



JM TPO SYSTEMS

Single Ply Roofing



JM TPO SYSTEMS

A Company You Know and Trust



JM TPO manufacturing facility in Scottsboro, AL

JM's Commitment to Single Ply and TPO

Johns Manville (JM) is recognized as one of the industry's foremost providers of complete single ply and bituminous roofing systems. Our 150-plus-years of history as a leading manufacturer of quality building products has made JM a trusted advisor for our customers.

We have maintained our legacy by investing in products that address unique building requirements and advances in roofing technology. With over 30 years of experience in high-performance single ply roofing systems, we continue to help our customers succeed in this increasingly important marketplace. In 2012, JM dedicated a new EPDM manufacturing facility in Milan, Ohio, complementing our investment in the single ply industry.

Presently, JM is also helping our customers take advantage of the continued growth in the thermoplastic polyolefin (TPO) marketplace. With over a decade of TPO experience, JM currently has a best-in-class manufacturing facility located in Scottsboro, Alabama.

Responding to Market Demand

TPO is the nation's fastest-growing commercial membrane roofing system. In fact, it has consistently continued to outpace other roofing materials due to its ease of use and specifier confidence.

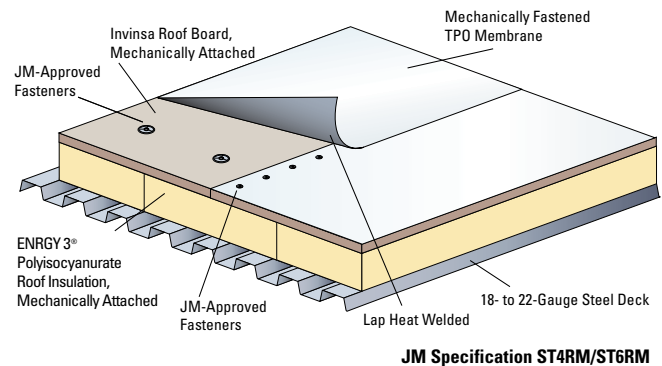
TPO takes less time to install, requires minimal maintenance, and its thermoplastic makeup and heat-weldability allow contractors to make repairs with ease.

When used in conjunction with JM's polyisocyanurate insulation boards or Invinsa® Roof Board, TPO can be installed over existing roof systems in re-cover applications. Consult your local JM sales representative for specific system requirements and local code regulations.

Benefits and Features of JM TPO

JM TPO is the result of extensive research and customer feedback. We ensure quality is added and maintained where it matters most.

One of the most critical requirements is thickness over scrim. JM sets targets above the thickness over scrim required by ASTM in order to ensure the highest long-term performance. JM also measures thickness on a continual basis across a 10-foot-wide sheet with a state-of-the-art thickness gauge to verify that the thickness valued by our customers is incorporated into the sheet.



Formulated for Success

- Cost-effective**
- Durable**
- Efficient**
- Environmentally sound**

TPO membranes are ideal for commercial roofing applications. The reinforced fabric scrim layer and top-ply thickness give TPO its durable physical properties, including:

- Long-term weathering, UV resistance and heat-aging properties
- Resistance to harsh chemicals, industrial pollutants, abrasions and punctures
- High breaking and tearing strength for superior wind uplift performance and long-term durability

Preferred in Tests by Roofing Contractors

More than 1,500 individuals — including over 1,000 welders — participated in a nationwide series of blind challenges comparing leading TPO membranes. Of the welders, 70% selected JM TPO as their membrane of choice. And of those experts who utilize TPO enough to correctly identify all membranes represented, 90% chose JM TPO as the superior product for:

- Weld window
- Lay flat
- Seam strength
- Workability

JM TPO was chosen as the best overall **six times more often than its closest competitor** — a strong statement from people who really know roofing.

Our optimized formula was also recognized to deliver high-performance ozone resistance, cool roof reflectivity and overall weather resistance.

One of the Widest Melt Windows of Any TPO Currently Available for Commercial Roofing

This promotes better welds over a wider variety of speeds and temperatures, and leads to a softer, more flexible sheet to work with for the applicator. JM TPO passes ASTM D 6878 and complements these test results with a solid — and growing — set of approvals from FM Global® and UL® (Underwriters Laboratories Inc.).

An Environmentally Smart Solution

For building owners and architects concerned about energy efficiency and reducing harmful impacts on the environment, JM helps you build green by offering a TPO product that is light colored and highly reflective. These membranes reflect solar energy to lower the heat absorbed into the facility, thus reducing air conditioning energy loads and costs.

In addition, TPO's high reflectivity can help reduce the "heat island" effect, which occurs when buildings with nonreflective materials absorb heat from the sun, increasing the temperatures in urban environments.

White JM TPO membrane is ENERGY STAR® rated and meets the stringent requirements for both LEED® (Leadership in Energy and Environmental Design) and California Title 24 when tested by the CRRC® (Cool Roof Rating Council).

