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Technical Bulletin #312

Subject: Boreal Nature Elite Ducting Performance

Genyk Boreal Nature Elite is a successful product used in supply and return air ducting installations. The insulation of ducting is a typical application and Boreal Nature Elite has a significant history as a duct insulation.

As a duct insulation material, Genyk Boreal Nature Elite serves the purpose of insulation, supplemental vapour barrier and eliminates air leakage.

Regarding the vapour barrier characteristics - in accordance with the CAN/ULC S705.1 Material Standard, the vapour permeance of Genyk Boreal Nature Elite is measured using the ASTM E96 method. At 50mm, Genyk Boreal Nature Elite has a vapour permeance performance rating of $34\text{ng}/(\text{Pa}\cdot\text{s}\cdot\text{m}^2)$. The product exceeds the requirements of the OBC – $60\text{ng}/(\text{Pa}\cdot\text{s}\cdot\text{m}^2)$ as stated in OBC 9.25.4.2.(1). Further, increases in thickness have a linear improvement in vapour permeance. Thus, at 65mm, the vapour permeance performance rating will be $30\text{ng}/(\text{Pa}\cdot\text{s}\cdot\text{m}^2)$.

Similarly, the air permeance of Genyk Boreal Nature Elite is measured using the CCMC 07273 methodology. Genyk Boreal Nature Elite has an air permeance performance rating of $0.001\text{L}/(\text{s}\cdot\text{m}^2)$. The product exceeds the requirements of the OBC – $0.02\text{L}/\text{s}\cdot\text{m}^2$ as stated in OBC 9.25.3.2.(1).

Depending on local jurisdiction, the thermal resistance required for ducting is R12 to R20 (2.0" to 3.5").

As with any spray foam installation, Boreal Nature Elite must be isolated from occupancy with an adequate thermal barrier. Depending on the placement of the ducting, this typically is achieved with the drywall separation between attic/wall and occupancy.

If the ducting is being used as a return air plenum, and the spray foam is on the interior side of the ducting, the spray foam must be covered with an acceptable thermal barrier.



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