JM SINGLE PLY SEALING MASTIC

Features and Components

Use: To seal JM Single Ply membranes to terminations and other penetrations.

Type: One-part, butyl polymer-based water cutoff mastic.

Substrates: Compatible with wood, concrete, metal, plastic, and other substrates for water penetration prevention.

Color: Grey

Component
SE Sealant

Type
M Membrane
FL Flashing

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	HW	SA
	Do not use in Multi-Ply systems							

Single Ply	TPO		PVC		EPDM		
	MF	FA	MF	FA	MF	FA	BA
	Used to seal Membranes 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	108 g/l (EPA Method 24)
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 Single Ply Sealing Mastic
Weight per Unit *(approx)*	10.42 lb/gal (1.25 kg/l)
Specific Gravity	1.45
ButylPolymer/Solids	82% *(min)*
Solvents	18% *(max)*

Note: Typical values should not be construed as guaranteed analysis of any specific lot or as specification items.

Precautions

Johns Manville Single Ply Sealing Mastic is a combustible material and should be shipped and stored away from open flames, heat or sources of ignition. It should be used only in well-ventilated areas. It may cause eye, skin and respiratory irritation, and is harmful or fatal if swallowed. Avoid contact with skin. Use impervious clothing and rubber gloves to avoid prolonged or repeated contact with skin. Read the container label and follow all safety instructions.

Installation/Application

Bead

- Apply when the ambient and substrate temperature is 40°F (5°C) and rising.
- Do not use in applications where the caulk is exposed to direct ultraviolet rays.
- Refer to the application instructions guidelines for proper utilization of this sealant.

Packaging and Coverage

Container Size	Box of twelve 11 oz (325.31 ml) tubes
Shipping Weight *(approx.)*	15 lb (6.8 kg)/box
Boxes per Pallet	105
Coverage Rate* *(approx.)*	15 lin ft (4.57 lin m) per tube

* Coverage, open and dry time rates can vary dramatically depending on the particular substrate and environmental conditions. Coverage rates stated herein are approximate only.

Storage

Shelf Life	12 months from manufacture date
Storage Conditions	Clean, dry, indoor environment, out of direct sunlight, in an unopened container
Temperature Range	40°F – 90°F (4.4°C – 32°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.

CANNONDESIGN

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

DEVIN D GATES
SUBMITTED BY

075323-001
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

075323
SPECIFICATION SECTION / PARAGRAPH

MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

CRITICAL

ITEM BEING SUBMITTED (check only one)

- ○ Shop Drawings
- ○ Samples (_____ copies)
- ○ LEED Submittal
- ○ Certification / Qualifications
- ○ Record Documents
- ○ Product Data
- ○ Coordination Drawing
- ○ Calculations
- ○ Schedules
- ○ O&M Manuals
- ○ Other _____

ITEM BEING SUBMITTED FOR (check only one)

○ Action ○ Information Only ○ Record

REMARKS OR DEVIATIONS

Email correspondence with KWA provided clarifications for requested information and warranty letter attached.

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

DEVIN D GATES — 10/11/16
REVIEWED BY — DATE

To be completed by Reviewer

07 5323-001 REV002
CANNON DESIGN SUBMITTAL NUMBER

10/11/16
RECEIVED DATE

- ○ A. No Exceptions Taken
  No further review of submittal is required.
- ● B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ○ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ○ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ○ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ○ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be af
This review is null and void if submittal deviates from contra
and does not indicate or note deviations.

A/E COMMENTS ○ See attached sheet(s) for additional comments

Final warranty must meet specification section 1.10. 2. requirements: wind speed coverage of that indicated on structural drawings (90 mph minimum), hail coverage for up to 2 inch diameter, and accidental puncture coverage of 16 man hours per year of warranty.

see comments below

Kathy Williams — 10/11/16
REVIEWED BY — DATE

Gates, Devin

From: Scott Klingsick <scott@kwastl.com>
Sent: Friday, October 07, 2016 7:00 AM
To: Gates, Devin
Cc: kpatel@cannondesign.com
Subject: RE: Clarifications on returned EPDM shop drawings

Follow Up Flag: Follow up
Flag Status: Flagged

Yes this will be acceptable. We need the rest of the information revised and it to be resubmitted so we can approve submittal 075323-001. Thanks

Scott Klingsick, LEED Green Associate
Project Manager
9721 Litzsinger Rd.
St. Louis, MO 63124
(p) 314.962.2560 (f) 314.962.4057
scott@kwastl.com

KWA architecture / landscape architecture / interiors
KWA Architects

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From: Gates, Devin [mailto:ddgates@paric.com]
Sent: Thursday, October 06, 2016 4:59 PM
To: Scott Klingsick
Cc: kpatel@cannondesign.com
Subject: RE: Clarifications on returned EPDM shop drawings

Kelvin/Scott,

Were you able to take a look at this and does this resolve the impact resistance needs? I can resubmit formally as needed but with the back and forth I wanted to ensure we are all on the same page.

