



Premium Building Products
That Protect

1. Product Name

PW-100/40 Air/Vapor Barrier

Primers

- No. 100 Primer
- No. 100 VOC Primer
- No. 6000 Water-Based Primer
- No. JS160H Mastic

2. Manufacturer

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3. Product Description

BASIC USE

Protecto Wrap's Air/Vapor Barrier is a peel-and-stick membrane for use as a positive air/vapor stop in everyday construction. PW-100/40 AVB is compatible with and will adhere to steel, wood, concrete, building paper, block wall, drywall and insulation board. PW-100/40 AVB's paper release backing, and the variety of available roll widths, contributes to the ease of application. There are multiple uses that utilize the aggressive adhesive characteristics of the membrane, including:

- As a full building wrap in envelope applications in cavity wall construction
- Sealing window and door perimeters to the building substrates
- Sealing around skylights
- As a vapor barrier in mechanically fastened roofing systems
- Sealing joints in exterior gypsum board
- Sealing joints in outslation systems
- Sealing penetrations in roof and wall systems

COMPOSITION & MATERIALS

PW-100/40 AVB is a 40 mil (1 mm) SBS modified, rubberized asphalt sheet waterproofing membrane that fully bonds to most substrates through the primer course. The polyethylene-topped membrane has excellent conforming capabilities to irregular surfaces.

Note - The membrane is also available in a 60 mil (1.5 mm) version - PW-100/60.

PACKAGING

See Table 1.

LIMITATIONS

- PW-100/40 is not recommended for applications where the membrane will be exposed to continuous sunlight
- Do not apply primer or membrane to wet, damp, frosty or contaminated surfaces
- Do not apply primer or membrane to frozen concrete
- Do not apply over sealants containing tar. If bitumen modified materials are encountered, consult a Protecto Wrap representative for guidance

ACCESSORY MATERIALS

JS160H Mastic and Protecto Wrap primers are specially formulated for use with PW-100/40 AVB.

No. 100 Primer is a high tack SBS rubber base primer. It is used on all vertical surfaces before application of the membrane and on all surfaces with temperatures between 25 and 40 degrees F (-4 and 4 degrees C).

No. 100 VOC Primer is a VOC compliant version of Protecto Wrap's standard No. 100 Primer.

No. JS160H Mastic is a rubberized blend of bituminous and synthetic resins used for sealing detail cuts, membrane terminations and penetrations such as masonry ties.

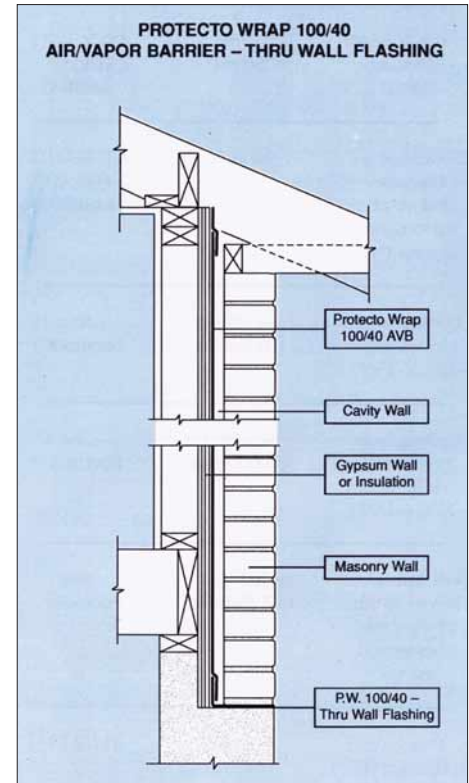
No. 6000 Water-Based Primer is a water-based primer that contains no VOCs. The No. 6000 Primer comes in a 1 gallon (3.8 L) concentrate. Mix the concentrate at a ratio of 1 part water to 1 part concentrate for a vertical application and 2 parts water to 1 part concentrate for a horizontal application.

4. Technical Data

APPLICABLE STANDARDS

ASTM International

- ASTM C836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course
- ASTM D146 Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing
- ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension
- ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials



Application details

- ASTM E154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover
- ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

APPROVALS

Consult manufacturer for current information on approvals by code bodies and other industry entities.

PHYSICAL PROPERTIES

See Table 2.

5. Installation

STORAGE & HANDLING

Store all material inside in a dry space at temperatures between 50 and 90 degrees F (10 and 32 degrees C). Do not store in direct sunlight. Do not remove material from box until ready to use. For cold weather applications, store PW- 100/40 AVB in a heated airspace at a temperature of 50 degrees F (10 degrees C) or higher for at least 2 days prior to application. Remove only

the material that can be applied within 2 hours. Store materials away from flames or sparks.

PREPARATORY WORK

Handle and store product according to manufacturer's recommendations.

Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

Verify that site conditions are acceptable for installation. Do not proceed with installation until unacceptable conditions are corrected.

Surface Preparation

Prior to application, ensure that all surfaces are clean, dry and free of dirt and other foreign matter. Apply PW-100/40 AVB at a temperature above 40 degrees F (4 degrees C). Should application below this temperature be necessary, consult a Protecto Wrap representative.

APPLICATION

The application surface must be cleaned using a broom, a vacuum or an air compressor dispensing clean, dry air so that all dust and foreign matter are removed.

Thinning of No. 100 Primer is not recommended. When not in use, seal open containers to prevent evaporation of the solvents.

