

ROOFS AND VAPOR RETARDERS

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I spoke with two weatherproofing consultants of some repute. Both had the same answer; they often (in one case always) specify a vapor retarder and have never had a refusal. The technical situation is that the MA Energy Code requires a vapor retarder. However, the vapor retarder may be omitted if engineering analysis shows it is not necessary.

It turns out that a metal deck with extruded polystyrene insulation (not polyiso) will satisfy the analysis, because the EXPS is just enough of a vapor retarder. However, on a concrete deck, this will not work.

In terms of how to convince a roofer that they might want to reconsider, I suggest that many leaks that are thought to be defects in the membrane are actually due to condensation from thermal bridging. That is why I specify/show SPF on the roof drain bodies and around piping penetrating the roof and that all piping penetrating the roof is insulated for at least 10 feet.

Be sure to NOT use EPDM; instead use either PVC (older, more tested material, but with some environmental concerns) or TPO (newer material). Unlike with EPDM, You can use electric field vector mapping (EFVM) to precisely locate leaks and avoid tear-offs. Both also have the advantage that they can be welded and they are available in light colors for Energy Star rating.