

ARMATHERM™ 500 SERIES

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.



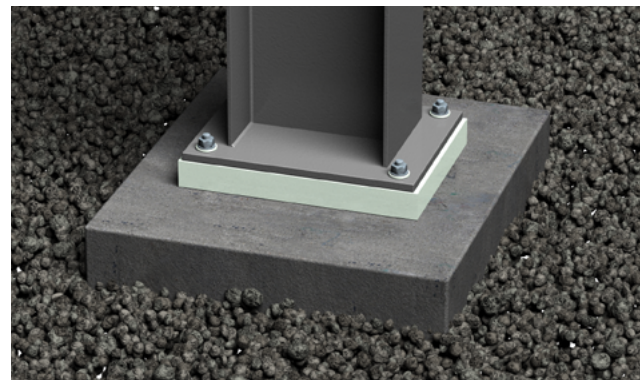
Armatherm™
500 Series

SPECIFICATIONS OF ARMATHERM™ 500 SERIES

Specifications of Armatherm™ 500 Series	500 - 080	500 - 150	500 - 200	500 - 280
Compressive Stress (psi)	210	560	1100	2150
Compressive Modulus (psi)	6,155	18,130	29,000	49,300
Shear strength (psi)	145	167	257	310
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	-300°F / +175 °F	-300°F / +175 °F	-300°F / +175 °F	-300°F / +175 °F

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



ARMATHERM™ 500 SERIES

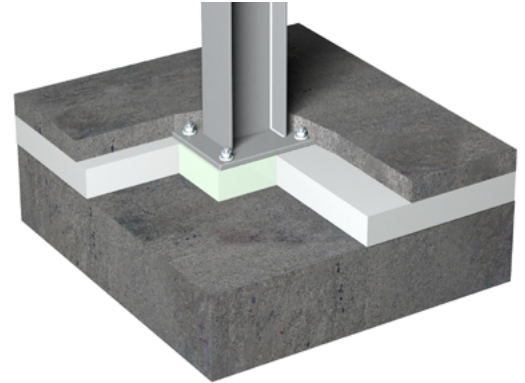
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COLUMN BASE

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 2,150 psi while providing minimal energy loss.

