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Equus Supplier Statement – Membrane Peaking in TPO Roofing and Waterproofing Systems

Membrane peaking refers to the visible formation of ridges or raised lines in a waterproofing membrane caused by movement in the underlying substrate. This movement commonly occurs at joints, gaps, or transitions between substrate materials, and is most frequently observed over plywood sheet joints or where differing substrates meet.

Substrates naturally expand and contract due to environmental conditions such as temperature and moisture fluctuations. When a TPO membrane is installed over these substrates, this movement can be reflected visually through the membrane surface. Due to the relatively thin profile of TPO membranes (approximately 1.5 mm), this type of movement may be more apparent than with thicker membrane systems.

Membrane peaking is most often a visual or aesthetic characteristic only and does not compromise the waterproofing integrity or long-term performance of the system. Where correctly designed and installed, a TPO membrane exhibiting peaking will continue to perform as intended.

During refurbishment or re-roofing works where an existing membrane is removed, the condition of the substrate should be carefully assessed. Any areas of excessive movement, irregularity, or deterioration may require remediation prior to installation to help minimise the likelihood or extent of visual peaking.

The potential for peaking can also be reduced through appropriate design measures, including substrate selection, sheet layout, fixing methods, minimising movement within central roof or deck areas, and gluing sheet edges with construction adhesive. Gluing sheet edges is a recommended step for highly visible roof applications.

Flagon TPO membranes that display peaking are **not considered to be failing or incorrectly installed**. When installed by an Equus Certified Applicator in accordance with the relevant Equus Specification, the system remains fully eligible for its stated warranty period.

When selecting a membrane for highly visible roof or deck applications, aesthetic considerations should form part of the material selection process.