Building Paper Frequently Asked Questions

Q: What is building paper made from?
A: It is made from Kraft paper which has been saturated with waterproofing asphalt. Asphalt is a stable petroleum based material and is the same product as is used in asphalt pavement to bind aggregate together, and in asphalt roofing. Asphalt is very resistant to a wet environment.

Q: What is the purpose of building paper in a wall?
A: The purpose of building paper is initially to prevent wind from penetrating into a wall and secondly to act as a backup moisture barrier behind cladding. In wet regions, the second function is very important since moisture in a wall is definitely not desirable.

Q: What do the designations of 30 Minute and 60 Minute building paper mean?
A: These designations refer to a moisture resistance test which uses a moisture sensitive dye as an indicator. This is an American test and is not officially recognized in Canada. HAL INDUSTRIES is the only Canadian manufacturer of building paper to rate our building papers according to this test.

Q: Does water actually penetrate through the building papers in 30 or 60 minutes in this test?
A: No. Water in liquid form does not penetrate through building paper during this test. What the test is actually measuring is dampness, caused by water vapour passing through the building paper. This test is useful as a way to distinguish between different products as to their ability to resist the transfer of dampness from wet cladding.

Q: How do two layers of building paper work together?
A: For any climate, we recommend using two layers. The outer layer of paper can become damp from wet cladding; however the inner layer keeps the wood wall separated from direct contact with this dampness. The outer layer can take the abuses of numerous wet and dry cycles in the wall while the inner layer remains unaffected over time.

One thing we know for sure is that all claddings will allow some moisture penetrations to occur. This moisture will contact the outer layer of building paper but the inner layer has a better chance to stay dry.

Q: Does using two layers of building paper restrict the drying rate or breathability of the wall in terms of water vapour release?
A: No, not significantly. The water vapour permeance of two layers of building paper is only about 20% lower than that of one layer and is still well within the requirements of the building code. For example, the building code requires that a breather membrane shall have 170 ng/Pa sec m2 of permeance (2 metric perms). One layer of 30 minute paper achieves about 610 ng/Pa sec m2 and two layers is about 500 ng/Pa sec m2.

Q: The term "reverse vapour drive" is often used in describing how moisture enters a wall. What does this mean and how is building paper affected by this?
A: Reverse Vapour Drive is the process which occurs when water vapour is driven into a wall from the outside. An example of this is when stucco is wet from an overnight rainstorm and is then warmed by the sun during the following day. The warm moist stucco will create a high vapour pressure at its surface, which will liberate vapour from both its outer face and its inner face. The vapour leaving the inner face will condense on colder surfaces inside the wall. It will condense on the outer face of the sheathing membrane firstly, and then proceed further into the wall and condense on the wood sheathing.

The amount of moisture which condenses on the wood sheathing will depend upon the permeance of the sheathing membrane. Membranes which are too permeable will allow easy penetration of the vapour to the wood surface, thus permitting condensation on the wood to occur.

Two layers of building paper will be the best protection against reverse vapour drive since most of the moisture being driven into the wall will condense on the outer layer of paper and not reach the wood.

Q: Building paper forms ripples after application. Is this good for the wall?
A: Yes. Ripples are caused by expansion of the paper after application to a wall. The ripples form an extensive network of air pockets which remain intact beneath stucco after it has cured. We call this feature the "Ripple Effect". The benefits of the trapped air pockets are as follows:

(a) All things dry better when exposed to air. These air pockets allow the wood to more easily release its moisture as a vapour.

(b) Less direct contact with damp stucco means less likelihood of moisture transfer to the wood. Stucco which has a wavy back might only contact the wall at 50% of its surface.

(c) Trapped air pockets help to insulate your wall. If the wall stays warmer, it dries better.

Q: Does UV exposure damage building paper?
A: Not significantly. Building paper's strength comes from wood fibre and we all know that exposed wood can withstand decades of UV exposure. Similarly, asphalt in roads and roofing withstands decades of UV exposure. The same asphalt is used in building paper. Our laboratory testing has confirmed the above historic evidence. At worst, UV and rain exposure can make building paper's appearance look weathered due to the bleaching action of these elements.

Q: How long can building paper be left exposed?
A: It is always best to cover any moisture barrier as soon as practical since you expect it to perform for many decades in the wall. However, if it isn't possible to apply cladding for an extended period, then we recommend use of two layers of building paper.

Our main concern is for the first owner of any new home. They deserve a new home with an "as new" moisture barrier in the wall. And we feel that the intent of the Building Code is the same.

The outer layer of paper will ensure that the inner layer remains in "as new" condition.

Q: What are some useful application tips and repair methods?
A: It is inevitable that application of cladding or stucco wire will result in hundreds of nail penetrations through the building paper in a typical building. These nail penetrations will tend to be self-sealing if driven straight in.

If tears or damage occur, repair with tape.

Large tears should be covered with a new layer of paper and taped at the top and sides, but not at the bottom.