



ELIMINATES VAPOR DRIVE IN EVERY THERMAL-CONTROLLED FACILITY

**CONTROLS VAPOR • STOPS CONDENSATION • STOPS ICE
CREATES A CONTROLLED & FSMA COMPLIANT ENVIRONMENT**

VAPORARMOUR.COM



OUR MISSION

We are building envelope experts dedicated to eliminating vapor drive in every thermal-controlled facility.

WE ARE RECOGNIZED EXPERTS

The Cold Storage industry recognizes us as the leader in eliminating vapor drive. We have led continuing education classes for RETA, CEBA and the GCCA nationwide addressing vapor drive. The U.S. Federal Government recognizes us as experts and has granted us the only application patent for applying a vapor barrier. We have published white papers on the elimination of vapor drive in thermal-controlled environments.

WE UNDERSTAND SOLUTIONS

After listening, we offer our knowledge to:

- eliminate vapor drive caused by vapor barrier discontinuity •
- eliminate contamination from ice and condensation •
- eliminate unnecessary energy, maintenance and work force costs •
- comply with the FDA and OSHA regulations •
- comply with the new FSMA regulations that address food contamination and product recall•

WE ELIMINATE VAPOR DRIVE

We seal your building envelope to eliminate ice and condensation caused by vapor barrier discontinuity. Vapor Armour™ is the only patented permanent application to stop ice and condensation contamination in thermal-controlled facilities.

As the inventor and patent holder of Vapor Armour™, we are the only Company authorized to install it.

WE FIT IN EVERY THERMAL-CONTROLLED FACILITY

To fit your building's personality, we have made Vapor Armour™ compatible with any type of building material including all roof types (PVC (Polyvinyl Chloride) TPO (Thermoplastic Polyolefin), BUR (Built Up Roof), EPDM (rubber)) and any type of roof deck and wall material (Metal, IMP, Concrete and Wood).

WE PROVIDE THE SOLUTION

After a forensic evaluation determining the root cause of the vapor barrier discontinuity, we install a Vapor Armour™ system as a permanent solution, backed by our 15-year "No Ice. No Condensation. No Cost." warranty.



THE INDUSTRY'S ONLY PATENTED VAPOR BARRIER



15

YEAR GUARANTEE

NO ICE.
NO CONDENSATION.
NO COST.

Our 15 Year **No Ice. No Condensation. No Cost.** Warranty

The Vapor Armour™ system is warranted when installed as specified by Vapor Armour™ technicians. We warrant that the system is not defective at the time of installation and will not become defective within a 15 year period from completing the installation. Vapor Armour, Inc. warrants that there will be no condensation, moisture and/or ice buildup from vapor drive from the Vapor Armour™ installation site when the Vapor Armour™ system has been installed as per Vapor Armour™ specifications. AND if we install the roof and the roof insulation, we will provide a Building Envelope 20-year Systems Warranty, ensuring the building envelope (the roof, the insulation and the vapor barrier) will be free from leaks, contaminated insulation, ice and condensation for 20 years.

SEE FULL WARRANTY FOR ALL TERMS

20

YEAR BUILDING ENVELOPE
SYSTEMS WARRANTY

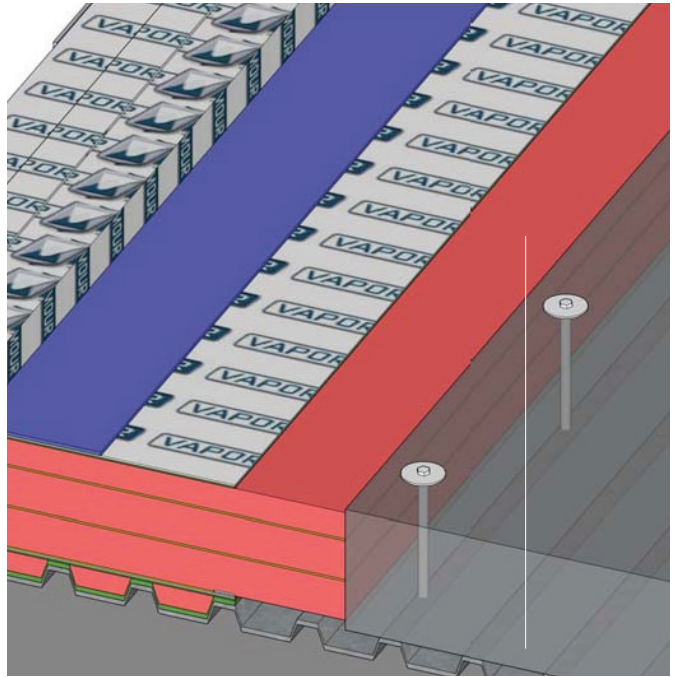
NO LEAKS, CONTAMINATED
INSULATION, ICE,
CONDENSATION
OR COST.

