

AQUASTOP MEMBRANE M-3050 TPO

Thermoplastic Polyolefin Membrane

PRODUCT DESCRIPTION

AQUASTOP MEMBRANE M-3050 TPO is a modern roofing and waterproofing material known for its flexibility, environmental friendliness, and resistance to UV and heat. It is especially popular in commercial roofing and exposed application.

- ▶ high flexibility and durability (at different temperature gradient)
- ▶ IR reflection, cool-roof, energy saving
- ▶ Excellent weldability (hot air / heat welding)
- ▶ Excellent weathering and UV resistance
- ▶ Dirt resistance, superior algae and fungus resistance

DESIGN USE

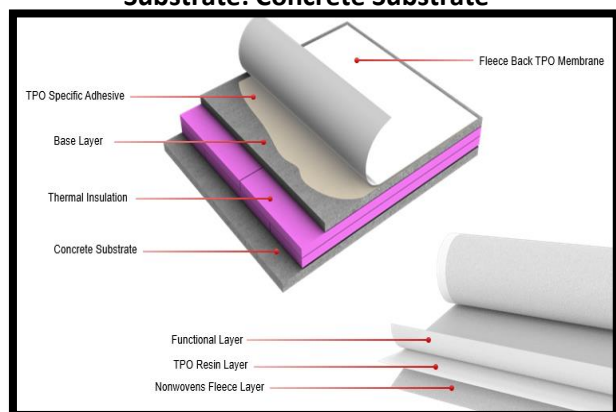
Commercial, industrial roofing, green building and sustainable building flat roof, terraces, podium, residential roofing, solar panel roofing, airports, and etc.

PHYSICAL DATA

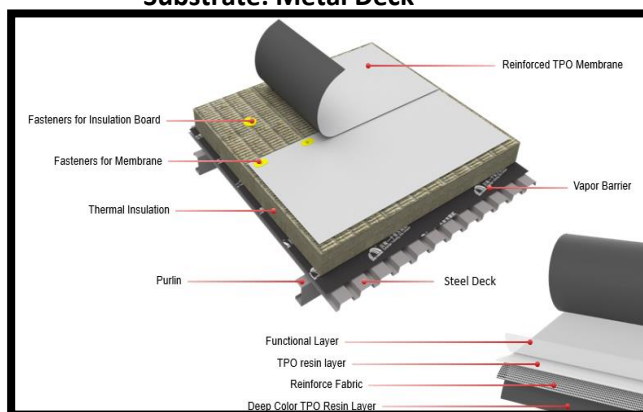
Finish	Matt
Colour Range	White <i>(Please consult KCC representative for custom colours)</i>
Elongation at Break	> 400% (ASTM D412)
Tensile strength	> 22.0 MPa (ASTM D412)
Puncture resistance	448 N
Solar Reflectance Index	0.8
Thickness	1.2, 1.5mm
Length	10-30 meter
Width	1.0, 1.5, 2.0, 3.0 meter
Application Method	Heat welding

RECOMMENDED COATING SYSTEM

Substrate: Concrete Substrate



Substrate: Metal Deck



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APPLICATION METHOD

AQUASTOP Membrane M-3050 TPO are fused together by hot air welding. This product creates a broad temperature range and good welding properties in several weather conditions. For special joint design and treatment, please consult local KCC team for more information.

SURFACE PREPARATION

New Concrete Substrates

- ▶ All new surfaces should be dry out thoroughly preferably for at least 28 days drying time.
- ▶ The moisture content of the concrete surface should be checked and ensured to be below than 16% when measured with reliable moisture meter.
- ▶ All surface contaminants such as laitance, dust and loose cement shall be removed by using scraper, sandpapers and clean slit brushes.
- ▶ Structural cracks should be repaired with appropriate crack repair compound.
- ▶ Any holes and undulations should be resurfacing with appropriate floor patch.
- ▶ Verify the roof has adequate slope (minimum 1:100 or 1%) toward drains to prevent ponding.
- ▶ Sweep, vacuum, or pressure-wash to remove dust, dirt, oil, grease, curing compounds, laitance, and loose particles. Concrete should be clean and dry before membrane installation. Moisture can cause blistering or poor adhesion. If moisture is suspected, perform a moisture test (ASTM D4263 – plastic sheet test).

Previously painted, coated, or previously waterproofed Surfaces

- ▶ Complete removal by grinding or shot-blasting is ideal. If coating removal is not practical, conduct adhesion testing with the new primer or adhesive system. If adhesion is poor, install a separation layer (e.g., protection board, concrete topping, or geotextile layer). For well-bonded bitumen, install a separator or recovery board (such as PIR board, cover board, or polyester geotextile) before TPO.
- ▶ If there's an old membrane (bitumen, asphalt, or PU), remove all delaminated or loose sections. Remove high spots, blisters, and degraded areas.
- ▶ Patch spalled or damaged concrete using non-shrink repair mortar. Fill cracks with epoxy injection or sealant, depending on width. Ensure the surface is smooth, dry, and uniform — no sharp ridges or protrusions.
- ▶ Remove any old flashings and install new TPO-compatible details. Properly seal around penetrations, parapets, and drains. If bituminous residues are present at upstands, isolate them with a TPO-compatible primer and metal flashing or protection board.

Limitations

- ▶ Do not install TPO over green concrete or damp substrates.
 - ▶ Avoid installation in conditions below the adhesive manufacturer's minimum temperature (usually around 4–10°C).
 - ▶ Never apply TPO directly over bitumen, asphalt, or tar-based coatings. (Chemical incompatibility causes degradation.)
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DISCLAIMER

The above information is given to the best of our knowledge based on laboratory testing and practical experiences. The information in this data sheet may be subject to changes from time to time and without notice due to production refinements arising from continuing research and evaluation programmes which may occasionally result in marginal changes in the coating properties.

REVISION DATE 12/6/2026
REVISION NO. 3.1
