

SECTION 00300 – PROPOSAL

TO THE MAYOR AND COMMISSIONERS
CITY OF HOLLYWOOD, FLORIDA

SUBMITTED Atlas Apex Roofing, LLC

Dear Mayor and Commissioners:

The undersigned, as BIDDER, hereby declares that the only person or persons interested in the Proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a Bid or Proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The BIDDER further declares that he has examined the site of the Work and informed himself fully in regard to all conditions pertaining to the place where the Work is to be done; that he has examined the Drawings and Specifications for the Work and contractual documents relative thereto, including the Notice to Bidders, Instructions to Bidders, Proposal Bid Form, Form of Bid Bond, Form of Contract and Form of Performance Bond, General, Supplementary and Technical Specifications, Addenda, Drawings, and MBE/WBE Program, Exhibit A-D, and has read all of the Provisions furnished prior to the opening of bids; and that he has satisfied himself relative to the work to be performed.

The undersigned BIDDER has not divulged to, discussed or compared his bid with other bidders and has not colluded with any other BIDDER of parties to this bid whatever.

If this Proposal is accepted, the undersigned BIDDER proposes and agrees to enter into and execute the Contract with the City of Hollywood, Florida, in the form of Contract specified; of which this Proposal, Instructions to Bidders, General Specifications, Supplementary Conditions and Drawings shall be made a part for the performance of Work described therein; to furnish the necessary bond equal to one hundred (100) percent of the total Contract base bid, the said bond being in the form of a Cash Bond or Surety Bond prepared on the applicable approved bond form furnished by the CITY; to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation, supervision, labor and all means necessary to construct and complete the work specified in the Proposal and Contract and called for in the Drawings and in the manner specified; to commence Work on the effective date established in the "Notice to Proceed" from the ENGINEER; and to substantially complete all Contract Work as per Project Schedule of Section 00800, and stated in the "Notice to Proceed" or pay liquidated damages for each calendar day in excess thereof, or such actual and consequential damages as may result therefrom, and to abide by the MBE/WBE Program.

The BIDDER acknowledges receipt of the following addenda:

No. One (1) Dated January 17, 2018

No. _____ Dated _____

No. _____ Dated _____

And the undersigned agrees that in case of failure on his part to execute the said Contract and the Bond within ten (10) days after being presented with the prescribed Contract forms, the check or Bid Bond accompanying his bid, and the money payable thereon, shall be paid into the funds of the City of Hollywood, Florida, otherwise, the check or Bid Bond accompanying this Proposal shall be returned to the undersigned.

Attached hereto is a certified check on the

_____ Bank of _____

or approved Bid Bond for the sum of

10% Ten percent of the amount of the bid Dollars (\$) according to the conditions under the Instructions to Bidders and provisions therein.

NOTE: If a Bidder is a corporation, the legal name of the corporation shall be set forth below, together with signature(s) of the officer or officers authorized to sign Contracts on behalf of the corporation and corporate seal; if Bidder is a partnership, the true name of the firm shall be set forth below with the signature(s) of the partner or partners authorized to sign Contracts in behalf of the partnership; and if the Bidder is an individual, his signature shall be placed below; if a partnership, the names of the general partners.

WHEN THE BIDDER IS AN INDIVIDUAL:

(Signature of Individual)

(Printed Name of Individual)

(Address)

WHEN THE BIDDER IS A SOLE PROPRIETORSHIP OR OPERATES UNDER A TRADE NAME:

(Name of Firm)

(Address)

(Signature of Individual) (SEAL)

WHEN THE BIDDER IS A CORPORATION:

Atlas Apex Roofing, LLC

(Correct Name of Corporation)

By:

(SEAL)

Henry Gembala

Vice President

(Official Title)

281 NE 32nd Street, Oakland Park, FL 33334

(Address of Corporation)

Organized under the laws of the State of Florida, and authorized by the law to make this bid and perform all Work and furnish materials and equipment required under the Contract Documents.

CERTIFIED COPY OF RESOLUTION OF BOARD OF DIRECTORS

Atlas Apex Roofing, LLC

(Name of Corporation)

RESOLVED that Henry Gembala

(Person Authorized to Sign)

Vice President

(Title)

(Name of Corporation)

of

Atlas Apex Roofing, LLC

be authorized to sign and submit the Bid or Proposal of this corporation for the following project:

CITY OF HOLLYWOOD, FLORIDA

DRAINAGE IMPROVEMENTS FOR ALLEYS SOUTH OF HOLLYWOOD
BOULEVARD, BETWEEN 22ND AND 26TH AVENUES

PROJECT NO. 16-11040

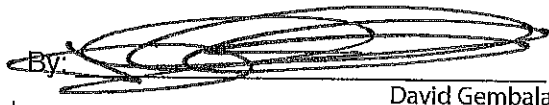
The foregoing is a true and correct copy of the Resolution adopted by

Atlas Apex Roofing, LLC

(Name of Corporation)

at a meeting of its Board of

Directors held on the 05 day of May, 20 12.

By: 
David Gembala

Title: President

(SEAL)

The above Resolution MUST BE COMPLETED if the Bidder is a Corporation.

- END OF SECTION -

SECTION 00301

**CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
ENGINEERING & CONSTRUCTION SERVICES DIVISION**

PROPOSAL BID FORM

Project No.: 17-2142

Project Name: Meter Shop Roof Replacement

If this Proposal is accepted, the undersigned Bidder agrees to complete all work under this contract within 60 calendar days following the issuance of the Notice to Proceed. All entries on this form must be typed or written in block form in ink.

BASE BID:

<u>No.</u>	<u>Description</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
1	Mobilization/Demobilization, Bonds and Insurance	1	LS	\$11,000.00	\$11,000.00
2	Install new roof – east section from expansion joint.	1	LS	\$74,000.00	\$74,000.00
3	Install new roof – west section from expansion joint.	1	LS	\$30,000.00	\$30,000.00
4	Install new gutters, downspouts and splash blocks on north-, east- and south-sides of building – east section from expansion joint	1	LS	\$8,000.00	\$8,000.00
5	Install new gutters, downspouts and splash blocks on south-side of building– west section from expansion joint.	1	LS	\$4,000.00	\$4,000.00
6	Remove / replace turbine vent, APV vent and 2 – 2' X 2' exhaust vents east side of expansion joint	1	LS	\$600.00	\$600.00
7	Perform all mechanical and electrical tasks and/or installation necessary to complete project.	1	LS	\$2,500.00	\$2,500.00
8	Repair and/or replace existing broken concrete roof features.	1	LS	\$3,000.00	\$3,000.00

SECTION 00301

**CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
ENGINEERING & CONSTRUCTION SERVICES DIVISION**

PROPOSAL BID FORM

9	Owner's Contingency	1	LS		\$25,000
10	Permit, Licenses, Testing / Engineering and Fee Allowance	1	LS		\$5,000
11	Consideration of Indemnification	1	LS		\$10.00
	TOTAL BASE BID			\$163,110.00	\$163,110.00
TOTAL BASE BID IN WORDS					
One Hundred Sixty Three Thousand One Hundred Ten Dollars and No Cents					

NOTES:

1. SUBSTANTIAL COMPLETION TIME AND PROJECT CLOSEOUT TIME FOR THE CONTRACT SHALL BE AS DEFINED IN THE PROJECT SCHEDULE IN THE SUPPLEMENTARY GENERAL CONDITIONS (SGC'S).