EXTERIOR COMPRESSION SEAL™

FROM  VAPOR ARMOUR

Exterior Compression Seal™ is the only building seal that:

- carries a warranty guaranteeing to eradicate vapor drive for 15 years
- decreases energy costs by 17-22% or more
- helps stop product contamination from inconsistent temperatures
- complies with FSMA
- complies with Insurance and Banking Audits
- removes unnecessary labor costs
- reduces defrost cycle and extends compressor's life-span

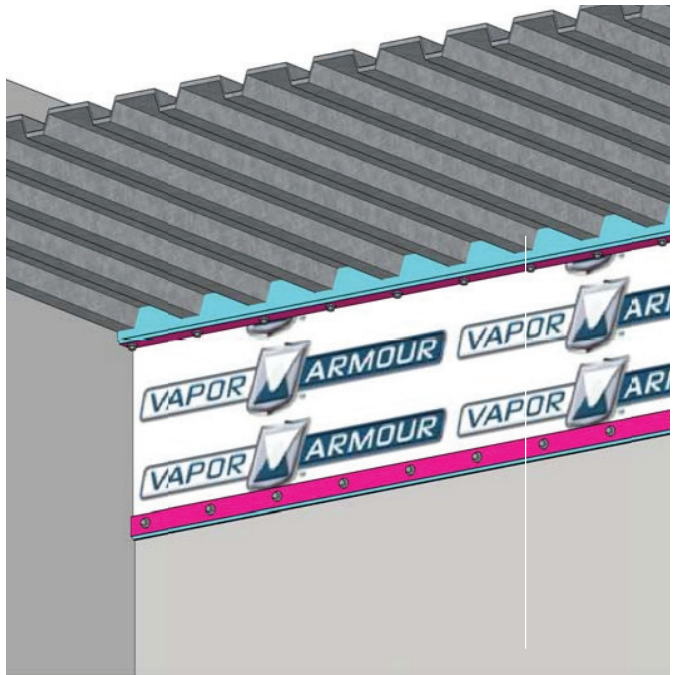


INTERIOR SEPARATION WALL SEAL™

FROM 

Interior Separation Wall Seal™ is the only building seal that:

- carries a warranty guaranteeing to eradicate vapor drive for 15 years
- decreases energy costs by 17-22% or more
- helps stop product contamination from inconsistent temperatures
- complies with FSMA
- complies with Insurance and Banking Audits
- removes unnecessary labor costs
- reduces defrost cycle and extends compressor's life-span



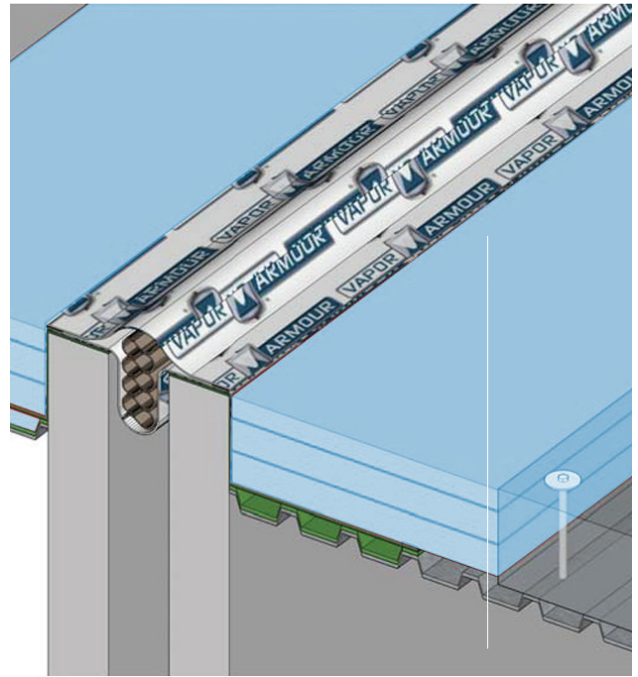
VAPOR SHIELD™

Expansion-Joint Seal

FROM 

Vapor Shield™ by Vapor Armour™ is the only Expansion Joint Seal that:

- will not disrupt business operations during installation
- is compatible with every roof system
- immediately eliminates air infiltration
- includes a 15-year 'No Ice. No Condensation. No Cost.' warranty
- has a retrofit thermal value of R-20, R-50 and R-80



VAPOR LOCK™

Vertical IMP Joint Retrofit Connection Seal

FROM 

Vapor Lock by Vapor Armour™ — the only vertical joint seal proven to permanently eliminate air infiltration from faulty IMP joints. Compatible with ANY IMP design. Also backed by our 15-year 'No Ice. No Condensation. No Cost.' warranty.



