

## Vapour Permeable Air Barriers: Bakor Air-Bloc 07 and Bakor Air-Bloc 31

### ***What is a vapour permeable air barrier?***

A material which resists the passage of air and bulk water but allows the passage of moisture vapour through diffusion under a difference in pressure.

### ***Where should a vapour permeable air barrier be located within the wall assembly?***

Since it allows the passage of moisture vapour it can be located anywhere within the wall assembly – even on the cold in winter side. However, since these membranes resist the passage of water they are of most value when positioned in the cavity of a typical double wythe wall assembly to act as a waterproofing layer preventing the ingress of water from the outside to the inside of the building envelope.

### ***What is a typical application?***

Normally a vapor breathing air barrier is used where insulation is to be installed within or inside of the back-up wall. Moisture protection is still required but in cold climates, we don't like to see a vapor barrier on the "cold in winter" side of the insulation.

### ***What's the difference between Bakor Air-Bloc 07 and Bakor Air-Bloc 31?***

Bakor Air-Bloc 07 is a single component, solvent type, polymer modified bitumen membrane, suitable for year round use.

Bakor Air-Bloc 31 is a single component, non-asphaltic, rubberized emulsion membrane. It is low odour, and can be applied from the inside side of the wall in occupied buildings making it ideal for retrofits. It is water-based, we recommend application above 5°C.

### ***How are these membranes applied?***

They are applied by trowel or by spray application. The majority of projects are trowel applied by masonry contractors or drywall contractors. Walls with fewer openings lend themselves well to spray application and these are normally done by specialty contractors who own the equipment required to apply the membranes.

### ***What happens at locations where there is a change in substrate?***

Bakor Air-Bloc 07 and Bakor Air-Bloc 31 are components of an air barrier system. A sheet membrane must be used at the interface of dissimilar materials. Examples are sheathing to window or door, wall to column or shear wall, etc. Blueskin® SA is a self-adhered membrane, which is normally used in these areas. It is installed first followed by Bakor Air-Bloc 07 or Bakor Air-Bloc 31.

Membranes are installed in the same manner as asphalt building paper – nailed or stapled in place.

Joints are lapped or taped. The building code requires that lapped joints be "clamped such as between framing members, furring or blocking and rigid panels". The ability of taped joints to stand up over the long term is questionable. Also, there appears to be debate regarding the durability of spun bonded polyolefin in contact with the natural surfactants in wood and the adhesives in OSB and plywood.

### ***What are the steps in a successful Bakor Air-Bloc 07 or Bakor Air-Bloc 31 project?***

1. Apply Blueskin® Primer and Blueskin® SA transition membrane at changes in substrate.
2. Treat joints in sheathing pressure sensitive paper or Blueskin® SA strips.
3. Apply Air-Bloc to wall and lap at least 25mm over Blueskin®.

### ***How long can Bakor Air-Bloc 07 or Bakor Air-Bloc 31 be left exposed?***

Good practice is to allow Air-Bloc to be left uncovered for 48 hours to allow curing. Contact Bakor if exposure beyond six weeks is expected.

### ***Do we need to treat the joints in the sheathing?***

Joints in sheathing should be treated with pressure sensitive tape or 75mm strips of Blueskin® SA centered on the joints. <>