SECTION 00410

APPROVED BID BOND

(Construction)

STATE OF FLORIDA

KNOW ALL MEN BY THESE PRESENTS:

Philadelphia Indemnity Insurance Company

That we Atlas Apex Roofing, LLC, as Principal, and, as Surety, are

held and firmly bound unto the City of Hollywood in the sum of

Ten Percent of the Amount Bid Dollars (\$ 10%) lawful

money of the United States, amounting to 10% of the total Bid Price, for the payment of

said sum, we bind ourselves, our heirs, executors, administrators, and successors,

jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal has submitted the accompanying bid, dated February 1 2018 for

CITY OF HOLLYWOOD, FLORIDA

METER SHOP ROOF REPLACEMENT PROJECT

PROJECT NO. 17-2142

NOW, THEREFORE, if the principal shall not withdraw said bid within 90 days after date of the same and shall within ten days after the prescribed forms are presented to him for signature, enter into a written contract with the CITY, in accordance with the bid as accepted, and give bond with good and sufficient surety or sureties, and provide the necessary Insurance Certificates as may be required for the faithful performance and proper fulfillment of such Contract, then this obligation shall be null and void.

Approved Bid Bond

In the event of the withdrawal of said bid within the specified period, or the failure to enter into such contract and give such bond and insurance within the specified time, the principal and the surety shall pay to the City of Hollywood the difference between the amount specified in said bid and such larger amount for which the City of Hollywood may in good faith contract with another party to perform the work and/or supply the materials covered by said bid.

IN WITNESS WHEREOF, the above bound parties have executed this statement under their several seals this 1st day of February, 2018, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

WHEN THE PRINCIPAL IS AN INDIVIDUAL:

Signed, sealed and delivered in the presence of:

Witness

Signature of Individual

Address

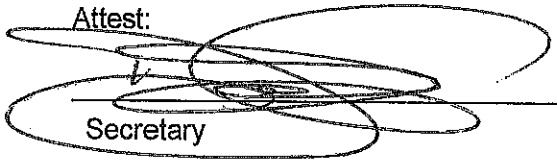
Printed Name of Individual

Witness

Address

WHEN THE PRINCIPAL IS A CORPORATION:

Attest:


Secretary

Atlas Apex Roofing, LLC

Name of Corporation

281 NE 32nd Street

Business Address

Fort Lauderdale, FL 33334

By:



(Affix Corporate Seal)

Henry Gembala
Printed Name

Vice President
Official Title

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, David Gembala, certify that I am the secretary of the Corporation named as Principal in the attached bond; that Henry Gembala who signed the said bond on behalf of the Principal, was then Vice President of said Corporation; that I know his signature, and his signature thereto is genuine and that said bond was duly signed, sealed and attested for and on behalf of said Corporation by authority of its governing body.


Secretary (SEAL)

Approved Bid Bond

TO BE EXECUTED BY CORPORATE SURETY:

Attest:

See Power of Attorney
Secretary

Philadelphia Indemnity Insurance Company

Corporate Surety

One Bala Plaza, Suite 100

Business Address

Bala Cynwyd, PA 19004-1403

BY:

(Affix Corporate Seal)

Kevin R. Wojtowicz

Attorney-in-Fact

Nelson, Wojtowicz, Neu & Associates

Name of Local Agency

1000 Central Ave. Ste 200

Business Address

St. Petersburg, FL 33705

STATE OF FLORIDA

Before me, a Notary Public, duly commissioned, qualified and acting, personally appeared, Kevin R. Wojtowicz to me well known, who being by me first duly sworn upon oath says that he is the attorney-in-fact for the Philadelphia Indemnity Insurance Company and that he has been authorized by Philadelphia Indemnity Insurance Company to execute the forgoing bond on behalf of the CONTRACTOR named therein in favor of the City of Hollywood, Florida. Subscribed and sworn to before me this 1st day of February, 2018

Notary Public, State of Florida

My Commission Expires:



- END OF SECTION -

PHILADELPHIA INDEMNITY INSURANCE COMPANY

One Bala Plaza, Suite 100
Bala Cynwyd, PA 19004-0950

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: That **PHILADELPHIA INDEMNITY INSURANCE COMPANY** (the Company), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, does hereby constitute and appoint Kevin R. Wojtowicz and Laura D. Mosholder of Nielson, Wojtowicz, Nen & Associates, its true and lawful Attorney-in-fact with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business and to bind the Company thereby, in an amount not to exceed \$25,000,000.

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PHILADELPHIA INDEMNITY INSURANCE COMPANY on the 14th of November, 2016.

RESOLVED: That the Board of Directors hereby authorizes the President or any Vice President of the Company: (1) Appoint Attorney(s) in Fact and authorize the Attorney(s) in Fact to execute on behalf of the Company bonds and undertakings, contracts of indemnity and other writings obligatory in the nature thereof and to attach the seal of the Company thereto; and (2) to remove, at any time, any such Attorney-in-Fact and revoke the authority given. And, be it

FURTHER RESOLVED: That the signatures of such officers and the seal of the Company may be affixed to any such Power of Attorney or certificate relating thereto by facsimile, and any such Power of Attorney so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

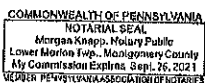
IN TESTIMONY WHEREOF, PHILADELPHIA INDEMNITY INSURANCE COMPANY HAS CAUSED THIS INSTRUMENT TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY ITS AUTHORIZED OFFICE THIS 27TH DAY OF OCTOBER, 2017.



(Seal)

Robert D. O'Leary Jr., President & CEO
Philadelphia Indemnity Insurance Company

On this 27th day of October, 2017, before me came the individual who executed the preceding instrument, to me personally known, and being by me duly sworn said that he is the therein described and authorized officer of the **PHILADELPHIA INDEMNITY INSURANCE COMPANY**; that the seal affixed to said instrument is the Corporate seal of said Company; that the said Corporate Seal and his signature were duly affixed.



(Notary Seal)

Notary Public:

Morgan Knapp

residing at:

Bala Cynwyd, PA

My commission expires:

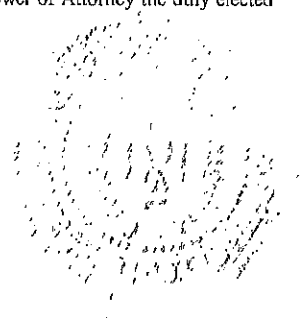
September 25, 2021

I, Edward Sayago, Corporate Secretary of PHILADELPHIA INDEMNITY INSURANCE COMPANY, do hereby certify that the foregoing resolution of the Board of Directors and this Power of Attorney issued pursuant thereto on this 27th day of October, 2017 are true and correct and are still in full force and effect. I do further certify that Robert D. O'Leary Jr., who executed the Power of Attorney as President, was on the date of execution of the attached Power of Attorney the duly elected President of PHILADELPHIA INDEMNITY INSURANCE COMPANY.

In Testimony Whereof I have subscribed my name and affixed the facsimile seal of each Company this 1st day of February, 2018.



Edward Sayago, Corporate Secretary
PHILADELPHIA INDEMNITY INSURANCE COMPANY



SECTION 00420

INFORMATION REQUIRED FROM BIDDERS

GENERAL INFORMATION

The Bidder shall furnish the following information. Failure to comply with this requirement may cause its rejection. Additional sheets shall be attached as required.

