

General Application Instructions

All applications must be approved by Johns Manville.

All surfaces must be clean, smooth, dry, compatible and free of dirt, debris, oil/grease and gravel. All fasteners, if required, must be properly seated and plates flush, leaving an acceptable surface to receive adhesive.

JM RSUA Packaged in 1,500 ml Cartridges

Remove the molded cap at the top of the cartridge and attach provided static-mixing nozzle to the threaded mixing head. Place the cartridge into the appropriate JM RSUA applicator.

JM RSUA Packaged in 5-Gallon Bladder

Remove bladder from box. Remove the white disc closure from the top of the packaging and extend quick-connect spouts in both Part 1 and Part 2 boxes. Invert bladder and place in appropriate tray on the Garlock Cyclone (or similar).

Box labeled "Part 1" must be in area of tray labeled "Part 1" and box labeled "Part 2" in area labeled "Part 2."

- Connect the black Part 1 fitting to the black inlet hose fitting
- Connect the gray Part 2 fitting to the gray inlet hose fitting
- Operate pump according to manufacturer's instructions
- On a scrap piece of material, dispense a small amount of RSUA. Let rise to ensure equipment and adhesive are on-ratio

For Membrane Application

Unroll the membrane and allow it to relax at least 15 minutes before applying adhesive; longer time may be necessary in colder weather.

Position the membrane with a 2" (5.08 cm) overlap between sheets. Fold membrane back one-half of the length of the first sheet's length to expose its bottom side.

Board and Membrane Application

Apply JM RSUA directly to the substrate and allow it to begin to rise and build body before placing fleece-backed membrane or board stock into the adhesive.

- Membrane attachment requires the membrane be rolled with a 150lb roller to ensure positive contact between membrane, adhesive and substrate. Weigh the board stock down with readily available load on the rooftop; example pails of bonding adhesive, screw/plate buckets or other sources of weight (minimum 32 lbs) that will not damage the roof insulation.
- Board stock attachment requires the board stock to be walked in to ensure positive contact between the board stock, adhesive and substrate.
- Do not allow the adhesive to skin over. Eliminate uneven surfaces to ensure positive contact between the insulation board/membrane and substrate.
- Apply when ambient temperature of 25°F (-3.9°C) and rising.
- Adhesive must be at least 70°F (21°C) before application.

Spatter Application

Equipment capable of producing spatter application of sprayable two-part adhesives must be used. Approved JM spray equipment includes:

Graco "E" Series Reactors
HULK
Millennium Cyclone 5/15 VS PLUS
P55
Patriot Jr.
Predator

Please reference manufacturer's instructions for application guidance. See page 3 for approved substrates and roof decks.

Unused material can be applied at a later date by simply plugging the cartridges (with provided caps) and using a new static mixing nozzle. When using box or drum packaging, properly clean dispensing wand and pump unit according to the equipment manufacturer's recommendations.



JM Roofing Systems Urethane Adhesive (RSUA) Installation Guidelines

Coverage – Fleece Backed Membranes, Insulation, and Substrates (see approvals on page 3)

Bead spacing: 12" o.c. • Applied bead size: ½" - ¾" min.

Packaging	Typical Coverage Rates*		
	per package	ft ² /gal	gal/100 ft ²
Cartridge	600-800 ft ² /case	189-250	0.33-0.4
5 gal box	2,500-3,000 ft ² /set**	250-300	
15 gal drum	7,500-9,000 ft ² /set**		
50 gal drum	25,000-30,000 ft ² /set**		

Bead spacing: 6" o.c. • Applied bead size: ½" - ¾" min.

Packaging	Typical Coverage Rates*		
	per package	ft ² /gal	gal/100 ft ²
Cartridge	300-400 ft ² /case	94-125	0.8-1.1
5 gal box	1,250-1,500 ft ² /set**	125-150	0.66-0.8
15 gal drum	3,750-4,500 ft ² /set**		
50 gal drum	12,500-15,000 ft ² /set**		

Bead spacing: 4" o.c. • Applied bead size: ½" - ¾" min.