CUSTOMIZED APPLICATIONS™

FROM  VAPOR ARMOUR

Approximately 15 separate electrical conduits enter a 38° cooler

Over and above our common seals (Exterior Compression™, Interior Separation™, Pipe Lock™, Vapor Lock™) we are often tasked with one-off custom approaches. Again, Vapor Armour™ STOPS vapor drive, STOPS air. Here we are stopping air, in details that are not limited to the normal building envelope.



CUSTOMIZED APPLICATIONS™

FROM  VAPOR ARMOUR

Vertical Seal between a 38° cooler and -10° freezer

Over and above our common seals (Exterior Compression™, Interior Separation™, Pipe Lock™, Vapor Lock™) we are often tasked with one-off custom approaches. Again, Vapor Armour™ STOPS vapor drive, STOPS air. Here we are stopping air, in details that are not limited to the normal building envelope.





SPEC DATA SHEET

Product Name: Vapor Armour™ specially formulated vapor barrier membrane

Manufacturer: Vapor Armour Inc .14745 SE 82 Drive, Clackamas OR 97015

Product Description: BASIC USES: Vapor barriers in cold storage facilities to prevent air transfer

Composition & Materials: Vapor Armour™ membrane is a proprietary thermoplastic formulation consisting of resins, plasticizers, stabilizers, fungicides, flame-retardants laminated to a weft-inserted polyester fabric.

Polyester Denier: WEFT – 1,000 • WARP – 1,340

Breaking Grab Strength: 400 lbs.

Movement: 30% prior to breaking

Product Intent: prevention

- Vapor barriers to eliminate air infiltration through building envelope shared wall construction.
- Elimination of air infiltration preventing condensation and ice buildup in freezers and coolers.

Food Safety and Modernization Act: The Food Safety and Modernization ACT (FSMA) has determined condensation and ice in a food processing and/or food storage facility is a source of contamination. Most food-borne diseases are infections caused by a variety of bacteria, viruses and parasites which can be transferred through this food handling process.

Installation: Vapor Armour™ is only installed by trained Vapor Armour™ technicians. Installation is available throughout the North America.

Warranty: Vapor Armour™ vapor barrier guarantees there will be no condensation and/or ice buildup for Fifteen (15) Years.

Maintenance: There is no maintenance required. Product is installed to seal the building's envelope.

Technical Services: Vapor Armour™ provides consulting and design to increase the building envelope integrity.

Detailed installation provided by Vapor Armour™ installation technicians. Vapor Armour™ technical brochures and specifications are available on request.

Tests Outlined by ASTM D-4434

Test Description	Test Method	Metric Results	US Standard Results
Thickness Nominal	ASTM D 751	1.25 mm	50 mils - Type III
Breaking Strength	ASTM D 751 - Grab Method	2099 x 1628 N	472 x 366 lbf
Elongation at Break	ASTM D 751 - Grab Method	31%	
Heat Aging	ASTM 3045, 56 days @ 176° F	90% of Control: no cracking, chipping or crazing	
Tearing Strength	ASTM D 751 - Procedure B	304 x 409 N	68 x 92 lbf
Low Temperature Bend	ASTM D 2136	(-)40° F	
Linear Dimensional Change	ASTM D1204 - 6 hrs @ 176° F	-0.4%	
Water Absorption	ASTM D 570 - 166 hrs. @ 158° F	-0.7%	
Static Puncture	ASTM D 5602	25kg	56 lbs
Dynamic Puncture	ASTM D 5635	20 J	474 pdl-ft.

