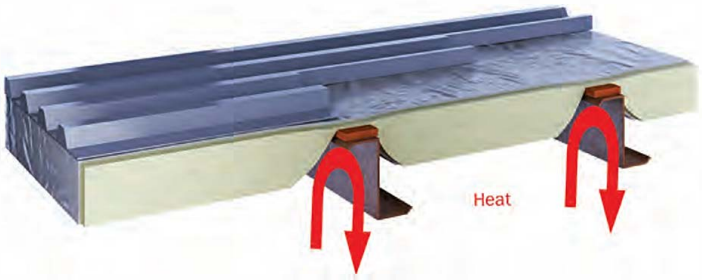
COMPACFOAM

Prevents thermal bridging in building envelope connections

Compacfoam® thermal break material reduces heat loss at wall and roof purlins, fenestration frame attachments and curtain wall transition connections. It can also be used at sill plates and column bases.

Features and Benefits

- LBC Red List Free
- Thermal resistance of R-2.2-3.7 per inch
- Supports up to 1,400 psi
- Mildew, mold, rot resistant



With Thermal Break Compactfoam

Without Thermal Break Compactfoam

The purpose of a thermal break is to reduce the impact of thermal bridging by preventing conductive heat flow through the building thermal envelope. Thermal breaks also help to keep surface temperatures within the thermal envelope above the dew point. This eliminates potential condensation risk.

Compacfoam® conducts heat up to 5,000 times less than aluminum, 1,300 times less than steel and up to 20 times less than concrete. For any material, conduction is a function of thickness and temperature difference, so the thickness of a thermal break material should be carefully considered.

THERMAL™ BRIDGING SOLUTIONS

The Design Standard...

Compacfoam® is an EPS which combines strength and thermal resistance. It is manufactured in a range of load capacities for various load conditions within the building envelope. It can be used as a thermal break between steel purlins and roof or wall panels in metal building applications providing continuous insulation where thermal bridging normally occurs. It is also ideal for use in window sills or as a buck for metal framed window and door installations, reducing heat loss between the metal frames and steel stud or wood framing openings. Likewise, Compacfoam® thermal break material is an effective thermal break at curtain wall and storefront transitions.

Physical Properties

		CF100	CF ECO	CF150	CF200	CF300	CF400
Compressive Stress (psi)	ASTM C165						
@10% deflection		200	253	275	500	920	1400
@5% deflection		115	138	190	210	470	580
Compressive Modulus (psi)	ASTM D695	5,800	6,670	9,570	10,700	23,490	29,000
Thermal Conductivity (BTU/in/hr/ft^2/^{o}F)	ASTM C518	0.268	0.31	0.293	0.318	0.368	0.45
Thermal Resistance	ASTM C518	3.73	3.2	3.41	3.14	2.71	2.2

The thermal conductivity of a material is a function of its conductance and is an important value in determining the rate at which heat flows through that material. Heat flow is also dependent on area and temperature. To be effective, a thermal break has to have a much, much lower thermal conductivity than the material it is "breaking". Since the conductance of a material is a function of its thickness, both thickness and area are important in heat flow calculations for a thermal break.

Compacfoam® is available in thickness from 1/2" to 6" supplied in sheets or cut to size. In any connection design using a thermal break, the goal is to find the appropriate thickness/area combination that helps the wall or roof assembly meet the U value requirement based on climate zone and energy code.