



Project: Warm Springs Condominium Development

Location: Fremont, California

Contractor: Diablo Roofing of Oakland

Square Feet: 109,000

Products: Flex brand PVC 60 mil fleece and walkpads

PVC (vinyl) roofing membrane is playing a vital role in a new condominium development in the Warm Springs neighborhood of Fremont, Calif. PVC is not only contributing its usual environmental benefits, but also complementing the effectiveness of the building's rooftop array of solar panels.

PVC is ideal for rooftop-mounted solar because it helps keep panels cool. The material's supreme suitability for solar projects is something of a best-kept secret that fortunately is becoming more widely known.

California, always at the leading edge of green building and other sustainability initiatives, is home to Title 24, also known as the California Building Standards Code. This comprehensive set of regulations aims to maximize energy efficiency and sustainability in buildings across the state. Both PVC roofing and solar energy can help fulfill some of these standards. Together, they make a perfect pair.

The benefits stem largely from the high reflectivity of white PVC membranes. By reflecting sunlight rather than absorbing it, white PVC keeps rooftop temperatures lower, helping to cool both the building and the solar panels themselves, improving the panels' efficiency.

This large-scale condominium project, spanning an entire city block, required a comprehensive roofing solution. Flex Membrane, the manufacturer of the PVC roofing system used on the project and led by President John L. Doyle, was selected in part for the long-term durability and sustainability attributes associated with PVC roofing systems. Diablo Roofing of Oakland performed the roofing install, using 109,000 square feet of Flex brand PVC 60 mil fleece-back roofing membrane adhered to the coverboard with low-rise foam adhesive.



Rooftops equipped with solar arrays are typically accessed more frequently for inspection and maintenance. To accommodate this, Flex also supplied 2,040 linear feet of walk rolls. These reinforced PVC rolls are strategically placed to minimize wear and tear in high-traffic areas. Made with 25% pre-consumer recycled PVC content, the walk rolls also contribute to the project's sustainability-focused approach.



The recyclability of PVC roofing membrane is a key component of the material's sustainability story. Production scrap can be collected at the manufacturing plant and re-incorporated into future product. At the end of service life, many installed PVC roofing membranes can be removed and recycled instead of sent to landfills.

In this project, because this specific roof membrane was adhered with glue, it is not currently recyclable. However, due to continuing innovations in the PVC roofing industry, Doyle believes this roof has a good chance to be recyclable by the end of its lifecycle. "That's more than two decades away. Our industry is already getting closer to making recycling of adhered membrane a reality."

PVC is gaining prominence as a roofing solution in California and throughout the country. "It has a half-century track record that people can look at and judge for themselves. The durability and sustainability speak for themselves," said Doyle. "This roof will last 20 to 25 years, maybe more. Because of this longevity, it has low total cost of ownership. Then add the energy savings over those years from PVC helping to keep the building cooler, and you've got a durable, affordable roofing solution." ■



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