

**PAPER TITLE**

Innovative Sealant Technology Provides Design Flexibility for Air Tight Joints

**MAIN AUTHOR**

Andrea Wagner

**OTHER AUTHORS**

Kelly Broker, Larry Carbary

**ABSTRACT**

Air tightness is controlled not by individual products alone, but by how those individual products come together and behave as a system. This is confirmed by the evolution of building codes from being material only based specifications to required system testing. Individual air barrier materials, especially sheet applied barriers, are able to prevent air infiltration through opaque surfaces; however, they are not able to accommodate movement imparted at control joints and interfaces with other building materials. This presentation will use data from lab testing to demonstrate how current sealants and membranes address the issues of air tightness in joints. This information will be compared to similar test results and case studies related to a newly developed sealant which has a silicone resin as its foundation in lieu of a traditional polymer. Technical data on the new sealant will be discussed along with joint design solutions, especially for sealing between traditional substrates (windows, curtainwall, etc.) and polyethylene backed air barriers. Finally, a solution for complex joints and interfaces combining the new sealant with a pre-cured silicone extrusion will be presented. Independent lab testing will be presented demonstrating the ultimate flexibility the new sealant provides the design professional in determining how best to complete a continuous air tight facade.