



www.armatherm.co.uk

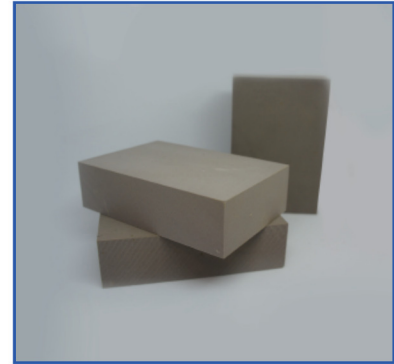
# Armatherm™ 500

Structural Thermal Break Material

## Introduction

Reducing heat flow within a building's thermal envelope reduces energy consumption as well as potential condensation issues. Armatherm™ 500 thermal break material significantly reduces energy lost from thermal bridging in building envelope connections.

Armatherm™ 500 is a high strength, polyurethane material made in several densities to support a wide range of loading conditions. Due to its closed cell structure, it does not absorb water or moisture and has limited creep under continuous load.



Armatherm™ 500

Specifications of Armatherm™ 500	160	250	320	490
Compressive Strength (N/mm <sup>2</sup> )	2.0	4.3	6.8	18.5
Compressive Modulus (N/mm <sup>2</sup> )	65	137	225	495
Thermal Conductivity (W/mK)	0.031	0.042	0.054	0.078
R value per 25mm	4.60	3.40	2.80	2.00
Min. Operating Temperature °C	-185	-185	-185	-185
Max. Operating Temperature °C	80	80	80	80

Armatherm™ 500 is manufactured in sheets 2000mm x 1000mm x 5mm, 10mm, 12mm, 15mm, 20mm, 25mm, 50mm thick and can be bonded to create 150mm, 200mm and 250mm thicknesses to achieve a specific R value. It can be used anywhere a penetration or transition exists in the building envelope creating a thermal bridge.

- Parapets
- Slab/floor edge
- Column base
- Roof penetrations
- Custom windowsills
- Roof edge
- Slab to foundation
- Foundation to wall
- Concrete balconies
- Custom moulding for over-insulating



Column Base Thermal Break

Call **+44 (0) 1274 591115** For all enquiries

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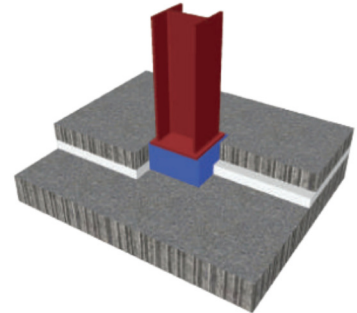
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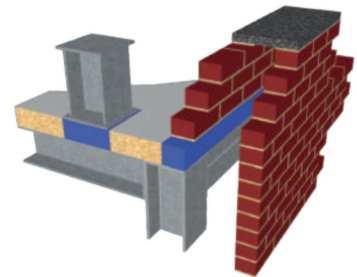
## Column Base

Columns traditionally extend through the building envelope and slab insulation at their base. Thermal bridging can be prevented by using Armatherm™ 500 series material as a load supporting, thermal break directly under the column base. This is particularly important in cold storage facilities to prevent the sub grade from freezing.



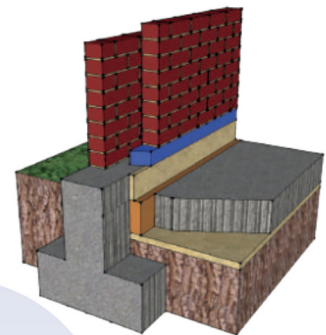
## Parapet/Roof Penetration

Roof to wall and parapet locations require structural framing for support which prevents continuous insulation from roof to façade. This creates a thermal bridge which can be prevented by providing a Armatherm™ 500 series structural thermal break under the parapet connecting the façade and roof insulation and improving the effective R value by as much as 30%. A thermal break can also be installed within the envelope at roof penetration points where structural elements are supported. This provides continuous insulation and prevents potential condensation issues.



## Slab/Foundation/Wall

Foundations are a part of a building's envelope. The connection from slab on grade to foundation wall and wall above foundation wall are both areas where thermal bridging occurs. Armatherm™ 500 series material can support and transfer loads up to 17.2 N/mm<sup>2</sup> while providing minimal energy loss. When used with rebar, the heat loss at these concrete connections is reduced significantly.



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