TPO

What is TPO?

TPO (thermoplastic polyolefin) is a single-ply reflective roofing membrane made from polyprophylene and ethylene-propylene rubber polymerized together. This thermoplastic cool roof solution has gained broad industry acceptance for its many performance and installation advantages. TPO is among the fastest growing commercial roofing products in the world today.

Benefits of TPO

DURABILITY, FLEXIBILITY AND VERSATILITY
- TPO is highly resistant to tears, impacts, and punctures with good flexibility to allow for building movement
- Can be installed on low and high slope surfaces
- Can be heated and reshaped or melted multiple times

ECONOMICAL AND EASY TO INSTALL
- Membrane's flexibility allows for a rapid installation and requires little maintenance
- Large panels reduce number of seams and cut labour costs drastically

COOL ROOFING MATTERS
- A light coloured roof that reflects the sun's energy can play a significant role in reducing the buildings cooling costs
- It also offers benefits to the surrounding environment through a reduction of the urban heat island (UHI) effect

WELDED SEAMS FOR LONG-LASTING PERFORMANCE
- TPO membranes are heat-welded at 926°C with a hot-air gun. The result is a fused seam that's stronger than the field of the membrane

ECO-FRIENDLY
- TPO membranes contain no toxic or hazardous ingredients and are fully recyclable

Did you know?

TPO roofing membranes originated in Italy and have performed since the 1980's

Several manufacturers offer **TPO** roofing but no two membranes are alike in physical properties, look or feel

TPO is typically installed in 3 colours: white, grey, tan

TPO has been used in underground cabling and waterproofing for more than 30 years.

3
Typical TPO thicknesses:
- **45 mil (.045")**
- **60 mil (.060")**
- **80 mil (.080")**

20%+
Year over year growth of market share in the last decade in the U.S. alone *(Industry data)*

28%
TPO's share of the commercial roofing market in the U.S. as of 2012 *(Industry data)*

30
Years length of Firestone's comprehensive Red Shield warranty for UltraPly™ TPO Platinum system

50%
Greater puncture resistance between a 80-mil and 45-mil TPO membrane

100%
TPO is fully recyclable

CASE STUDY

ZERO REPAIRS FOR OVER 15 YEARS - AND COUNTING

Judge Memorial High School in Salt Lake City, UT installed Firestone's UltraPly™ TPO system in 1998 to replace its built-up roof. The roof shows almost no wear to date, provides consistent whiteness and had zero repairs to date.

> "The Firestone UltraPly™ TPO roofing system has been a good product all around. We haven't even had minor repairs.
>
> *- KEN LEWIS, Maintenance Supervisor*

Full case study available on www.firestonebp.ca

CASE STUDY

TPO ON ONE OF THE MOST EFFICIENT BUILDINGS IN THE WORLD

The Earth Rangers Centre (ERC) in Woodbridge, ON is a global leader in energy efficiency and sustainable operations. The ERC is currently the highest rated LEED building in Canada. 16,000 square feet of Firestone UltraPly™ TPO keep the building cool and waterproof since 2003.

Firestone UltraPly TPO Fully Adhered has performed flawlessy since 2003

> "I would recommend UltraPLY TPO™, particularly when comparing to asphalt roofs. Since installation in 2003, we have not had a single issue to deal with on this roof. This is very important to me managing this facility, because the same cannot be said of most mechanical systems.
>
> *- Andy Schonberger, Director, Earth Rangers Centre*
> *Chair Board Of Directors, CaGBC - Toronto Chapter*

Visit www.ercshowcase.com for the fully story

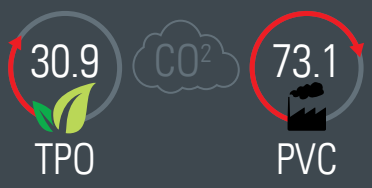
TPO vs. PVC

Firestone Building Products withdrew from the PVC market in 2005 as a commitment to the environment amongst a global shift to phase out PVC – which is manufactured from Vinyl Chloride Monomer (VCM), a known human carcinogen.*

A wide range of major corporations including Microsoft, HP, Shaw, Wal-Mart, Nike, Mattel, Lego, Johnson & Johnson, GM, VW, and Honda have begun the switch to alternative materials. PVC is already banned in certain states.**

ENVIRONMENTAL IMPACT

TPO membranes have a drastically lower environmental impact compared to PVC throughout their entire life cycle.



Measured in Kg CO^2 per m^2 of installed Adhered White 60 mil membrane.***

** World Health Organization, ** Healthy Building Network, *** Green Team Inc.*