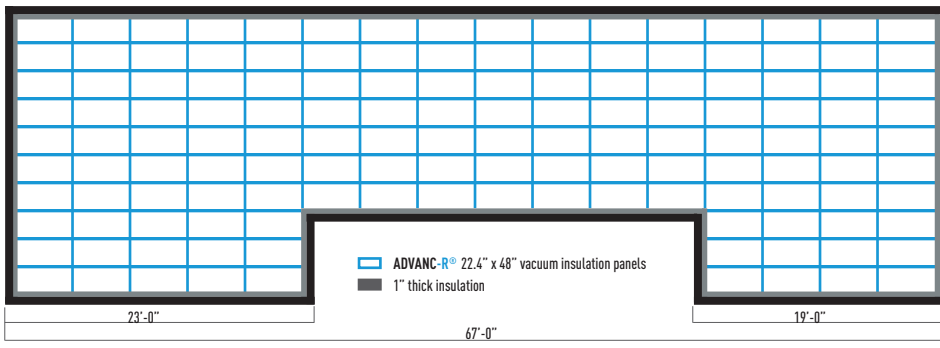


PRODUCT BROCHURE

ADVANC-R[®] TAKE-OFF

Scale: 0.0375" = 1'-0"



PRODUCT DESCRIPTION: Panasonic ADVANC-R[®] Vacuum Insulation Panel (VIP) is Ultra-Thermal Insulation with industry top class Center of Panel R-value of 66⁽¹⁾. ADVANC-R[®] VIP's R-value is as high as 16.8 times that of traditional insulation⁽²⁾. ADVANC-R[®] is your solution to meet increasing R-value requirements, while minimizing your roofing system's profile and maximizing building space. ADVANC-R[®] is thin, rigid, and non-structural. ADVANC-R[®] is Class A rated for flame and smoke

KEY FEATURES

- **INDUSTRY TOP CLASS CENTER OF PANEL R-VALUE 66⁽¹⁾**
Integrating 20+ years of Panasonic's cutting-edge VIP technologies to engineer the Ultra-Insulator for building applications
- **SOLUTION FOR RE-ROOFING WITH HEIGHT LIMITATIONS**
An innovative and cost effective re-roofing solution that significantly increases roofing system's R-value while minimizing the system's profile
- **INTERNAL SPACE MAXIMIZER FOR NEW CONSTRUCTION**
Using industry top class R-value ADVANC-R[®] users can maximize the building's internal space by significantly reducing the roof system's profile
- **INTERTEK ETL LISTED (CONTROL NUMBER: 5023792)**
ASTM C1484 ASTM C1667
ASTM E84 ASTM C1363
ASTM C165 ASTM D2126
- **MADE OF NON-TOXIC AND ENVIRONMENTALLY FRIENDLY MATERIALS**
Consists of 100% non-toxic materials. As much as 97% of VIP (by weight) can be recycled⁽²⁾
- **AVAILABLE SIZES:**

P/N	W x L x T (inch)	W x L x T (mm)
TZC3500E	22.4 x 24.0 x 0.94	570 x 610 x 24
TZC3490E	22.4 x 48.0 x 0.94	570 x 1220 x 24

PRODUCT SPECIFICATIONS

PART NUMBER	R-VALUE CENTER OF PANEL ⁽¹⁾	WIDTH		LENGTH		THICKNESS		WEIGHT		AREA		PANELS PER PALLET
	FT ² -F-H / BTU	IN	MM	IN	MM	IN	MM	LB	KG	FT ²	M ²	
TZC3500E	66	22.4	570	24.0	610	0.94	24	5.2	2.3	3.74	0.35	66
TZC3490E	66	22.4	570	48.0	1220	0.94	24	10.2	4.6	7.49	0.70	33

Disclaimer: ⁽¹⁾ Based on independent third-party testing at time of publication. ⁽²⁾ Actual Recycled amount may depend on recycler's capabilities. Please recycle in accordance with local environmental regulations. ⁽³⁾ Competitive insulation R values are based on publicly obtained information. ADVANC-R[®] is a registered trademark of Panasonic Corporation of North America. Copyright © 2021, Panasonic Corporation of North America. All Rights Reserved. Specifications are subject to change without notice.

ADVANC-R[®] VACUUM INSULATION PANEL

APPLICATIONS

- ADVANC-R[®] is your answer to achieving higher R-value requirements, especially in re-roofing situations, where there are space constraints preventing a thicker roof profile
 - Re-roofing of commercial buildings
 - New commercial building roofs
 - Residential building with limited slopes



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SPECIFICATIONS

- Architectural specification assistance available in MasterSpec

STANDARDS AND APPROVALS

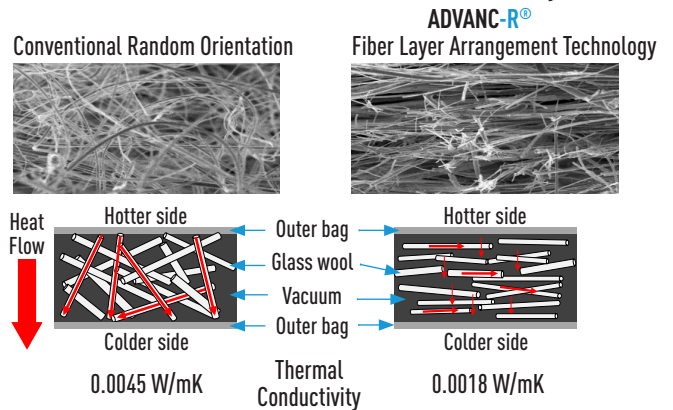
- Intertek ETL: Control Number (CN) 5023792
- ASTM C1484: Super-Insulation Standards
- Factory Mutual 4470: Single-Ply, polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Noncombustible Roof Deck Construction



