



MRCA T & R Committee Advisory on TPO

Information is being circulated in the industry indicating that high solar loading and elevated temperature lead to the premature exhaustion of anti aging components such as anti oxidants, UV absorbers and heat and light stabilizing compounds within TPO. **This could lead to the breakdown of the sheet in affected areas.**

This also might explain some reported problem applications with localized deterioration of membrane. One manufacture has recently changed formulation to account for this problem; another advises their product not be "subjected" to high thermal or solar loading; while others remain silent. Southern states appear to have this problematic local condition due to the heat load these roofs experience.

The committee believes that enough information has surfaced concerning TPO accelerated weathering due to solar or thermal loading to advise members to:

Review roof plans for situations where sun light is reflected back on membrane; such as areas below metal and glass or highly reflective curtain walls, or high profile reflective wall flashings.

Look for heat emitting equipment or heat exhausting vents or dark emissive materials laid on the roof that can elevate the temperature of the covered sheet; as well as areas under or over elevated temperature operations.

If situations exist that may commonly elevate temperatures over 160 degrees or increase solar loads **beyond "normal" incoming solar load, question the manufacturer as to the suitability of their product for the situation; consider changing the product to a material that will clearly withstand the loading;** consider changes in design to forestall the loading.

If you have existing TPO roofing subjected to these situations you may well want to inspect the applications for incipient, developing or obvious local problems. The manufacturer can then be approached for direction in addressing or rectifying any deficiency.

Please inform the committee of any problem found as well as any reaction from the manufacturer involved.

T&R Committee

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