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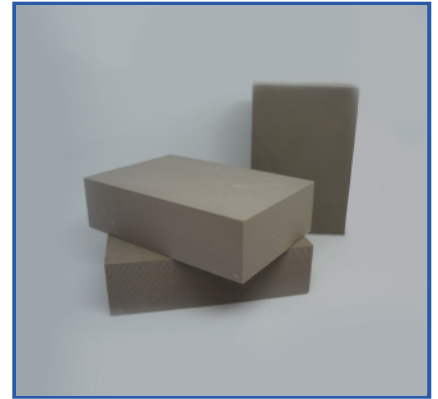
Armatherm™ 500

Thermal Break Material For Structural Connections

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	500-080	500-150	500-200	500-280
Compressive Stress (psi)	210	560	1100	2150
Compressive Modulus (psi)	6155	18,130	29,000	49,300
Thermal Conductivity (BTU in/hr ft² F)	0.26	0.32	0.39	0.53
R value per inch	3.85	3.1	2.6	1.9
Operating Temperature	-300F/+175F	-300F/+175F	-300F/+175F	-300F/+175F

Armatherm™ 500 is manufactured in sheets 8' x 4 and can be bonded together to satisfy U value and thickness specification requirements. The standard thicknesses are 2", 1" and 1/2". Armatherm™ 500 can be used anywhere a penetration or transition exists in the building envelope creating a thermal bridge. Solutions using Armatherm™ to minimize heatloss include:

- 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



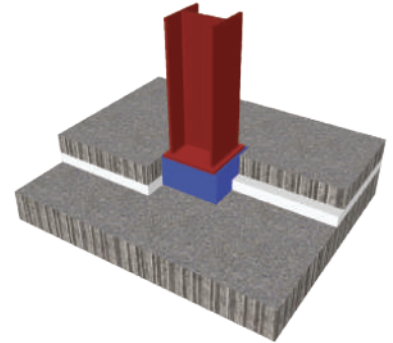
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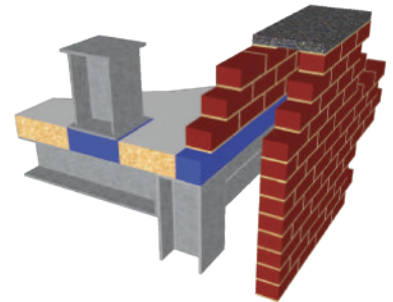
Column Base

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.



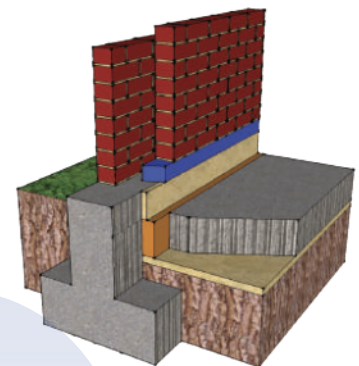
Parapet/Roof Penetration

Roof to wall and parapet locations require structural framing for support which prevents continuous insulation from roof to facade. This creates a thermal bridge which can be prevented by providing an Armatherm™ 500 series structural thermal break under the parapet connecting the facade 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 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 2,500 psi while providing minimal energy loss.



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