1. Contractor's Name/Address: Atlas Apex Roofing, LLC
281 NE 32nd Street
Oakland Park, FL 33334
2. Contractor's Telephone Number: (954) 565-1567
and e-mail address: estimating1@atlasapexusa.com
3. Contractor's License (attach copy): CCC1329972
Primary Classification: Certified Roofing Contractor
Broward County License Number (attach copy): 185-255-492
4. Number of years as a Contractor in construction work of the type involved in this Contract: 5 years = Atlas Apex Roofing, LLC
25 Years = Weiss & Woolrich Southern Enterprises, Inc.
5. List the names and titles of all officers of Contractor's firm:
David Gembala - President
Henry Gembala - Vice President
6. Name of person who inspected site or proposed work for your firm:
Name: Danny Neely
Date of Inspection: January 11, 2018 at 11:00 am
7. What is the last project of this nature you have completed?

Orange Co. Convention Center - North & South Roof Repairs

Orange Co. Convention Center - Roof Fall Arrest System

8. Have you ever failed to complete work awarded to you; if so, where and why?

NO

9. Name three individuals or corporations for which you have performed work and to which you refer:

CORE Construction

A/R/C Associates, Inc.

Jay Ammon Architect

10. List the following information concerning all contracts on hand as of the date of submission of this proposal (in case of co-venture, list the information for all coventures).

Name of Project	City	Total Contract Value	Contracted Date of Completion	% Completion to Date
See Attached				
		See Attached		
				See Attached

(Continue list on inset sheet, if necessary)

11. What equipment do you own that is available for the work?

Crane, dump trucks, power broom, roof cutter & various hand tools

12. What equipment will you purchase for the proposed work?

A Lull possibly

Completed Projects

Project Name & Location	Name of Owner, GC or Architect	Contact Name & Phone	Original Contract	Final Contract	Was a Bond provided?	% Complete	Date Completed
MAST Academy HS Key Biscayne, FL	Pirtle Construction	Joe Lester jlester@pirtleconstruction.com 954.653.2360	\$332,000.00	\$242,995.86	Y	100	10/15
Margaritaville Hollywood Beach Resort Hollywood, FL	Coastal/Tishman	Dennis Jardine dennis.jardine@coastaltishman.com 786.251.3133	\$1,415,020.00	\$1,464,721.93	Y	100	10/15
Jensen Beach Elementary Jensen Beach, FL	West Construction, Inc.	Matthew West mwest@westconstruction.net 561.588.2027	\$642,000.00	\$642,000.00	N	100	11/15
Volusia Pines Elementary Lake Helen, FL	A/R/C Associates, Inc.	Jim Ripley jimr@arc-arc.com 407.896.7875	\$842,000.00	\$867,373.28	Y	100	11/15
NTC Orlando Armory	Mulligan Constructors, Inc.	Dan Lewis dlewis@mulliganconstruction.com (407) 654-6523	\$167,054.00	\$167,054.00	Y	100	6/16
Miami-Dade County Courthouse Exterior Envelope & Plaza	Mark 1 Restoration Company	Bromley Kelly bkelly@mark1masonry.com (954) 675-4200	\$705,680.00	\$634,223.05	Y	100	8/16
City Place Doral	Suffolk Construction Company, Inc.	Christopher Lewis (305) 913-3377	\$2,050,000.00	\$2,185,988.55	Y	100	3/17
OCPS – Liberty Middle School Capital Renewal Project	WELBRO Building Corporation	Jeff Carter (407) 475-1050 x1068	\$963,000.00	\$582,796.55	N	100	4/17
Orange Co. Convention Center – North & South Roof Fall Arrest System	CORE Construction	Roger Baum (407) 519-1390	\$1,533,000.00	\$1,533,000.00	N	100	9/17
Orange Co. Convention Center – North & South Roof Repairs	CORE Construction	Roger Baum (407) 519-1390	\$2,979,000.00	\$3,108,284.00	N	100	11/17

NOTE:

If requested by CITY, the Bidder shall furnish a notarized financial statement, references and other information, sufficiently comprehensive to permit an appraisal of its current financial condition.

LIST OF SUBCONTRACTORS

The Bidder shall list below the name and address of each Subcontractor who will perform work under this Contract in excess of one-half percent of the total bid price, and shall also list the portion of the work which will be done by such Subcontractor. After the opening of Proposals, changes or substitutions will be allowed with written approval of the City of Hollywood. Subcontractors must be properly licensed and hold a valid Hollywood Certificate of Competency.

	Work to be Performed	Subcontractor's Name / Address
1.	Electrical	Associate Electric
		4805 NW 79th Ave, Doral, FL 33166
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

NOTE: Attach additional sheets if required.

- END OF SECTION -

SECTION 00495

TRENCH SAFETY FORM

This form must be completed and signed by the Bidder. **(Not Applicable this Project)**

Failure to complete this form may result in the bid being declared non-responsive.

Bidder acknowledges that the Florida Trench Safety Act, Section 553.60 et. seq., which became effective October 1, 1990, shall be in effect during the period of construction of the project. The Bidder by signing and submitting the bid is, in writing, assuring that it will perform any trench excavation in accordance with applicable trench safety standards. The Bidder further identifies the following separate item of cost of compliance with the applicable trench safety standards as well as the method of compliance:

Method of Compliance

Cost

Total \$ 0.00

Bidder acknowledges that this cost is included in the applicable items of the Proposal and in the Grand Total Bid Price. Failure to complete the above will result in the bid being declared non-responsive.

The Bidder is, and the Owner and Engineer are not, responsible to review or assess Bidder's safety precautions, programs or costs, or the means, methods, techniques or technique adequacy, reasonableness of cost, sequences or procedures of any safety precaution, program or cost, including but not limited to, compliance with any and all requirements of Florida Statute Section 553.60 et. seq. cited as the "Trench Safety Act". Bidder is, and the owner and Engineer are not, responsible to determine if any safety related standards apply to the project, including but not limited to, the "Trench Safety Act".


Witness Signature

Daniel Neely
Witness Printed Name
281 NE 32nd Street
Oakland Park, FL 33334

Witness Address

01/31/18
Date


Contractor's Signature

Henry Gembala
Printed Name

Vice President
Title

01/31/18
Date

- END OF SECTION -



Hollywood Meter Shop

Proposed Flat Roofing System

Membrane	1 ply	Adhesive Set	JM TPO FB 115 (color: White)
Insulation Board	1 layer	Adhesive Set	1.5" ISO Board, Energy 3

NOA 14-0627.06, Page 10, -105 psf



Atlas-Apex Roofing
281 Northeast 32nd Street
Fort Lauderdale, FL 33334
Phone: (954) 565-1567 | Fax: (954) 565-1568

www.atlasapexusa.com
info@atlasapexusa.com
LICENSE # CCC1329972



JM TPO FB 115

Fleece Backed Thermoplastic Polyolefin Membrane

Meets or exceeds the requirements of ASTM D 6878

Features and Components

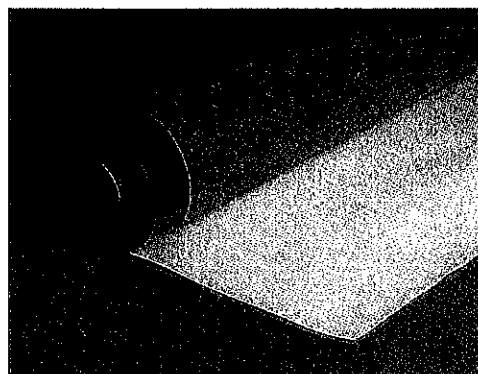
Integral Polyester Fleece Backing: In-line application of fleece allows for stronger bond for polyester backing that gives more flexibility in varying substrates for mechanically fastened or adhered systems.