Packaging	Typical Coverage Rates*		
	per package	ft ² /gal	gal/100 ft ²
Cartridge	200-266 ft ² /case	63-83	1.19-1.59
5 gal box	833-1,000 ft ² /set**	83-100	1.0-1.2
15 gal drum	2,500-3,000 ft ² /set**		
50 gal drum	8,333-10,000 ft ² /set**		

Spatter Pattern

Packaging	Typical Coverage Rates*		
	per package	ft ² /gal	gal/100 ft ²
5 gal	1,300-1,800 ft ² /set**	130-180	0.56-0.77
15 gal	3,900-5,400 ft ² /set**		
50 gal	13,000-18,000 ft ² /set**		

* Coverage rates are approximate and may vary based on substrate type and application. Approved substrates include structural concrete decks, JM Vapor Barrier SA or SAR, ENRGY 3, ProtectoR HD®, RetroPlus, DuraBoard, SeparatoR CGF, Securock, DensDeck, DensDeck Prime, DEXcell®, smooth modified asphalt membranes and granulated asphalt membranes. Please contact JM Technical Services for other approved substrates.

** A set is defined as an equal Part 1 and Part 2.



JM Roofing Systems Urethane Adhesive (RSUA) Installation Guidelines

Substrate & Roof Deck Compatibility		
Material Type	Bead Application	Spatter Application (excludes canisters)
	Membrane & Insulation	Membrane & Insulation
Insulation / Underlayments		
ENRGY 3 Polyiso (GRF & CGF)	Yes	Yes
Separator CGF, Protector HD	Yes	Yes
HD Wood Fiber	Yes	Yes
RetroPlus Roof Board	Yes	Yes
Gypsum (DensDeck, DEXcell, SECUROCK)	Yes	Yes
Expanded Polystyrene (EPS)	Yes ¹	No
Extruded Polystyrene (XPS)	Yes ²	No
Spray Foam Insulation (SPF)	No	No
JM Vapor Barrier SA or SAR	Yes	Yes
Roof Decks		
Concrete	Yes	Yes
Cellular Lt. Wt. Concrete (Min. 200 psi compressive strength)	Yes	Yes
Non-Vented Substrate Lt. Wt. Concrete	Yes	Yes
Gypsum	Yes	Yes ⁵
Cementitious Wood Fiber	Yes	No
Plywood/OSB	Yes	Yes
Painted Steel	Yes ²	No
Galvanized Steel	Yes ^{2,10}	No
Acoustical Steel	Yes ²	No
Wood Plank	Yes	Yes
Existing Roofing Materials - bonded pull test required for adhesion to existing membranes		
Smooth BUR	Yes ³	Yes ³
Gravel BUR	Primer required ^{4,9}	No
Mineral Cap Sheet	Yes	Yes
Granular Modified-Bitumen SBS	Yes	Yes
Smooth Modified-Bitumen SBS	Yes	Yes
Coal Tar Pitch	Yes ⁶	No
Granular Modified Bitumen APP	Yes	Yes
Smooth Modified Bitumen APP	No	No
Aluminum-Coated BUR	Yes ⁷	Yes ⁷
Aged EPDM, Hypalon®	Yes ^{8,11}	No
Unweathered Asphalt	Yes ⁸	Yes ⁸

¹ JM TPO FB, JM PVC FB, and JM PVC SD Plus FB membranes may be installed directly over minimum 1.25-lb. density EPS; to obtain UL & FM codes, an overlayment of HD Polyiso or gypsum cover board is required.

² For insulation attachment only.

³ Existing Smooth BUR must be Type III or IV asphalt if the JM TPO FB, JM PVC FB, or JM PVC SD Plus FB membrane is to be installed directly without insulation.

⁴ Loose gravel to be removed by HydroVac. A minimum ½" of RetroPlus RoofBoard or insulation is required over properly prepared gravel BUR. JM fleece-backed membranes cannot be installed directly over a gravel/slag surface.

⁵ Adhesive pull test required.

⁶ An insulation providing the necessary R-value must be specified to prevent the coal tar pitch from softening. JM fleece-backed membranes cannot be installed directly to coal tar pitch.

⁷ Any loose coatings must be removed by power-washing or by physical abrasion, application of JM SA primer prior to the application of RSUA Adhesive. A test installation over the aluminum-coated smooth BUR is required.

⁸ Spatter, 6" or 12" o.c. beads requires JM All Season Sprayable Bonding Adhesive as a primer for all applications.

⁹ Acceptable, requires additional adhesive.

¹⁰ Power-washing required to remove finishing oil residue, if present.

¹¹ Contact JM Technical Services for further assistance.

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please 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. The physical and chemical properties of the product listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Check with the regional sales representative nearest you for current information.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville roofing products and systems, visit www.jm.com/terms-conditions.