation:

- Material Type - i.e. Farrat TBF
- Plate Dimensions
- Plate Thickness
- Number and size of Holes
- Quantity
- Delivery Postcode

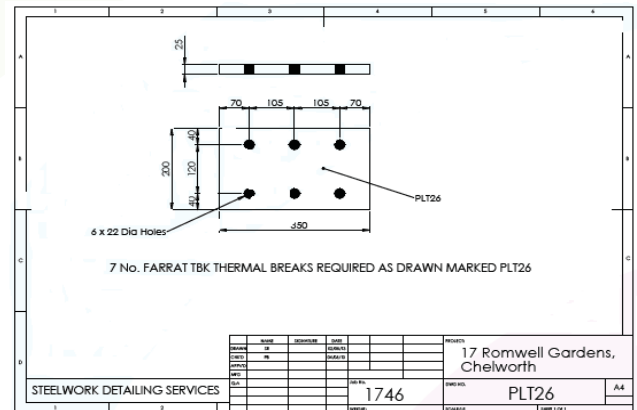
Farrat TBF Structural Thermal Breaks are bespoke products, so early procurement is recommended.

- We aim to start manufacturing **within 3 working days** from an order being placed.
- A fully dimensioned drawing is required for each type of plate with a unique project ref, prior to fabrication.
- Prior to delivery all Farrat thermal breaks are labelled with the fabricator's drawing ref.
- Fabrication is undertaken in accordance with our UKAS ISO 9001 and UKAS ISO14001 accreditations.

Farrat Consultancy Services

We provide an engineering led consultancy service for a broad range of clients across the construction sector.

At Farrat we have some of the leading experts in the niche areas of structural thermal breaks, energy efficiency, and fire safe building design. As a result we are able to offer specialist consultancy services to ensure that architects, engineers and specifiers can prevent thermal bridges, and develop structures that are efficient, fire safe, and profitable. Contact our sales team for more information on our consultancy services.



Request a Consultancy or Quotation: sales@farrat.com

Call our Technical Team: 0161 924 1600

All information in this datasheet is for guidance only based on current knowledge and may be subject to change and correction.