Technical Note 5

Air Barrier Systems

Abstract: This Technical Note lists the air barrier systems and defines the properties that these systems must possess in order to perform their intended functions.

Air Barrier System

Air barrier systems consist of all of the air barrier assemblies installed on a building and the transitions from assembly to assembly. The air barrier systems may also separate conditioned space from non-conditioned space within a building as well as spaces within a building that where the intended or resultant conditions vary significantly from each other.

Air barriers systems shall have a maximum air leakage rate of 0.4 cfm/ft^2 at a pressure difference of 1.57 psi [2.0 L/(s·m^2)] at a pressure difference of 75 Pa) when tested in accordance with one of the following test methods.

1. ASTM E779 Standard Test Method for Determining Air Leakage Rate By Fan Pressurization
2. ASTM E1827 Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door

Sources of unacceptable air leakage of air barrier systems shall be detected by means included in ASTM E1186 Standard Practice for Air Leakage Site Detection in Building Enclosures and Air Barrier Systems.

The ABAA has published a standard entitled Standard Method For Building Enclosure Airtightness Compliance Testing that includes the above referenced test methods. It can be downloaded at:

http://www.airbarrier.org/technical-information/whole-building-air-tightness-testing-2/

Summary

This Technical Note contains information about the air barriers. This information may be used to design and build building enclosure assemblies.

The information and suggestions contained in this Technical Note are based on the available data and the experience of the Technical Committee of the Air Barrier Association of America. The information contained herein must be used in conjunction with good technical judgment and a basic understanding of the properties of air barriers.

Final decisions on the use of the information contained in this Technical Notes are not within the purview of the Air Barrier Association of America and must rest with project owners, architects, engineers, consultants and contractors.