One of the Widest Melt Windows: Promotes better welds over a wider variety of speeds and temperatures, and leads to a softer, more flexible and workable sheet.

Reinforced fabric scrim layer and top-ply thickness: Lends to durable physical properties including:

- Long-term weathering, UV resistance and heat-aging properties
- High breaking and tearing strength

Optimized TPO formulation: delivers high-performance ozone resistance, cool roof reflectivity and overall weather resistance.



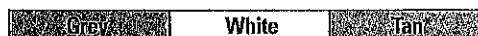
Component



Type



Colors



*Grey and tan are special order only.

System Compatibility This product may be used as a component in the following systems. Please reference product application for specific installation methods and information.

Multi-Ply	BUR		APP		SBS			
	HA	CA	CA	HW	HA	CA	HW	SA
	Do not use with Multi-Ply systems							

Single-Ply	TPO		PVC		EPDM		
	MF	FA	MF	FA	MF	FA	BA
Compatible with the selected Single Ply systems above							

Key: HA = Hot Applied CA = Cold Applied HW = Heat Weldable SA = Self Adhered MF = Mechanically Fastened FA = Fully Adhered BA = Ballasted

Energy and the Environment

Standard			Reflectivity	Emissivity
CRRC®	White	Initial	0.77	0.87
		3 Yr. Aged	0.70	0.86
	Tan	Initial	0.67	0.87
		3 Yr. Aged	0.62	0.90
	Gray	Initial	0.35	0.87
		3 Yr. Aged	Pending	Pending
CA Title 24	White	Pass	0.77	0.87
	Tan	Pass 3 Yr. Aged	SR=75	
ENERGY STAR®	White	Initial	0.77	0.87
		3 Yr. Aged	0.70	
	Tan	Initial	0.67	0.87
		3 Yr. Aged	0.62	
LEED® (SRI)	White	Initial	95	
		3 Yr. Aged	85	
	Tan	Initial	81	
		3 Yr. Aged	75	
	Gray	Initial	89	
		3 Yr. Aged	Pending	
Recycled Content	Post-consumer		0%	
	Post-industrial		5%	

The LEED® Solar Reflectance Index (SRI) is calculated per ASTM E1980.

Peak Advantage® Guarantee Information

Product	Guarantee Term
JM TPO FB 115	15 or 20 years

Codes and Approvals



Installation/Application



Fully Adhered Mechanically Fastened Hot Air Weld

Refer to JM TPO application guides and detail drawings for instructions.

Packaging and Dimensions

Roll Width	10' (3.05 m)
Roll Length	100' (30.48 m)
Roll Coverage	1000 ft² (92.9 m²)
Rolls per Pallet	6
Pallet Weight	2,303 lb (1,045 kg)
Pallets per Truck	16
Producing Location	Scottsboro, AL

*Assumes 48' flatbed truck and does not reflect pellets of accessories or impact of mixed sizes.

Refer to the Safety Data Sheet and product label prior to using this product. The Safety Data Sheet is available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.

RS-8839 7-17 (Replaces 11-16)



JM TPO FB 115

Fleece Backed Thermoplastic Polyolefin Membrane

Meets or exceeds the requirements of ASTM D 6878

Tested Physical Properties

Physical Properties		ASTM Test Method	Standard for ASTM D 6878 (Min.)	JM TPO – FB 115 ¹	
				MD*	XMD**
Strength	Breaking Strength, min, lbf (N)	D 751	220 (976)	499 (2,220)	450 (2,002)
	Elongation at Break, min %	D 751	15	29	27
	Tearing Strength, min, lbf (N)	D 751	45 (200)	91 (404)	146 (649)
	Factory Seam Strength, min, lbf (N)	D 751	66 (290)	171 (761)	
Longevity	Thickness, min, in.	D 751	+/- 10% from Nominal	0.060 (Nominal)	
	Thickness Over Scrim, min, in. (mm)	D 7635	0.015	0.027 (0.686)	
	Water Absorption, max, %	D 471	3.0	0.08	
	Brittleness Point, max, -40°F	D 2137	No Cracks	Pass	
Heat Aged Performance	Properties after Heat Aging @ 240°F	D 573	Pass/Fail	Pass	
	Breaking Strength, % (after aging)	D 751	90	>90	>90
	Elongation, % (after aging)	D 751	90	>90	>90
	Tearing Strength, % (after aging)	D 751	60	>60	>60
	Weight Change, max, % (after aging)	D 751	±1.0	0.25	
	Linear Dimensional Change, max, % (after 6 hrs @ 158°F)	D 1204	±1.0	<0.2	
Weather Performance	Accelerated Weathering, min	G 151 & G 155	10,080 kj/m ² •nm @ 340 nm (4,000 hrs @ 0.70 W)	10,080 kj/m ² (4,000 hrs)	
	Cracking (@ 7x magnification)	G 155	No Cracks	Pass	

1. JM TPO FB 115 is comprised of a 60 Mil TPO membrane and an integral fleece backing.
The given physical properties are based on the JM TPO 60 Mil membrane.

* MD = Machine Direction

**XMD = Cross-Machine Direction

Note: All data represents tested values.

Supplemental Testing

Physical Properties	ASTM Test Method	Standard for ASTM D 6878 (Min.)	JM TPO – FB 115 Result
Dynamic Puncture	D 5635	N/A	Pass @ 27.5 Joules
Static Puncture	D 5602	N/A	Pass @ 44 lb (20 kg)
Reflectance	C 1549	N/A	78%
Emittance	C 1371	N/A	0.87

Refer to the Safety Data Sheet and product label prior to using this product.
The Safety Data Sheet is available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.

RS-8639 7-17 (Replaces 11-16)



JM TPO WATER BASED MEMBRANE ADHESIVE

Features and Components

- Use:** For adhering JM TPO membranes to approved substrates. Limited availability from October 1st to April 15th. See *Bulletin* for additional information.
- Type:** One-part, water based membrane adhesive.
- Substrates:** Compatible with approved insulations and cover boards, and concrete decks.
- Colors:** Bright blue when wet, and dark green when ready to adhere. See Installation/Application for a visual guide to colors.



Component

AD
Adhesive

Type

M
Membrane

Single Ply

System Compatibility This product may be used as a component in the following systems. Please reference product application for specific installation methods and information.

Multi-Ply	BUR		APP		SBS	
	HA	CA	CA	HW	HA	CA
	HA	CA	CA	HW	HA	CA

Do not use in Multi-Ply systems

Single-Ply	TPO		PVC		EPDM		
	MF	FA	MF	FA	MF	FA	BA
Used to adhere Membranes in the selected Single Ply systems above							

Key: HA = Hot Applied CA = Cold Applied HW = Heat Weldable SA = Self Adhered MF = Mechanically Fastened FA = Fully Adhered BA = Ballasted

Energy and the Environment

VOC Content	<10 g/l (Calculated)
This product may be used in jurisdictions limiting VOC (volatile organic compounds) content of single ply roofing adhesive to no greater than 250 g/l.	