Thanks,

DEVIN GATES
SENIOR PROJECT ENGINEER

Cell: 314-348-8828
Main: 636-561-9500

- - - - - -
77 Westport Plaza, Suite 250
St. Louis, MO 63146

PARIC.COM

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From: Aaron Hammerstone [mailto:aaron.hammerstone@kirberg.com]
Sent: Tuesday, October 04, 2016 7:10 AM
To: Gates, Devin; scott@kwastl.com
Cc: kpatel@cannondesign.com
Subject: FW: Clarifications on returned EPDM shop drawings

All,

Please see the two attachments, as well as the information in the below email in regards to the ASTM testing on JM EPDM membrane.

Thanks

Aaron Hammerstone | Project Manager

314.333.4710 Direct | aaron.hammerstone@kirberg.com

314.792.3777 Mobile

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From: Mark Tucker [mailto:Mark@D7Reps.com]
Sent: Monday, October 03, 2016 4:12 PM
To: Aaron Hammerstone

Cc: James Nunns; zac.stallings@jm.com; Jim Schriefer
Subject: RE: Clarifications on returned EPDM shop drawings

Aaron,

This JM EPDM 90NR data sheet shows we meet ASTM 4637 for EPDM. It's the same testing All EPDM is to meet, requiring minimum test results for numerous categories. There are three major manufacturers of EPDM: Johns Manville, Firestone, and Carlisle. NOTE: of the three, the latter two, have private label products, targeting a different market segment of contractors. The 3 major manufacturers are also, the only three members of the EPDM Roofing Association (ERA): http://www.epdmroofs.org/about-era/members . The goal of this organization is collectively establish current and accurate data documenting of EPDM. http://www.epdmroofs.org/about-era/who-we-are .

Inside of **ASTM D 4637**, are individual tests for certain criteria. As a whole, make up ASTM D 4637.
Of which include the following:
ASTM D 5635 – Dynamic Puncture Resistance, 5J, Type 1 – Passes
ASTM D 5602 Static Puncture Resistance, 44.1 lbf, Type 1 – Passes

There are only two hail tests for the Single Ply Membranes (according to Jim D. Koontz- Crenshaw and Koontz). Of which, the one most recognized, is FM's test, for approved Roof Nav assemblies per FM 4470.
For this project, we supplied the following two FM Nav #'s:

Assembly Properties

Assembly #:	**392147-0-0**	Slope:	1.0000
Roof System:	Single-Ply System	Wind Uplift*:	90
Application:	New Roof	Internal Fire:	1
Cover Securement:	Adhered	Exterior Fire:	A
Deck Type:	Steel	Hail:	SH
	For Use With Non-Combustible Walls:		No

AND

Assembly #:	**374588-0-0**	Slope:	1.0000
Roof System:	Single-Ply System	Wind Uplift*:	270
Application:	New Roof	Internal Fire:	NC
Cover Securement:	Adhered	Exterior Fire:	A
Deck Type:	Structural Concrete	Hail:	SH
	For Use With Non-Combustible Walls:		No

The roofing specification for this project, states in Part 1, paragraph 1.5, line 3, That the manufacturer must meet "Tested and listed by FM for class specified in "Performance Requirements" Article in Part 2 of this Section". In Part 2, **we met** Part 2, paragraph 2.2, A1. As noted, A2 criteria is for Modified Roofing. As such, A2 should be eliminated from requirements of the submittal, as **Part 2, 2.2, D.2** requires a Hail Resistance: SH. Of which, is met with both of the approved JOHNS MANVILLE Roof Nav Assembly numbers provided.

As for UL 2818, again is not a test used in the Single Ply industry. It is used primarily in the residential steep slope roofing market (shingles, tile, slate, metal roofs). The test requirementfor this, is to test roof slopes at 6" in 12" or greater. This test was a realized in 1996, by Major Property Insurers, the Institute of

Business and Home Safety (IBHS), and with United Laboratory. They developed ASMT 2218, to set a national standard, for roof impact resistance, for the residential steep slope market.

-
- A scope/ description, for the use of ASTM 2218, from the UL ASTM 2218 web page: http://www.comm-2000.com/ProductDetail.aspx?UniqueKey=20884 click on “scope”.
- 1 Scope

  1.1 This test method provides impact resistance data for the evaluation of prepared roof covering materials. For purposes of this Standard prepared roof covering materials are considered to be small units, sheets or panels designed for installation with multiple layers of such materials installed in **overlapping rows normally on inclines exceeding 25 percent**.

We did a quick research of other manufacturers web sites, and on hand manufacturers data. Not one in the Single Ply manufacturing business, list or utilize the UL 2218 test. In fact, all manufacturers use the same testing, as it relates to the ASTM (see above for Static and Dynamic Puncturing) for that membrane. In this project instance, is EPDM (ASTM D 4637).

It appears to us, that there seems to be a mix of an EPDM specification, and a Modified/ Residential specification.

If this information does not satisfy the needs of the BID Documents, please let me know.

