

BIOCEL / ENVIROCEL

Attached Cushion Carpet Backing



Heating and Cooling

Heating and cooling commercial buildings is expensive. Products that contribute thermal resistance can help improve energy costs.

Products with BioCel* or EnviroCel* polyurethane cushioned backings demonstrate an R-value up to 65 percent greater than conventional carpet products.

R-Value Assessment

R-Value assessment — Test Method ASTM C 518

Thermal resistance is measured with a heat flow meter. The higher the R-value, the greater the insulating properties. Typical ratings as measured by an independent test lab include:

Carpet with conventional backing (Style A, 26 oz. face wt.)	0.51 R-Value
Carpet with BioCel* Attached Cushion Carpet Backing (Style A, 26 oz. face wt.)	0.84 R-Value

Thermal resistance can also be expressed as an R-per-inch value, or the R-value of a 1-inch thickness of material. By converting the above R-values to R-per-inch equivalents, the insulating ability of carpet products can be compared to that of other common building products:

Concrete	0.10 R-per-inch
Plywood	1.25 R-per-inch
Carpet with conventional backing (Style A, 26 oz. face wt.)	1.89 R-per-inch
Carpet with BioCel* Attached Cushion Carpet Backing (Style A, 26 oz. face wt.)	2.11 R-per-inch
Fiberglass Insulation	3.20 R-per-inch

Note: In general, testing has shown that R-value is influenced more by pile height and underlayment thickness than by fiber or yarn type. The presence of a cushioned backing serves to increase insulating properties.

Radiant Floor Heating

Radiant floor heating is a method of heating a space by using heated water circulated through tubes imbedded in the subfloor. According to the The Carpet and Rug Institute in *CRI 104, Standard for Installation of Commercial Textile Floorcovering Materials*, commercial carpet products installed over cushion are compatible with radiant floor heating systems.

Although carpet with BioCel* or EnviroCel* polyurethane carpet backings have a greater R-value than conventional broadloom installed without cushion, the Radiant Panel Association in a letter has commented: "The R-value of [carpet products with] these backings are well within...the acceptable limits for most radiant heating systems."

Note: Subflooring with radiant floor heating requires the same preparation, techniques, and adhesive application as conventional subflooring. However, heat must be lowered before installation to prevent adhesive from setting too quickly.



For additional information:
In the U.S. and Canada
Contact Universal Textile Technologies (UTT)
204 W Industrial Blvd, Dalton, GA 30720
706.277.3778 Fax: 706.277.1837

www.universal-textile.net
info@universal-textile.net

NOTICE: No freedom from any patent owned by UTT, Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. UTT and Dow assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN: ALL IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE ARE EXPRESSLY EXCLUDED.

Published February 2008



UNIVERSAL
TEXTILE TECHNOLOGIES