Prime the area to be sealed with No. 100 Primer and allow it to dry to a tacky state. Apply primer to all surfaces by roller or brush, at a rate of 150 - 250 ft²/gal (3.8 - 6.3 m²/L), depending on the porosity of the surface. Primed surface must be free of runs, puddles or excessive primer, as the presence of these conditions can result in blistering.

Protecto Wrap No. 6000 Water-Based Primer may be used in lieu of No. 100 Primer when application temperatures are above 50 degrees F (10 degrees C). Side laps should be a minimum of 2" (51 mm) and end laps should be a minimum of 4" (102 mm). All membrane terminations should be sealed with a 1" (25.4 mm) wide troweled bead of JS160H Mastic.

Test the primer using the "rule of thumb" method. Press thumb firmly on the primed surface and twist. If the primer feels pliable but does not adhere to thumb, the primed surface is ready for membrane application.

Unroll the PW-100/40 AVB to the desired length and begin applying the membrane by removing the release paper and smoothing it into place. Apply a bead of SBS Mastic over any brick tie cuts and at all membrane terminations.

TABLE 1 PRODUCT PACKAGING (PRIMER AND MASTIC)

	No. 100 Primer	No. 80 Primer	JS160H Mastic
36 10.5 oz tubes, lb (kg)	-	-	24 (18.6)
4 - 1 gallon can, lb (kg)	38 (17.2)	38 (17.2)	40 (25)
5 gallon pail, lb (kg)	46 (21)	46 (21)	50 (31)
55 gallon drum, lb (kg)	485 (220)	485 (220)	-

TABLE 2 TYPICAL PHYSICAL PROPERTIES

Property	Value	Test Method
Thickness	40 mil (1 mm)	-
Color	Grey	-
Pliability 180° bend over 1" (25.4 mm) mandrel at -25°F (-32°C)	Unaffected	ASTM D146
Tensile strength (membrane)	250 psi (1.7 MPa)	ASTM D412 (Die C) modified
Elongation - Ultimate failure of rubberized asphalt	300% min	ASTM D412 (Die C) modified
Cycling over crack at -15°F (-26°C)	No effect, 100 cycles	¹
Cycling over 1" (25.4 mm) joint at -15°F (-26°C)	No effect, 1000 cycles	¹
Peel adhesion - 28 days wet (submerged aging)	4.7 lb/in (5.7 N/m) width	²
Puncture resistance - PW 100/40 Through wall flashing (stretched by blunt object)	40 lb (178 N) min	ASTM E154
Puncture resistance - Polyethylene film (mm N tear - impact from sharp object)	250 in oz (1746.25) min	ASTM D781
Air permeance of "in-place" system (pressure difference of 75 Pa)	Less than 0.25 cfm/ft ² (0.01 l/s/m ²)	ASTM E283 ³
Resistance to 2 kPa air pressure difference	No increase in equivalent leakage area	ASTM E283 ³
Permeance - Metric perms	0.009 perms (0.517) max	ASTM E96 (Method B)
Water absorption - 72 hours % of weight	0.25 max	ASTM D1228

¹ Membrane is applied across 2 primed blocks with no separation between blocks. At -15 degrees F (-26 degrees C), blocks are pulled apart 1/4" (6.4 mm), then returned to original position. Cycle is repeated 100 times. For joint cycling, the blocks are double covered with membrane separated by 1" (25.4 mm), then cycled at -15 degrees F (-26 degrees C) between 3/4" and 1 1/4" (19.1 and 32 mm) for a minimum of 1000 cycles.

² Membrane is applied to primed blocks and rolled. Blocks are then stored for 28 days under water. Membrane is then peeled from the concrete at a 90° angle.

³ Membrane is adhered to concrete block wall and penetrated by mechanical fasteners. System is tested with both positive and negative pressure differentials (independent certified laboratory test figures).



Note - It is very important in full envelope applications that the PW-100/40 AVB be tightly sealed into roofing and below-grade waterproofing systems and perimeter flashings to retain the integrity of the vapor barrier throughout the entire structure. In full building envelope applications, the dew point must be engineered to conditions outside of the building.

PW-100/40 AVB is available with a serrated release liner 4" (102 mm) from the top edge for ease of application. In this application, remove the 4" (102 mm) top release paper and adhere the PW-100/40 AVB to the wall. Once in place, remove the bottom release paper and adhere the PW-100/40 AVB to the surface being sealed.

PRECAUTIONS

Protecto Wrap solvent-based primers/mastic are flammable. Avoid exposure to open flames, sparks, etc. Use only in areas with adequate ventilation. Refer to MSDS for additional information and warnings.

6. Availability & Cost

AVAILABILITY

PW-100/40 AVB is manufactured in Denver, CO, and is available worldwide through a network of Protecto Wrap distributors. For detailed product information or to find a local representative or distributor, contact the Protecto Wrap Co.

COST

PW-100/40 AVB is competitively priced. Contact a local representative or the corporate office for information.

7. Warranty

Protecto Wrap Co. expressly warrants, subject to the Exclusion Of Warranties provision, that its products shall be fit for the ordinary purposes for which such products are intended for a period of 5 years. Contact the manufacturer for complete warranty details.

8. Maintenance

None required, if installed in accordance with manufacturer's recommendations.

9. Technical Services

Complete technical assistance and information are available from Protecto Wrap field representatives and distributors or by contacting the manufacturer.

10. Filing Systems

- MANU-SPEC®
- Additional product information is available from the manufacturer.