PRODUCT COMPOSITION

- Panasonic's ADVANC-R[®] VIP is comprised of a highly porous glass wool structure, absorbents and adsorbents in a vacuum sealed aluminum laminated bag
- The vacuum drastically reduces the transfer of heat through VIP. Our patented Fiber Layer Arrangement Technology (FLAT) radically improves thermal performance by aligning the glass wool to significantly reduce thermal conductivity by 60% (vs. conventional random orientation)

Glass Wool Orientation Effect on Thermal Conductivity



- ADVANC-R[®] VIP is manufactured in facilities with:
 - OHSAS 18001: 2007 Occupational Health & Safety Management Systems
 - ISO 9001: 2015 Quality Management Systems
 - ISO 14001: 2015 Environmental Management Systems

CATEGORY	VALUE	TEST
Flame Spread Index ⁽¹⁾	Class A (25)	ASTM E84
Smoke Development Index ⁽¹⁾	Class A (10)	
Density ⁽¹⁾	13.9 lbs/ft ³	ASTM C1667
Compressive Strength @ 25% ⁽¹⁾	14.3 PSI	ASTM C165
Thermal and Humid Aging (after 2 weeks) ⁽¹⁾	7.43%	ASTM D2126
Service Temperature	-40°F to 140°F / -40°C to 60°C	

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ADVANC-R[®] VACUUM INSULATION PANEL

PRODUCT HANDLING

- The outer bag of ADVANC-R[®] must not be damaged or compromised such that it loses its vacuum
- Neither sizes can be changed or modified
- Read ADVANC-R[®] Handling & Installation guidelines for more details

PACKAGING

- Utilizing special packaging for easy access to ADVANC-R[®]. Outer sleeve can be lifted over VIP. Take inner sleeve apart from tape and remove the inner sleeve.

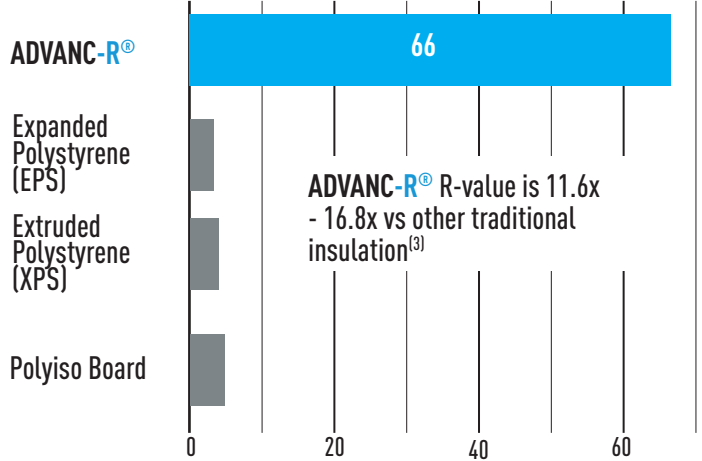
ROOF TAKE-OFF

- For information on optimizing ADVANC-R[®] layouts for commercial building roofs, please contact Panasonic Building Products Team: +1-201-392-4424 or building@us.panasonic.com

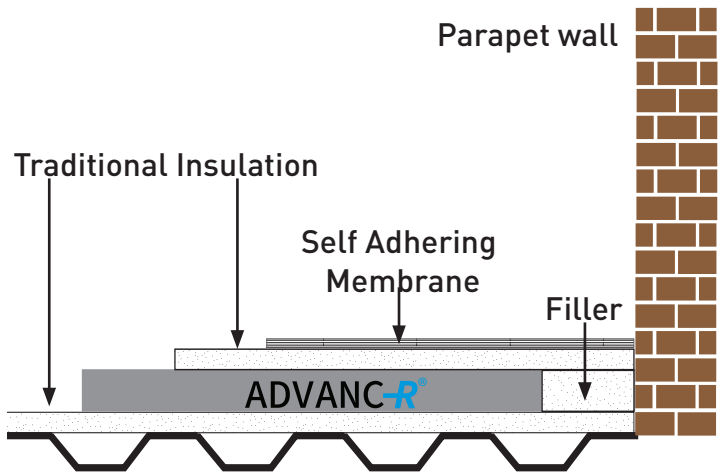
INSTALLATION

- Recommend inserting ADVANC-R[®] between protective layers
- In order to maximize R-value, we recommend staggering the seams of each layer of the roofing system
- Only use Roofing System Manufacturers approved adhesives to attach our ADVANC-R[®] to other layers of the roofing system. Do not use fasteners, screws, nails, staples, etc
- ADVANC-R[®] should be installed at least 8" away from parapet walls, mechanical roof penetrations, or any other obstructions on the roof
- Stepping on the VIP may compromise the outer bag
- Ensure no foreign or sharp objects (burrs, metal shavings, screws, nails, etc) touch the ADVANC-R[®]
- Read ADVANC-R[®] Handling & Installation guidelines for details

COMMERCIAL ROOFING INSULATION: R-Value



Cross Section of Metal Deck



Layer of ADVANC-R[®] on a rooftop



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