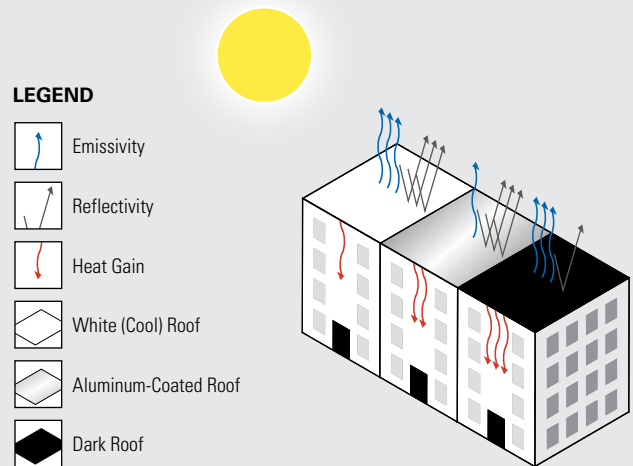
Complete TPO Solutions

TPO membranes are available in standard widths, thicknesses, lengths and colors for use in mechanically attached and fully adhered roofing systems. JM also provides a full line of innovative TPO accessories, adhesives and sealants. Customizable thicknesses, lengths and widths up to 10 feet are also possible with minimum purchases.

JM's mechanically fastened and adhered TPO roof systems are UL and FM Global approved. Our membranes meet or exceed the requirements of ASTM D 6878 Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing.

For a complete listing of available TPO products and accessories, as well as applicable test methods, visit www.jm.com/roofing or contact your local JM sales representative.

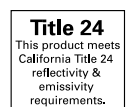
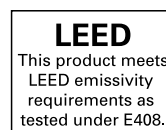
THE THEORY OF COOL ROOFS



This simple graphic illustrates the theory of cool roofs. There are many complex and related variables to consider when selecting the correct roofing product for these applications.

Solar reflectivity (or reflectance) is the fraction of solar energy reflected by the surface back to the sky.

Infrared emissivity (or emittance) is a measure of the ability of a surface to shed some of its heat away from the roof surface. High emissivity helps keep surfaces cool.



LEED is a registered trademark of the U.S. Green Building Council. Title 24 is in the Building Standards Section of the California Code of Regulations. ENERGY STAR is a registered trademark of the U.S. Department of Energy and U.S. Environmental Protection Agency.

"TPO membrane roof systems feature superior performance characteristics ... providing optimum value to the customer."

– **Dominic Marino**, Vice President of Waukegan Roofing Co. Inc., Chicago, IL



SUPERIOR PERFORMANCE

"TPO is white and has excellent reflectivity characteristics for the Florida sun. It goes down quickly, which allows us to dry-in the building. It is an economical, durable and long-lasting product."

– **Jay Rintelmann**, President of
Hartford South LLC, Orlando, FL



RETAIL WAREHOUSE | Jacksonville, FL
818,000 square feet of JM TPO-60

Roofing Contractor: Hartford South LLC, Orlando, FL
JM Pinnacle Council® contractor

Owned by Florida Crown Development Corporation



RANIER & SNOQUALMIE BUILDINGS | Sumner, WA
900,000 total square feet of JM TPO-45

Roofing Contractor: Tri-Star Roofing Inc., Ravensdale, WA
JM Pinnacle Council® contractor

