



DURABLE & PROTECTIVE
WALLCOVERING
YOU CAN CUSTOMIZE

WATER VAPOR TRANSMISSION [BREATHABILITY]

BACKGROUND

The building material industry manages moisture barrier properties in architectural components to ensure the correct moisture levels in the internal spaces of buildings. Of concern are materials that are considered vapor barriers that fall under class I and II of vapor control layers.

What is water vapor?

Water vapor or aqueous vapor is the gas phase of water. Water vapor is invisible, and lighter than air.

What is water vapor transmission?

WVT is a measure of how much water vapor will pass through material per unit area per unit time.

ISSUES

The predominant issue with buildings is migration of water vapor through the building envelope. Water vapor typically migrates from hot & humid to cold & dry areas. In warm climates, water vapor will move from the outside of the building to the air conditioned inside. In cold climates, it will reverse the process. If water vapor then hits a vapor barrier (e.g. vinyl wall covering) on the interior of the walls facing the exterior, moisture collects on that barrier and when warm temperatures and organic matter are present, mold & mildew has a chance to grow.

SOLUTIONS

Materials that are water vapor permeable should be used and, if possible, use of materials that are inorganic provide the best results. Usually, a coat of latex paint as an interior wall finish solves the problem, but when higher wall performance is required as in healthcare environments or if a wall covering look is desired, then the solution is;

Vitrulan Glass Textile Wall Systems: Woven Glass Textiles are highly water vapor permeable even when coated with latex paint. Vitrulan Glass Textiles including the Hi Tech Magnet wall covering maintains a permeability rating (breathability) that will not affect other coating materials. Vitrulan's Hi-performance VRP® Wall System, while having a reduced perm rating, is still considered permeable (breathable) and falls under Class III of vapor control layer.

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TECHNICAL DATA

WVT (Water Vapor Transfer) Performance Ratings of Vitrulan Glass Textile Products

Per ASTM: E-96 TESTING		
Product	Coating	Permeability (Breathability)
Vitrulan Glass Textiles	No coating	96.3 perms / base of 100 = 96% breathable
Vitrulan Glass Textiles	Latex paint	65.1 perms / base of 100 = 65.1% breathable
Vitrulan Glass Textiles	Epoxy paint	22.6 perms / base of 100 = 22.6% breathable
Vitrulan Glass Textiles VRP® Wall System (Epoxy, Poly)	VRP® System	2.4 perms / base of 100 = 2.4% breathable

CINCH Hi-Tech Magnet Product

Product	Coating	Permeability (Breathability)
Vitrulan M-22 Smooth	No coating	11.6 perms
Vitrulan M-22 Smooth	Latex paint	4.3 perms / (tested incl. adhesive)
Vitrulan M-22 Smooth	Dry-Erase Paint	2.4 perms /base of 100 = 2.4% breathable

Note:
The above information is based on our current knowledge about the product referenced and has been published to the best of our knowledge. We point out to the user that possible risks can arise when the product is used for other than intended applications.