Additional Tests

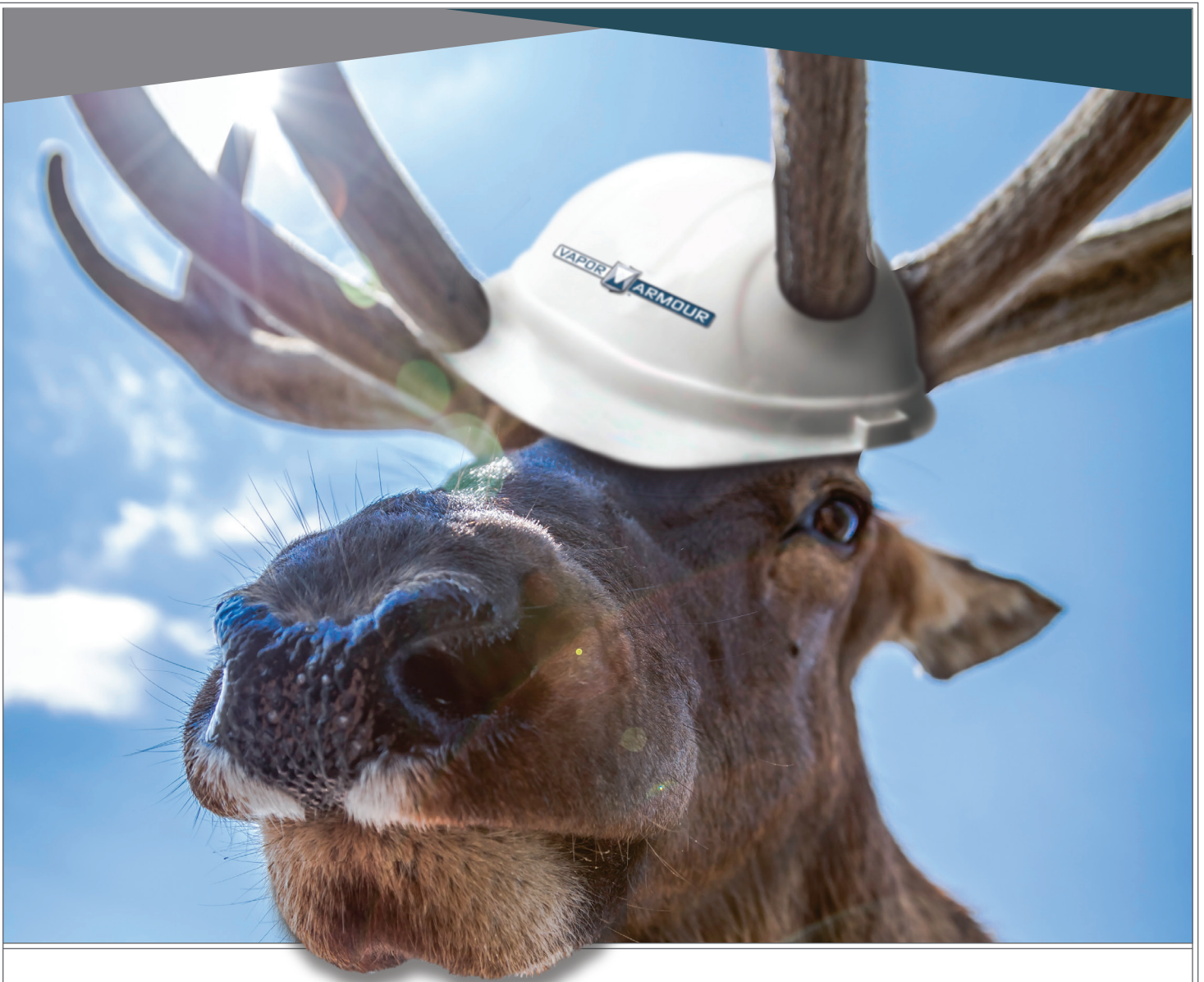
Test Description	Test Method	Metric Results	US Standard Results
Fungi Resistance	ASTM G-21	No sustained growth or discoloration	
Moisture Vapor Transmission	ASTM E-96, Proc. B, Method A	<.07 g/hr/m ²	< .22 U.S. Perms
Weight	ASTM D 751	1.4 kg per m ²	.29 lbs per sq. ft.



ELIMINATE VAPOR DRIVE

No Ice. No Condensation.

- ✓ No product contamination
- ✓ No ice buildup
- ✓ No condensation
- ✓ FSMA compliance
- ✓ OSHA risk reduction
- ✓ Lower energy, maintenance and work force costs
- ✓ Extend compressor life
- ✓ Smaller carbon footprint