Physical Properties

Property	JM TPO Water Based Membrane Adhesive
Weight per Unit (approx.)	8.26 lb/gal (0.990 kg/l)
Specific Gravity	0.99

Precautions

Adhesive contains ingredients which could be harmful if mishandled. Contact with skin and eyes should be avoided, and the recommended personal protective equipment should be worn.

Installation/Application



Med. Nap Roller



Wet Ready to Adhere

- Apply when the ambient and substrate temperature will be above 40° F (4° C) and rising for 48 hours.
- This is a 2-sided adhesive when applied in a vertical application. When used in a horizontal application with smooth-backed or fleece-backed membrane apply one-sided. When using one-sided application apply to substrate only.
- Refer to the application instructions guidelines for proper utilization of this adhesive.

Packaging and Coverage

Container Size	5 gal (18.9 l) pail
Shipping Weight (approx.)	46 lb (20.9 kg)
Coverage Rates (One and Two Sided)	120-180 ft ² /gal (2.95-4.42 m ² /l)

* Coverage, open and dry time rates can vary dramatically depending on the particular substrate and environmental conditions. Coverage rates stated herein are approximate only. If FM Global® or UL® approval is required, consult specific RoofNav™ or the UL Certifications Directory for specific application rates.

** For one-sided application, full adhesive is applied to the substrate. For two-sided application, half of the adhesive is applied to the substrate and half of the adhesive is applied to the membrane.

Storage

Shelf Life	12 months from manufacture date
Storage Conditions	Clean, dry, indoor environment in an unopened container
Temperature Range	60°F - 80°F (16°C - 27°C) - Protect from freezing

Exposure Window

Johns Manville recommends immediate and complete use upon opening. Use open containers within 48 hours of opening. Replace lid on can when not in use. Adhesive that has changed color or viscosity is no longer usable.

SECURROCK® is registered trademark of United States Gypsum Company. SECURROCK® is manufactured by United States Gypsum Company and is marketed by Johns Manville as JM® SECURROCK®.

Refer to the Safety Data Sheet and product label prior to using this product. The Safety Data Sheet is available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.

RS-7823 8-17 (Replaces 3-17)



Flat & Tapered ENRGY 3®

Polyisocyanurate Roof Insulation

Meets the requirements of ASTM C 1289, Type II, Class 1, Grade 2 (20 psi)

• ENRGY 3 / Tapered ENRGY 3

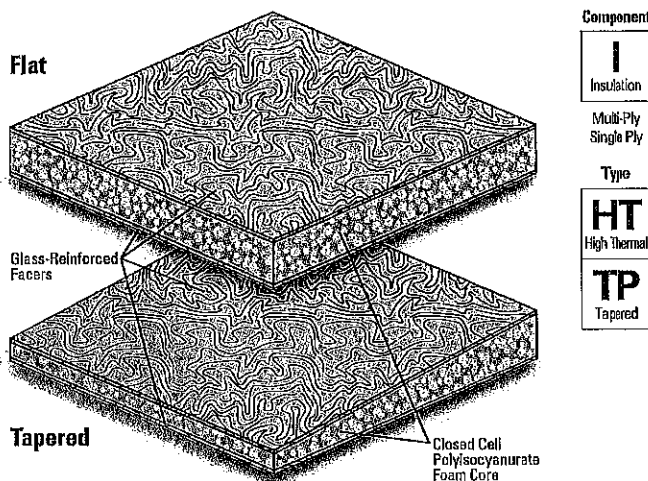
Grade 3 (25 psi)

• ENRGY 3 25 PSI / Tapered ENRGY 3 25 PSI

Features and Components

Glass-Reinforced Facers: Provides rigidity and resistance to indentation and crushing, and are compatible with BUR, modified bitumen and single ply membrane systems.

Closed Cell Polyisocyanurate Foam Core: Provides high R-value per inch in built-up, modified bitumen, metal roof and single ply roof systems, and approved for direct application to steel decks.



System Compatibility This product may be used as a component in the following systems. Please reference product application for specific installation methods and information.

Multi-Ply	BUR		APP		SBS			
	HA	CA	CA	HW	HA	CA	HW	SA

Compatible with the selected Multi-Ply systems above

Single-Ply	TPO		PVC		EPDM		
	MF	FA	MF	FA	MF	FA	BA

Compatible with all Single Ply systems

Key: HA = Hot Applied CA = Cold Applied HW = Heat Weldable SA = Self Adhered MF = Mechanically Fastened FA = Fully Adhered BA = Ballasted

Energy and the Environment

LEED®	Recycled Content	Varies with thickness, see Product Data and Packaging table on next page.
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Produced with a pentane blowing agent with zero ozone depletion and virtually no global warming potential.

Peak Advantage® Guarantee Information

Systems
For use in approved JM Peak Advantage Roofing Guarantees

Codes and Approvals



- FM® Standards 4450/4470 Approvals (refer to FM RoofNav™)
- UL® Standard 790, 263 and 1256 (refer to UL Roofing Materials system directory)
- Meets the requirements of CAN/ULC S704, Type 2 & 3, Class 3
- California Code of Regulations, Title 24, Insulation Quality Standard License #1-1341
- Third-party certification with the PIMA Quality Mark™ for Long-Term Thermal Resistance (LTTR) values

Refer to the Safe for Use instructions and product label prior to using this product. The Safe for Use instructions are available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.

Note: Technical information on this data sheet is intended to be used as a general guideline only and is subject to change without notice. Contact your JM Sales Representative for further details.

Installation/Application



Refer to the application instructions guidelines for proper utilization of this product.

Flute Span:

Width of Rib Opening: Up to 2⁵/₈" (6.67 cm) Up to 3³/₈" (8.57 cm) Up to 4³/₈" (11.11 cm)

Insulation Thickness (min): 1.0" (2.54 cm) 1.2" (3.05 cm) 1.3" (3.30 cm)

Packaging and Dimensions

Flat Sizes ¹	4' x 4' (1.22 m x 1.22 m)	4' x 8' (1.22 m x 2.44 m)
Tapered Size	4' x 4' (1.22 m x 1.22 m)	
Producing Locations	Bremen, IN Hazleton, PA	Cornwall, ONT Jacksonville, FL
Stocking Locations	Grand Prairie, TX	Southgate, CA Tracy, CA

- For available thicknesses, see Product Data and Packaging table on page 2 of this data sheet. Other sizes available by special request, some sizes are not stocked and special order with minimum order quantities. Contact your JM Sales Representative for details.
- Tapered ENRGY 3 and Tapered ENRGY 3 25 PSI are available in thicknesses of 1/2" to 4". Available profiles are shown on page 3 of this data sheet. In some regions extended panels are also available.
- Not all sizes, thicknesses, and products are stocked at all locations, please call Customer Service at 1-877-766-3295.

