

## **VAPOUR BARRIER**

A vapour barrier is in direct relation to the building envelope. Usually, a plastic or foil sheet is used in conjunction with the damp proofing process, vapour barriers protect from exterior vapours, moisture, air, and contaminants from entering indoor spaces. This vapor barrier lines the walls, floors, and roof assemblies, as well as being integral in the foundation and footing stages along with damp proofing.

The vapor barrier, which can be interchanged with the term **Building Envelope** is effectively a protective shell for the delicate electrical systems and interiors of a building. The main function of this is to stop moisture from penetrating the interior. This can be from more common things such as rain and snow to water freeing and expanding within the joints of the construction altering the structural validity and integrity of the building. Further, water vapor from warm and humid outdoor air coming into contact with colder inner walls or cool interior surfaces may lead to condensation, which can lead to a host of issues ranging from ruining aesthetics to life-threatening mold.

Another primary function of a Vapour Barrier would be the assurance of a heated or cooled interior environment resisting impact by the outside opposing temperature (sometimes referred to as a *Thermal Envelope*). This in turn also directly impacts energy efficiency as the HVAC system does not have to work as hard to maintain a constant indoor ambient temperature. Thermal values remain more constant, and that in turn saves money and energy. This thermal envelope has many factors leading to it, including insulation and the use of a blower door . These tests are conducted to see a range of results, from the relative efficiency of a basement washroom exhaust fan, all the way to how well a skyscraper holds its air conditioning.

Voltas Engineering has a full department dedicated to the design and implementation of building envelope systems in and around Vancouver. Our team focuses on making quality, well-thought-out plans for every project. We problem-solve at every corner, as we are a true one-stop shop! **Contact us** now for your building envelope needs!

