

**CORBOND® Performance Insulation System®  
& “THE 1/3, 2/3 RULE”**

November 3, 1994

**RE:** Use of polyethylene vapor retarders (barriers) and glass fiber batts in conjunction with spray-in-place **CORBOND® Performance Insulation System®** in residential construction—the 1/3, 2/3 rule.

**BACKGROUND:** Many building codes in the U.S. require the application of a Polyethylene vapor retarder (barrier) on the warm side in winter of insulated building cavities. This code requirement was designed to reduce the condensation problems that frequently occur in fiberglass batt and other types of insulation commonly used in building envelope cavities by reducing the influx of moisture vapor into house cavities.

Research that occurred during the development of the “Super Good Cents” program by Bonneville Power Administration showed that in an effort to minimize penetrations through vapor retarders in super insulated, very thick glass fiber insulated walls, the vapor retarder could be placed such that approximately 1/3 of the R-Value would be on the warm side and 2/3 on the cold side. In a double stud wall this put nearly the entire electrical system inside the vapor retarder and greatly reduced penetrations and consequently moisture paths to the cold side of the wall cavity wherein condensation would typically occur.

**RECOMMENDATIONS:** 2” of CORBOND insulation is to be used with an R-11 batt. The interface of CORBOND insulation and batt is the vapor retarder point and because CORBOND insulation is less than 1 perm at 2” on ply or OSB, it is the sole vapor retarder necessary. Do not use a further polyethylene retarder in order to avoid a vapor trap. This combination will work in any climate in the continental states and is particularly useful in climates with warm, humid summers where air conditioning is common. This is because air conditioning reverses moisture vapor drives which would ordinarily pass right through fiber and condense on a poly vapor barrier. CORBOND insulation is a solid with a thickness-which is called an ‘isolator’ of air and moisture, the vapor is stopped normally at the building exterior sheathing.

Note: Some increase in the CORBOND insulation thickness ratio is recommended in high snow areas for the minimization of ice dams.

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