Typical Physical Properties

Test	ASTM	Values
Tensile Strength	C 209	500 psf (24 kPa) (min), 730 psf (35 kPa) (nom)
Compressive Resistance 10% Consolidation	D 1621	Grade 2: 20 psi (138 kPa), Grade 3: 25 psi (172 kPa) (min)
Dimensional Stability Change, (length & width)	D 2126	0.5% (nom), 2% (max)
Moisture Vapor Permeance	E 96	<+ 1.0% perm, 57.5 ng/(Pa*s*m2), 1.5 perm, 85.8 ng/(Pa*s*m2)
Water Absorption	C 209	1.0% (max)
Service Temperature	D 1623	-100°F – 250°F (-73°C – 121°C)
Flame Spread, (foam core)	E 84	20 - 30 (nom), 75 (max)
Smoke Developed, (foam core)	E 84	55 - 250 (nom), 450 (max)

Product Data and Packaging

Thickness		Long-Term Thermal Resistance (LTTR) Values ¹		Recycled Content ² 20 PSI / 25 PSI			Boards per Pallet	Square Feet per Pallet		Pallets per Truck ³	
In.	mm	R-Value	in. R-Value	% Pre-Consumer	% Post-Consumer	% Total	4'x8' and 4'x10'	4'x4'	4'x8'	4'x8'	4'x8'
1.0	25.4	5.7	1.00	5.3 / 5.2	31.8 / 29.9	37.1 / 35.1	48	768	1536	48	24
1.1	27.9	6.3	1.10	5.2 / 5.2	30.0 / 28.1	35.3 / 33.3	41	656	1312		
1.2	30.5	6.8	1.20	5.2 / 5.2	28.4 / 26.6	33.6 / 31.76	38	608	1216		
1.25	31.8	7.1	1.25	5.2 / 5.2	27.7 / 25.8	32.9 / 31.0	35	560	1120		
1.3	33.0	7.4	1.30	5.3 / 5.3	27.0 / 25.2	32.3 / 30.4	35	560	1120		
1.4	35.6	8.0	1.41	5.3 / 5.2	25.7 / 23.9	31.0 / 29.2	32	512	1024		
1.5	38.1	8.6	1.51	5.2 / 5.2	24.5 / 22.8	29.8 / 28.0	32	512	1024		
1.6	40.6	9.1	1.61	5.2 / 5.2	23.4 / 21.7	28.7 / 27.0	28	448	896		
1.7	43.2	9.7	1.71	5.2 / 5.2	22.4 / 20.8	27.7 / 26.0	27	432	864		
1.75	44.5	10.0	1.76	5.2 / 5.2	22.0 / 20.4	27.2 / 25.6	27	432	864		
1.8	45.7	10.3	1.81	5.2 / 5.2	21.5 / 19.9	26.7 / 25.1	25	400	800		
1.9	48.3	10.8	1.91	5.2 / 5.2	20.7 / 19.1	25.9 / 24.3	24	384	768		
2.0	50.8	11.4	2.01	5.2 / 5.2	19.9 / 18.4	25.1 / 23.6	24	384	768		
2.1	53.3	12.0	2.11	5.2 / 5.2	19.2 / 17.7	24.4 / 22.9	21	336	672		
2.2	55.9	12.6	2.22	5.2 / 5.2	18.5 / 17.1	23.7 / 22.3	20	320	640		
2.3	58.4	13.2	2.32	5.2 / 5.2	17.9 / 16.5	23.1 / 21.7	20	320	640		
2.4	61.0	13.8	2.43	5.2 / 5.2	17.3 / 16.0	22.5 / 21.1	19	304	608		
2.5	63.5	14.4	2.53	5.2 / 5.2	16.8 / 15.4	22.0 / 20.6	19	304	608		
2.6	66.0	15.0	2.64	5.2 / 5.1	16.3 / 15.0	21.4 / 20.1	18	288	576		
2.7	68.6	15.6	2.74	5.2 / 5.1	15.8 / 14.5	21.0 / 19.7	17	272	544		
2.8	71.1	16.2	2.85	5.2 / 5.1	15.3 / 14.1	20.5 / 19.2	16	256	512		
2.9	73.7	16.8	2.96	5.2 / 5.1	14.9 / 13.7	20.1 / 18.8	16	256	512		
3.0	76.2	17.4	3.06	5.2 / 5.1	14.5 / 13.3	19.7 / 18.4	16	256	512		
3.1	78.7	18.0	3.17	5.1 / 5.1	14.1 / 12.9	19.3 / 18.1	14	224	448		
3.2	81.3	18.6	3.28	5.1 / 5.1	13.8 / 12.6	18.9 / 17.7	14	224	448		
3.25	82.6	18.9	3.33	5.1 / 5.1	13.6 / 12.4	18.7 / 17.6	14	224	448		
3.3	83.8	19.2	3.39	5.1 / 5.1	13.4 / 12.3	18.6 / 17.4	14	224	448		
3.4	86.4	19.9	3.50	5.1 / 5.1	13.1 / 12.0	18.2 / 17.1	13	208	416		
3.5	88.9	20.5	3.61	5.1 / 5.1	12.8 / 11.7	17.9 / 16.8	13	208	416		
3.6	91.4	21.1	3.72	5.1 / 5.1	12.5 / 11.4	17.6 / 16.5	12	192	384		
3.7	94.0	21.7	3.82	5.1 / 5.1	12.2 / 11.1	17.3 / 16.3	12	192	384		
3.75	95.3	22.0	3.88	5.1 / 5.1	12.0 / 11.0	17.2 / 16.1	12	192	384		
3.8	96.5	22.3	3.94	5.1 / 5.1	11.9 / 10.9	17.0 / 16.0	12	192	384		
3.9	99.1	23.0	4.05	5.1 / 5.1	11.7 / 10.7	16.8 / 15.8	12	192	384		
4.0	101.6	23.6	4.16	5.1 / 5.1	11.4 / 10.4	16.5 / 15.5	12	192	384		
4.1	104.0	24.2	4.26	5.1 / 5.1	11.2 / 10.2	16.3 / 15.3	11	176	352		
4.2	107.0	24.9	4.39	5.1 / 5.1	10.9 / 10.0	16.0 / 15.1	11	176	352		
4.3	109.0	25.5	4.49	5.1 / 5.1	10.7 / 9.8	15.8 / 14.9	11	176	352		
4.4	112.0	26.1	4.60	5.1 / 5.1	10.5 / 9.6	15.6 / 14.7	10	160	320		
4.5	114.0	26.8	4.72	5.1 / 5.1	10.3 / 9.4	15.4 / 14.5	10	160	320		

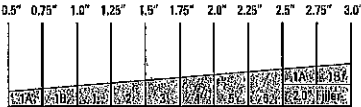
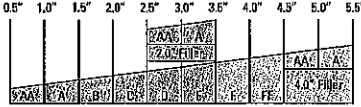
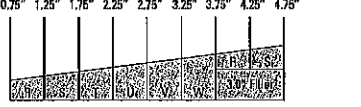
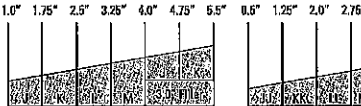
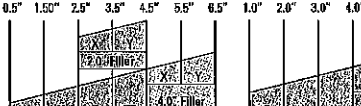

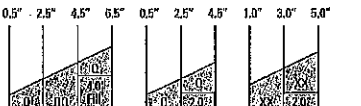
1. The Long-Term Thermal Resistance (LTTR) values were determined in accordance with CAN/ULC S770 at 75°F (24°C). The ultimate R-Value of these products will depend on individual installation circumstances. 2. Value represents average results (Grade 2/Grade 3). 3. Assumes 48' flatbed truck.



Tapered ENERGY 3[®]

Polyisocyanurate Roof Insulation

Johns Manville Tapered Polyiso Offerings Please refer to the previous page for typical physical properties.

