



# Single Ply Roofing Systems (PVC) Specification SP5RA/SP6RA/SP8RA

**Fully Adhered PVC Single Ply Roofing System. For use over Johns Manville (JM) approved decks, or appropriate JM insulation on inclines of up to 6:12 with solvent-based adhesive and inclines up to 2:12 with latex-based adhesive.**

**For Regions 1, 2 and 3**

**Materials per 100 sq. ft. (9.3 sq. meters) of roof area**

PVC Membrane	105 sq. ft. (9.8 sq. meters)
PVC Membrane Adhesive (Solvent Based)	1.5 gal. (5.7 liters)
PVC Membrane Adhesive (Latex Based)	1.0 gal. (3.8 liters)
Approximate installed weight:	37.5 - 40 lbs. (17-18 kgs./ sq.

### General

This specification is for use over any type of approved structural deck which is suitable to receive a fully adhered membrane.

This specification is also for use over certain Johns Manville roof insulations which provide a suitable surface for the PVC membrane. Insulation should be installed in accordance with the appropriate JM Insulation Specification detailed in the current JM Single Ply Roofing Systems Manual. This specification can also be used in certain reroofing applications.

**Design and installation of the deck and/or roof substrate must result in the roof draining freely, to outlets numerous enough and so located as to remove water promptly. Minor ponding is acceptable.**

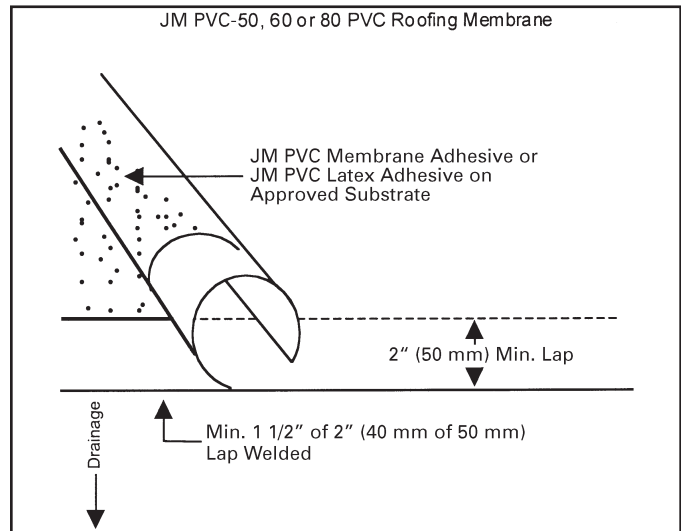
**Note:** All general instructions contained in the current JM Single Ply Roofing Systems Manual shall be part of this specification.

### Flashings

Flashing details can be found in **Section 7** of the JM Single Ply Roofing Systems Manual.

### Application

Local wind uplift conditions and characteristics should be considered when designing, specifying, and installing any roofing system. Information from the Single Ply Roofing Industry, FM Global and local building codes can provide guidelines for the designer.



Unroll the JM PVC Membrane, and allow to relax for at least 15 minutes when the temperature is above 60°F (16°C), or 30 minutes when temperature is below 60°F (16°C), prior to installation. Once the membrane has been properly positioned, fold the sheet back half of the sheet's length. Following the instructions of the adhesive, apply adhesive as directed. **Do not apply adhesive to the lap areas of the sheet that will be welded.** Instructions for positioning and placement of the PVC membrane sheet are provided in the **PVC Application Guide** which is available on the web site at [www.jm.com](http://www.jm.com). The membrane should be smooth and free of wrinkles and buckles.

### Welding of Lap Areas

**JM PVC Adhered Roofing Systems shall be hot air welded only. All surfaces to be welded shall be clean and dry. No adhesive shall be present in the lap areas.** Machines for hot air welding are available from several different sources. Each set of manufacturer's operating instructions shall be followed, as well as all local codes regarding electric grounding, supply and other related functions. Since most automatic welding machines require 218 to 230 volts, the use of a portable generator on the roof is recommended for greater flexibility. Hand-held welding machines are also available to weld membrane. After the preheated nozzle tip is applied in the overlap area and the material starts to flow, immediately follow with a



hand roller to press the heated membrane surfaces together with slow, even movements. Keep the roller within 1" (25 mm) of the nozzle tip. Angle the hot air tool so that the flowing air faces the roller. The temperature of the hot air tool shall be adjusted so that a minimum amount of smoke is developed and material from the bottom of the sheet begins to soften and flow from the seam. Seam strength may be tested when cool.

#### **Quality Control of Seams**

After heat welding, the seams are checked for integrity with a blunt-ended probe. Any openings or "fishmouths" shall be repaired with a hand-held hot air tool fitted with a narrow nozzle tip and with a roller. Each day, several sections of welded seams shall be pulled apart by the roofing contractor to test the quality of the welds. Should the welds be deficient, a more thorough examination of the work performed must be carried out and necessary repairs made.

#### **Perimeter Attachment**

Secure attachment of the PVC roofing membrane at the perimeter and at penetrations can be accomplished by mechanical fastening (using High Load Fasteners and Plates or APB Plates or other approved fasteners as appropriate for substrates).