Mark

From: Aaron Hammerstone [mailto:aaron.hammerstone@kirberg.com]
Sent: Friday, September 30, 2016 2:25 PM
To: Mark Tucker <Mark@D7Reps.com>
Subject: Fwd: Clarifications on returned EPDM shop drawings

Thanks,

Aaron Hammerstone

Project Manager
Kirberg Company
(314)792-3777

Begin forwarded message:

> **From:** Scott Klingsick <scott@kwastl.com>
> **Date:** September 30, 2016 at 2:24:29 PM CDT
> **To:** Aaron Hammerstone <aaron.hammerstone@kirberg.com>, "Gates, Devin" <ddgates@paric.com>
> **Cc:** "Szachnieski, Jason" <JRSzachnieski@paric.com>, Kathy Williams <kathy@kwastl.com>
> **Subject: RE: Clarifications on returned EPDM shop drawings**
>
> Aaron,

Sorry for the confusion. The wrong ASTM number listed in the specification. It should have been ASTM D 4637-08 “Specification for EPDM Sheet Used in Single-ply Roof Membrane” and/or UL 2218 Standard for Impact Resistance of Prepared Roof Covering Materials. We need testing and product data to show compliance with the requirements impact resistance for the hail requirements on this project.

Scott Klingsick, LEED Green Associate
Project Manager
9721 Litzsinger Rd.
St. Louis, MO 63124
(p) 314.962.2560 (f) 314.962.4057
scott@kwastl.com

KWA Architects

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From: Aaron Hammerstone [mailto:aaron.hammerstone@kirberg.com]
Sent: Friday, September 30, 2016 12:13 PM
To: Gates, Devin; Scott Klingsick
Cc: Szachnieski, Jason
Subject: Re: Clarifications on returned EPDM shop drawings

ASTM D 3746 is for bituminous roofing. ASTM D 4272 is for plastic films.

This is an EPDM roof system. I think I'm missing something here.

Thanks,

Aaron Hammerstone

Project Manager
Kirberg Company
(314)792-3777

On Sep 30, 2016, at 11:26 AM, Gates, Devin <ddgates@paric.com> wrote:

> Aaron,
>
> See convo below regarding the shop drawing markups.
>
> DEVIN GATES
> SENIOR PROJECT ENGINEER
>
> **Direct:** 636-561-9592
> **Main:** 636-561-9500

Cell: 314-348-8828
- - - - - -
77 Westport Plaza, Suite 250
St. Louis, MO 63146

Sent from my iPhone

Begin forwarded message:

> **From:** "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
> **Date:** September 30, 2016 at 11:21:32 AM CDT
> **To:** "Gates, Devin" <ddgates@paric.com>, "Szachnieski, Jason" <JRSzachnieski@paric.com>
> **Cc:** "Grossman, Lynn" <lgrossman@CANNONDESIGN.COM>
> **Subject: FW: Clarifications on returned EPDM shop drawings**
>
> Devin,
>
> See clarification from KWA below.
>
> Thanks,
>
> Kelvin Patel, CDT, LEED AP BD+C
> Associate
> T 314.425.8756
>
> ---
>
> **From:** Scott Klingsick [mailto:scott@kwastl.com]
> **Sent:** Friday, September 30, 2016 11:13 AM
> **To:** Patel, Kelvin <kpatel@CANNONDESIGN.COM>; Kathy Williams <kathy@kwastl.com>
> **Cc:** Grossman, Lynn <lgrossman@CANNONDESIGN.COM>
> **Subject:** RE: Clarifications on returned EPDM shop drawings
>
> Kelvin,
>
> It is fine to show the building taller than 60' information. We do need submittal for the 2.2 A.2. Impact Resistance: Test reports and product data showing compliance with ASTM D 3746 or ASTM D 4272. Thanks
>
> **Scott Klingsick,** LEED Green Associate
> Project Manager
> 9721 Litzsinger Rd.
> St. Louis, MO 63124
> (p) 314.962.2560 (f) 314.962.4057
> scott@kwastl.com

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From: Patel, Kelvin [mailto:kpatel@CANNONDESIGN.COM]
Sent: Thursday, September 29, 2016 1:14 PM
To: Scott Klingsick; Kathy Williams
Cc: Grossman, Lynn
Subject: FW: Clarifications on returned EPDM shop drawings

Kathy / Scott,

Please review Paric's questions and provide comments.

Thanks,

Kelvin Patel, CDT, LEED AP BD+C
Associate
T 314.425.8756

From: Gates, Devin [mailto:ddgates@paric.com]
Sent: Thursday, September 29, 2016 1:04 PM
To: Patel, Kelvin <kpatel@CANNONDESIGN.COM>
Cc: Szachnieski, Jason <JRSzachnieski@paric.com>
Subject: Clarifications on returned EPDM shop drawings

Kelvin,

I have a couple of clarifications on two items from the attached rejected submittal.

1. On page 3 the perimeter and corner dimensions are crossed out for buildings taller than 60' however this building is higher than 60' in locations, is this note correct?
2. Can you please be more specific on what is being requested in the note "submit information for A2"? Johns Mansville did not feel like any of this section applies to the EPDM roof.

Thank you,

DEVIN GATES
SENIOR PROJECT ENGINEER

Cell: 314-348-8828
Main: 636-561-9500

- - - - - -

77 Westport Plaza, Suite 250
St. Louis, MO 63146

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