



TO ALL GENERAL CONTRACTORS, SPECIALTY THERMAL CONTRACTORS, ARCHITECTS AND END-USERS — WE ARE PROUD TO INTRODUCE

# VAPOR ARMOUR™ VAPOR SEALS FOR NEW CONSTRUCTION ON LOW-TEMP FACILITIES

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 for Vapor Armour™ in September of 2010. Vapor Armour™, Vapor Lock™, Vapor Pipe Lock™ and Vapor Shield™ are manufactured in the United States and are designed specifically for each condition to eliminate vapor drive in all thermally controlled facilities.

## INSTALLATION OPTIONS FOR NEW CONSTRUCTION

*Temperature-controlled facilities only*



### EXTERIOR COMPRESSION SEAL™

Seals perimeter IMP walls to Roof deck connection

**LABOR SAVINGS**

No foam-in-place installation required between IMP and Roof Deck

**COST SAVINGS**

2 feet of perimeter XPS insulation is included in installation, no foam-in-place insulation

**OPERATIONAL ENERGY SAVINGS**

17-21% energy reduction



### INTERIOR SEPARATION WALL SEAL

Demising wall seals

**LABOR SAVINGS**

Minimize IMP installation time

**COST SAVINGS**

Break metal on cold side only, no foam-in-place insulation, no penetration sealing

**OPERATIONAL ENERGY SAVINGS**

17-21% energy reduction

### EACH OF THE ABOVE NEW CONSTRUCTION INSTALLATIONS:

Eliminate ice and condensation from vapor drive for 15 years • Help stop product contamination from inconsistent temperatures  
Comply with FSMA • Comply with Insurance and Banking Audits • Remove unnecessary labor costs  
Reduce defrost cycle and extend compressor's lifespan

### PRICING

Budgeting can be discussed on a lineal foot basis. Reach out to the Vapor Armour Team for budgeting as well as lump sum project proposals.

### ROI

Based upon our actual case data, a Vapor Armour installation has a projected ROI payback of 3 to 5 ½ years.



# MATERIAL COMPOSITION & DATA

**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 <sup>2</sup>	< .22 U.S. Perms
Weight	ASTM D 751	1.4 kg per m <sup>2</sup>	.29 lbs per sq. ft.



## OUR 15 + 20 YEAR NO ICE. NO CONDENSATION. NO COST. WARRANTIES

Vapor Armour, Inc. warrants that there will be no condensation, moisture and/or ice buildup from vapor drive from the Vapor Armour™ installation site for 15 years 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.

DEDICATED TO ELIMINATING VAPOR DRIVE IN EVERY THERMAL-CONTROLLED FACILITY