

Vapour and Condensation

Architecture

Why moisture moves through a wall, and the rule that keeps it from condensing inside.

Build tight to vapour on the warm side and open to vapour on the cold side, so moisture can dry outward.

resistance high inside, low outside

Warm humid inside

inside the insulation

Vapour control layer

Cold wet outside

outside the insulation

Breather membrane

Air leak through both

than vapour diffusion

Far more moisture

THE COMMON MISTAKE

× **A sealed membrane on the outer face**

✓ **A vapour open breather outside**

A vapour-tight layer on the cold side traps moisture that got past the inner one. It cannot dry either way, so it builds up in the construction.

Air leakage carries far more moisture into a construction than diffusion does. Fix the air barrier first.