Panel Desig.	Slope	Dimension		LTTR* Value Nominal	Pieces per Unit	Square Foot per Unit	Brd./ft per Unit	Slope Profiles
		Thin	Thick					
1/16 in./ft.(52 mm/m)								
1A	1/16	0.5	0.75	3.6	70	1120	700	 <p>All Panels Special Order</p>
1B	1/16	0.75	1	5.0	50	800	700	
1	1/16	1	1.25	6.4	38	608	684	
2	1/16	1.25	1.5	7.8	32	512	704	
3	1/16	1.5	1.75	9.3	28	416	676	
4	1/16	1.75	2	10.7	22	352	660	
5	1/16	2	2.25	12.1	20	320	680	
6	1/16	2.25	2.5	13.6	18	288	684	
1/8 in./ft.(104 mm/m)								
AA	1/8	0.5	1	4.3	64	1024	768	 <p>Extended and Special Order Panels: D, E, F, FF</p>
A	1/8	1	1.5	7.1	38	608	760	
B	1/8	1.5	2	10.0	26	416	728	
C	1/8	2	2.5	12.9	20	320	720	
D**	1/8	2.5	3	15.9	16	256	704	
E**	1/8	3	3.5	18.9	14	224	728	
F**	1/8	3.5	4	22.1	12	192	720	
FF**	1/8	4	4.5	25.3	10	160	680	 <p>All Panels Special Order</p>
R	1/8	0.75	1.25	5.7	44	704	704	
S	1/8	1.25	1.75	8.6	30	480	720	
T	1/8	1.75	2.25	11.4	22	352	704	
U	1/8	2.25	2.75	14.4	16	256	640	
V	1/8	2.75	3.25	17.4	14	224	672	
W	1/8	3.25	3.75	20.5	12	192	672	
3/16 in./ft.(156 mm/m)								
J	3/16	1	1.75	7.8	32	512	704	 <p>All Panels Special Order</p>
K	3/16	1.75	2.5	12.1	20	320	680	
L**	3/16	2.5	3.25	16.6	16	256	736	
M**	3/16	3.25	4	21.2	12	192	696	
JJ	3/16	0.5	1.25	5.0	52	832	728	
KK	3/16	1.25	2	9.3	28	448	728	
LL**	3/16	2	2.75	13.6	18	288	691	
MM**	3/16	2.75	3.5	18.2	14	224	694	
1/4 in./ft.(208 mm/m)								
G	1/4	1	2	8.6	30	480	720	 <p>Extended and Special Order Panels: Z, ZZ</p>
H	1/4	2	3	14.4	16	256	640	
I**	1/4	3	4	20.5	12	192	672	
X	1/4	0.5	1.5	5.7	48	768	768	
Y	1/4	1.5	2.5	11.4	24	384	768	
Z**	1/4	2.5	3.5	17.4	16	256	768	
ZZ**	1/4	3.5	4.5	23.6	12	192	768	
3/8 in./ft.(312 mm/m)								
SS	3/8	0.5	2	7.1	36	576	720	 <p>All Panels Special Order</p>
TT**	3/8	2	3.5	15.9	16	256	704	
1/2 in./ft.(416 mm/m)								
Q	1/2	0.5	2.5	8.6	32	512	768	 <p>Extended and Special Order Panels: Q, QQ</p>
QQ**	1/2	2.5	4.5	20.5	12	192	672	
XX	1/2	1	3	11.4	22	352	704	

* $(1/4 \times R^2 \times F/Btu)$

** Extended panels require less adhesive and less labor.

Tapered Recycle Content:

Recycled content is dependent upon average thickness. To calculate, match the average thickness of Tapered ENERGY 3 to the thickness of Flat ENERGY 3. Use the number from Flat ENERGY 3 as your recycled content.

Refer to the Safe for Use instructions and product label prior to using this product. The Safe for Use instructions are available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.

RS-5137 10-17 (Replaces 6-17)



JM ONE-STEP FOAMABLE ADHESIVE

Features and Components

Use: JM One-Step Foamable Adhesive is a two-component polyurethane adhesive used for attaching insulation or cover boards to the roof deck or to other insulation boards.

Type: Two-part, cold application insulation adhesive.

Substrates: Compatible with the following insulations, cover boards, and substrates¹: polyisocyanurate; HD wood fiber; perlite; InvinSA® Roof Board; gypsum; concrete² (*Lightweight structural, poured-in-place structural, precast, and insulating*); treated plywood (5/8" [1.58 cm] min. thickness); cementitious wood fiber plank; base sheets; gypsum; and some existing smooth-surfaced asphalt (*per inspection*).

1. Ensure that all insulation boards are 4' x 4' or smaller.
2. Drying time of 28 days required.

Color: Part 1 - Tan, Part 2 - Colorless

Features: Solvent free.

Set boards immediately into adhesive; reduces installation time and maximizes adhesive footprint.

No hoses or pumps required.

Always on ratio, eliminates guesswork.

Component

AD
Adhesive

Type

I
Insulation

B
Cover Board

Multi-Ply
Single Ply

System Compatibility This product may be used as a component in the following systems. Please reference product application for specific installation methods and information.

BUR	APP	SBS
HA	CA	HW
CA	HW	SA

Used to adhere Insulation in all Multi-Ply systems

TPO	PVC	EPDM
MA	FA	BA
FA	BA	

Used to adhere Insulation in all Single Ply systems

Key: HA = Hot Applied CA = Cold Applied HW = Heat Weldable SA = Self Adhered MF = Mechanically Fastened FA = Fully Adhered BA = Ballasted

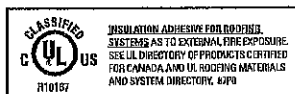
Energy and the Environment

Maximum VOC	18 g/l as applied after mixing (EPA method 24)
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Physical Properties

Property	ASTM Test Method	JM One-Step Foamable Adhesive
Weight (liquid components)	Part 1	9.6 lb/gal (1.5 kg/l)
	Part 2	8.35 lb/gal (1.0 kg/l)
Viscosity (liquid components)	Part 1	5,000 cps
	Part 2	3,700 cps

Codes and Approvals



Precautions

First Aid: In case of contact with eyes, immediately flush eyes with running water for at least 15 minutes. Call a physician immediately. In case of contact with skin, wash affected area with soap and water. Remove all contaminated clothing and shoes. Wash clothing before reuse and discard contaminated shoes. If swallowed, drink large amounts of water to dilute. If vomiting occurs, drink more water and call a physician immediately.

Environmental Hazard: PMDI in Part 1 component may cause pollution. Do not discharge into lakes, streams, ponds or public waters. For guidance, contact your regional office of the U.S. Environmental Protection Agency.

Disposal: Neutralize and dispose of spilled material, unused contents and empty containers in accordance with local, state and federal regulations.

Safety: Wear proper clothing and safety equipment.

Installation/Application



Bead

- Apply when ambient temperature is 0°F (-18°C) and rising. Do Not Thin.
- Ensure all insulation boards are 4' x 4' (1.22 m x 1.22 m) or smaller.
- Ensure all surfaces are dry and free of any debris, dirt, oil and grease before using JM One-Step Foamable Adhesive.
- Refer to the application instructions and guidelines for proper utilization and coverages rates of this adhesive.