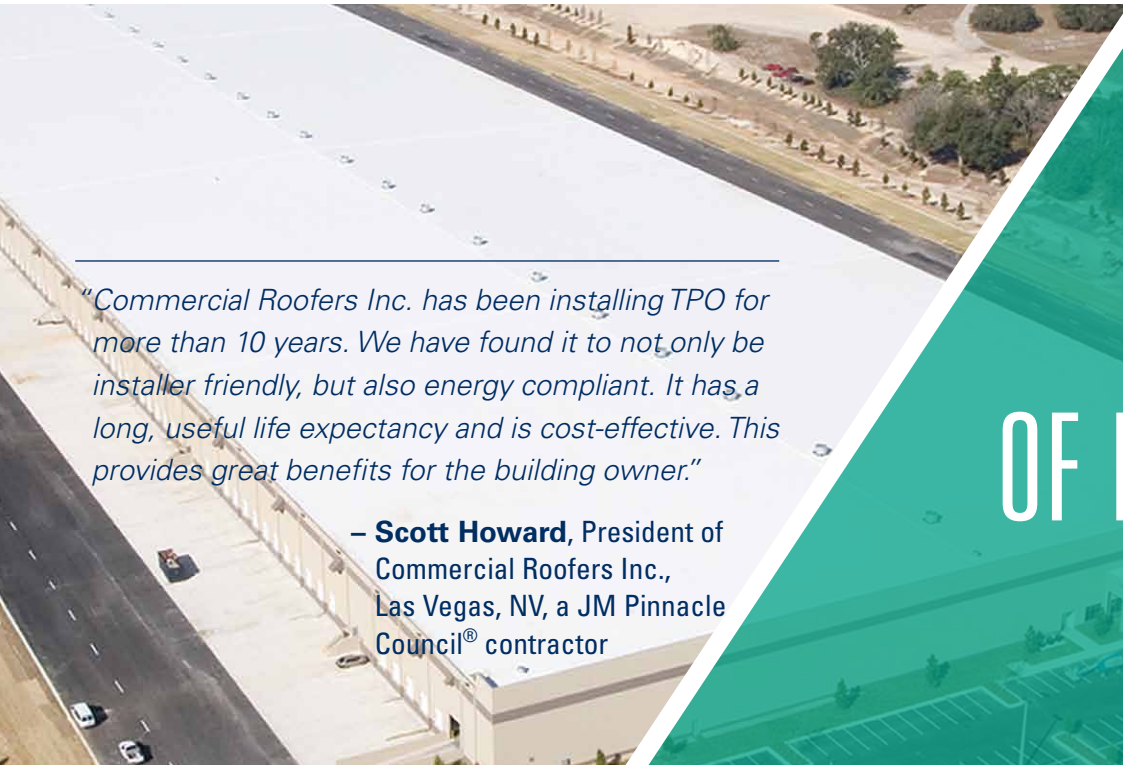
Owned by Knapp Development



WESTGATE HOTEL | San Diego, CA
5,000 square feet of JM TPO 80 mil

Roofing Contractor: Sylvester Roofing Company Inc., Escondido, CA
JM Pinnacle Council® contractor

Owned by Westgate Hotel Group



“Commercial Roofers Inc. has been installing TPO for more than 10 years. We have found it to not only be installer friendly, but also energy compliant. It has a long, useful life expectancy and is cost-effective. This provides great benefits for the building owner.”

– **Scott Howard**, President of Commercial Roofers Inc., Las Vegas, NV, a JM Pinnacle Council® contractor

A HISTORY OF LEADERSHIP

Offering Nationwide Access to Quality TPO



JM distribution locations are set up around the country to provide timely service to our customers.

Tracy, CA | Scottsboro, AL | Hazleton, PA

Great Systems, Great Guarantees

Each TPO system from Johns Manville may be eligible for the strongest and most comprehensive guarantee in the roofing industry, the JM Peak Advantage® Guarantee.



JM offers 5, 10, 15, 20 and 25-year guarantees for new construction, complete tear-off or re-cover applications. Be sure to contact a local sales representative for specific details on how to obtain a JM Peak Advantage Guarantee that meets your needs.

TPO Membrane Systems: Fully Adhered or Mechanically Attached		
SYSTEM	TERM	THICKNESS
Good	5, 10 or 15 year	45 mil
Better	20 year	60 mil
Best	25 year	80 mil

Dedicated to Service and Support

There is untold value in working with a company that has experience, a strong reputation and acknowledged expertise.

JM uses a consultative approach to meet the needs of our professional partners.

- **Technical Support Team** – Expert field technicians are available on site to provide support and answer any roof-related questions.
- **Systems Engineering Group** – Provides assistance to design professionals to ensure the roofing system complements the building envelope for a complete, quality building package.
- **Sales and Customer Support Teams** – Logistical experts work closely with sales representatives to provide accurate product information and facilitate on-time shipments.

A Leading Single-Source Provider

Johns Manville, a Berkshire Hathaway company (NYSE: BRK.A, BRK.B), is a leading manufacturer and marketer of premium-quality building and specialty products. In business since 1858, the Denver-based company has annual sales in excess of \$2 billion and holds leadership positions in all of the key markets that it serves. Johns Manville employs approximately 7,500 people and operates 40 manufacturing facilities in North America, Europe and China.

JM offers a comprehensive line of single ply and bituminous roofing system solutions. Each system is available with quality thermal insulations, cover boards, adhesives, cements, roof coatings, specialty roofing products and the possibility of a JM Peak Advantage Guarantee.

Product Warranties

Johns Manville designs roofing products that work together to provide a one-source comprehensive roofing system solution. Total roofing system guarantees are available under the JM Peak Advantage Guarantee program. To learn more about our standard guarantee terms and conditions, talk to your local JM sales representative.

JM Peak Advantage Guarantees are available only on qualified JM roofing systems containing JM roofing products. JM standard product terms and conditions will apply to include a one-year limited product warranty.

Peak Advantage Contractor Program

To ensure quality workmanship and top-notch installation, JM offers its Peak Advantage Contractor Program. Contractors selected to participate are proven to be best in class, having lived up to the highest performance standards. These contractors have access to JM's strongest guarantees. To be assured of the best possible results on the roofing system you specify, make sure it's installed by a JM Peak Advantage Contractor.



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