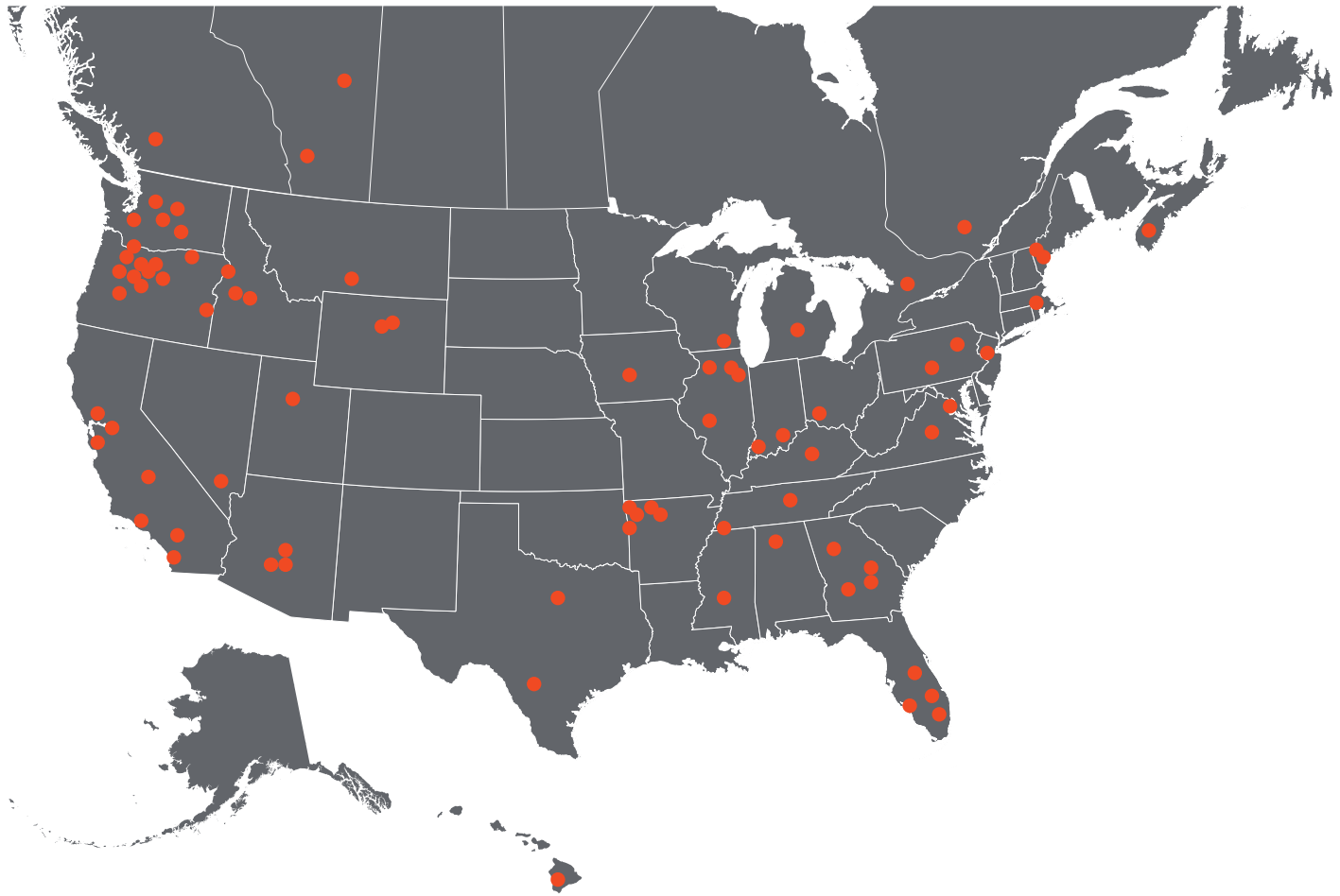
In 2019, Canada Welcomed Vapor Armour

Vapor Armour was hired to install our VA Exterior Compression Seal™ and Interior Separation Wall Seal™ in new construction in Toronto. We are also installing other patented seals in the Toronto area.

Additionally, we are installing in numerous facilities in Quebec, Nova Scotia and British Columbia. We feel extremely fortunate to service projects in Canada and look forward to further establishing our presence there.



THE INDUSTRY'S ONLY PATENTED VAPOR BARRIER



PROUDLY SERVING FACILITIES THROUGHOUT CANADA AND THE U.S.



ELIMINATES VAPOR DRIVE IN EVERY THERMAL-CONTROLLED FACILITY

Since its inception in 2000, Vapor Armour Inc. has become the industry leader in the engineering, manufacturing and installation of vapor barrier membrane. Vapor Armour, Inc. received its application patent (#7802403 B2) for Vapor Armour™ in September of 2010. Vapor Armour™, Vapor Lock™ and Vapor Shield™ are manufactured in the USA, designed specifically for each facility and made from specially formulated and patented vapor barrier membrane. Vapor Armour™, Vapor Lock™ and Vapor Shield™ are designed to eliminate vapor drive in all thermally-controlled facilities. Vapor Armour Inc. is headquartered in Clackamas, Oregon.

14745 SE 82ND DRIVE, CLACKAMAS, OR 97015 | 855.437.0446 | VAPORARMOUR.COM