Packaging and Coverage

Container Type	Case		
Items per Case/Box	4 cartridges/case with 6 mixing tips		
Shipping Weight (approx)	17.8 lb (8.1 kg)		
Cases/Boxes per Pallet	48		
Bead Spacing	Typical Coverage Rates*		
	per case	ft ² /gal	gal/100 ft ²
12" o.c.	400 to 600 ft ²	253 to 379	0.26 to 0.40
6" o.c.	200 to 300 ft ²	126 to 190	0.52 to 0.80
4" o.c.	133 to 200 ft ²	84 to 126	0.78 to 1.2

* Coverage rates are approximate and may vary based on substrate type and application. Approved substrates include structural concrete decks, JM Vapor Barrier SA, ENRGY 3, RetroPlus, DuraBoard, InvinSA, Sacurock, DensDeck, DensDeck Prime, smooth modified asphalt membranes and granulated asphalt membranes. Please contact JM Technical Services for other approved substrates.

Storage

Shelf Life	12 months from manufacture date
Storage Conditions	Clean, dry, well-ventilated indoor environment in an unopened container, 24 hours prior to use, store between 60°F (16°C) and 85°F (29°C).
Temperature Range	45°F to 95°F (7°C to 35°C) - Protect from freezing

Refer to the Safety Data Sheet and product label prior to using this product. The Safety Data Sheet is available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.

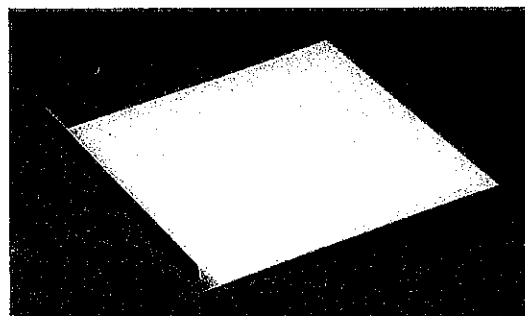


JM TPO-COATED METAL

Features and Components

Use: Fabricated by the contractor into metal flashings and edge details. It is used to provide monolithic watertight protection for both adhered and mechanically fastened TPO roofing systems.

Materials: Non-reinforced JM TPO (thermoplastic polyolefin) membrane laminated to galvanized steel.



Component

A

Accessory

Single Ply

Type

FE

Flashing Edge

Colors



System Compatibility This product may be used as a component in the following systems. Please reference product application for specific installation methods and information.

Multi-Ply	BUR	APP	SBS
	HA CA	CA HW	HA CA HW SA
Do not use in Multi-Ply systems			

Single Ply	TPO	PVC	EPDM
	MF FA	MF FA	MF FA BA
Compatible with the selected Single Ply systems above			

Key: HA = Hot Applied CA = Cold Applied HW = Heat Weldable SA = Self Adhered MF = Mechanically Fastened FA = Fully Adhered BA = Ballasted

Physical Properties

Property	JM TPO-Coated Metal
Weight per Unit	1.12 lb/ft ² (5.47 kg/m ²)

Peak Advantage® Guarantee Information

Systems
Approved for use in any JMI Peak Advantage Guarantee System

Installation/Application



Mechanically Fastened



Hot Air Weld (for membrane)

- Do not install JM TPO Coated Metal in direct contact with asphalt.
- Refer to JM TPO applicator guides or detail drawings for instructions.

Packaging and Dimensions

Sheet Size	4' x 10' (1.22 m x 3.05 m)
Nominal Thickness	
Membrane	0.030" (0.76 mm)
Metal	0.022" (0.56 mm)
Total	0.052" (1.32 mm)
Sheets per Pallet	30 & 10 (white only)
Coverage per Pallet	1,200 ft ² (111.5 m ²) (gross)
Weight per Sheet	45 lb (20.4 kg)
Weight per Pallet	1,360 lb (617 kg) 650 lb (295 kg)

Storage

Storage Conditions	Store indoors, flat, out of direct sunlight, and keep clean and dry prior to installation.
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Refer to the Safety Data Sheet and product label prior to using this product. The Safety Data Sheet is available by calling (800) 922-5922 or on the Web at www.jm.com/roofing.



**STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

**CONSTRUCTION INDUSTRY LICENSING BOARD
1940 NORTH MONROE STREET
TALLAHASSEE FL 32399-0783**

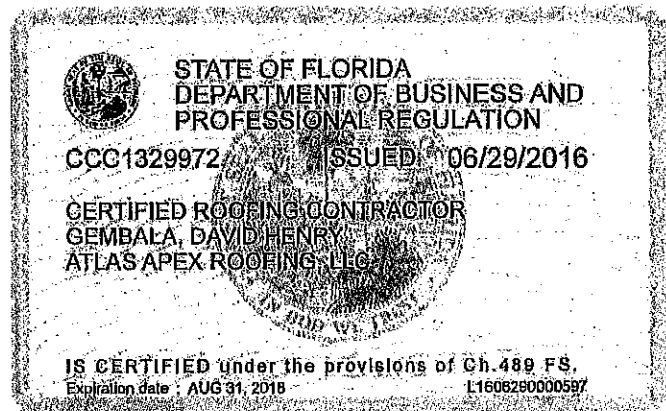
(850) 487-1395

**GEMBALA, DAVID HENRY
ATLAS APEX ROOFING, LLC
281 N.E. 32ND STREET
FORT LAUDERDALE FL 33334**

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbecue restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto www.myfloridalicense.com. There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!



DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

**STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
CONSTRUCTION INDUSTRY LICENSING BOARD**

LICENSE NUMBER

CCC1329972

**The ROOFING CONTRACTOR
Named below IS CERTIFIED
Under the provisions of Chapter 489 FS.
Expiration date: AUG 31, 2018**

**GEMBALA, DAVID HENRY
ATLAS APEX ROOFING, LLC
281 N.E. 32ND STREET
FORT LAUDERDALE FL 33334**



ISSUED: 06/29/2016

DISPLAY AS REQUIRED BY LAW

SEQ# L1606290000597



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

9/27/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Frank H. Furman, Inc., 1314 East Atlantic Blvd. P. O. Box 1927 Pompano Beach FL 33061		CONTACT NAME: Melissa Rhinehardt PHONE (A/C No. Ext): (954) 943-5050 FAX (A/C No): (954) 942-6310 E-MAIL ADDRESS: mel@furmaninsurance.com	
INSURED Atlas Apex Roofing LLC 281 NE 32 ST Ft Lauderdale FL 33334		INSURER(S) AFFORDING COVERAGE INSURER A: National Fire Ins Of Hartford INSURER B: Continental Insurance Co INSURER C: Valley Forge Ins INSURER D: Columbia Casualty INSURER E: INSURER F:	
		NAIC # 20478 35289 20508 31127	

COVERAGES	CERTIFICATE NUMBER: 10/17 GL XS Auto WC CEO	REVISION NUMBER:
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.		

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Included GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:		6020176844	10/1/2017	10/1/2018	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ excluded PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 BI/PD Combined Ded Per Occ \$ 10,000		
	A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS		6020180618	10/1/2017	10/1/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Medical payments \$ 2,000	
		B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000		6020176830 Over GL, AL, EL	10/1/2017	10/1/2018	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
			C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N N/A	WC620189478	10/1/2017	10/1/2018
D		Pollution Liab incl Mold & Professional E&O Liab			6016735309	10/1/2017	10/1/2018	Each Claim \$1,000,000 Aggregate Limit \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER "For Bidding Purposes Only"	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Dirk DeJong/MR
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