



## Farrat TBF

A high-performance Structural Thermal Break with fire resistant properties.

### 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 will not ignite, burn, support combustion, or release flammable vapours when subject to fire or heat in a structural application.

Farrat TBF is proven to have high compressive strength 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 tested and verified to the following industry standards:

- › Non-combustible calorific rating to EN 1716.
- › Maintains very high structural performance and compressive strength to 500° 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:

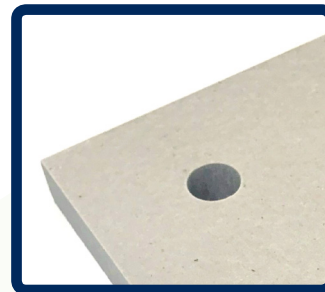
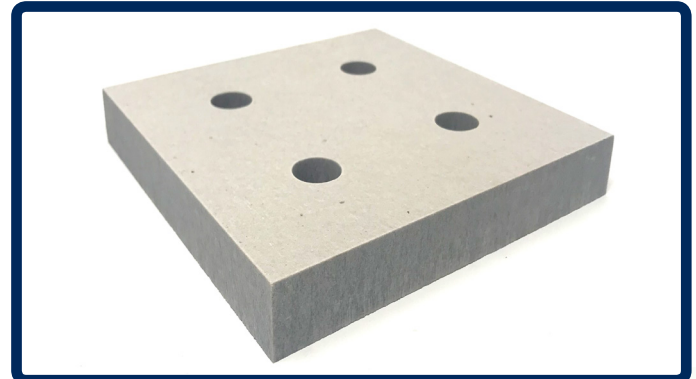
- › Steel to Steel
- › Steel to Concrete/Masonry
- › Steel to Timber
- › Concrete to Concrete

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.

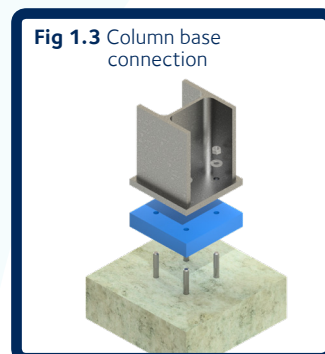
Farrat TBF Structural Thermal Breaks should therefore be used anywhere a penetration or transition exists in a building envelope to improve building performance.



#### 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 @ 500°C
Compression Strength, $f_{ck}$ (MPa)	[EN ISO 604]	460	200
Elastic Modulus (MPa)	[EN ISO 604]	6800	4200
Thermal Conductivity, $k$ (W/mK)	[DIN 52 612]	0.3	
Density (Kg/m <sup>3</sup> )		2100	
Colour		Grey	
Thicknesses Available (mm)		5, 10 & 25	
Thickness Tolerance (mm)		+/-0.5	

## Compressive Strength and Modulus at Temperature

Results in accordance with EN ISO 604.

FARRAT TBF @ AMBIENT	FARRAT TBF @ 200°C	FARRAT TBF @ 300°C	FARRAT TBF @ 400°C	FARRAT TBF @ 500°C
<b>Compressive strength [Mpa]</b>				
463	312	308	289	212
<b>E-Modulus [N/mm<sup>2</sup>]</b>				
6841	4914	4343	4365	4235

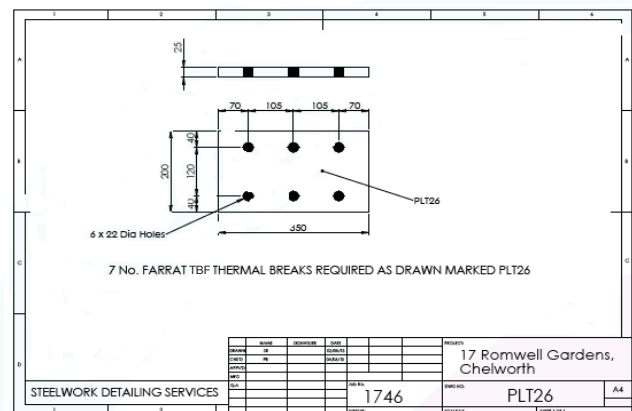
## Procurement & Manufacturing

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.



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