

## ENERGY STAR Qualified Homes Thermal Bypass Inspection Checklist & Icynene® Insulation:

### 1. Air barrier and thermal barrier alignment

Requirement: Insulation is installed in full contact with the air barrier to provide continuous alignment of the insulation with the air barrier.



Comment: Icynene® is an air barrier as well as insulation thus it meets the above requirement.

### 2. Shower / tub at Exterior wall

Requirements: Exterior walls have been enclosed on all six sides.  
Exterior walls have been fully insulated.



Comment: The intent of this requirement is once again to eliminate air movement and resulting convective losses and possible moisture accumulation. Normally the tub is installed before the insulation and drywall is in place – fiber insulation is placed in the open cavity after the tub has been installed so there is no way of enclosing the six sides of the cavity. Spraying Icynene® between the tub and exterior wall, prior to the installation of drywall, delivers insulation and the air barrier needed to enclose the cavity.

### 3. Insulated Floor Above Garage

Requirements: Air barrier is installed at any exposed edges of insulation.  
Insulation is installed to maintain permanent contact with the underside of the sub-floor decking.



Comment: Cold floors and other comfort callbacks for rooms over a garage have been a challenge for builders. Fiber insulation can settle so that it is no longer in contact with the floor surface nor does it prevent air infiltration. Icynene® adheres to the underside of the floor, remains intact, and provides the air barrier.

### 4. Attic Knee Walls

Requirements: Continuous top and bottom plates are installed with an air barrier on the attic side of insulated walls, including exposed edges of insulation at joists and rafters.  
Insulation is in complete alignment with interior wall finish and the attic side air barrier.



Comment: The intent is to reduce air leakage that occurs when builders do not install drywall or air barrier material on the attic side of the knee wall.  
By installing Icynene®, you are installing the insulation and required air barrier.

### 5. Attic Access Panel / Drop-Down Stair

Requirements: Attic access panel or stair is fully gasketed for an air-tight fit.  
Attic access panel or stair is covered with insulation that is attached and fits snugly in the framed opening.



Comment: Icynene® insulation contractor may be able to address this requirement.

### 6. Cantilevered Floor

Requirements: Air barrier spans cantilever and any exposed edges of insulation.  
Floor framing is completely filled with insulation or insulation is installed to maintain permanent contact with the sub-floor decking.



Comment: Another typically troublesome performance challenge for the quality builder can be resolved by use of The Icynene Insulation System®.

## 7. Duct Shaft / Piping Shaft and Penetrations

Requirement: Openings to unconditioned space are sealed with solid blocking and any remaining gaps are sealed with caulk or foam.



Comment: Icynene® seals all gaps and cracks as it is applied in liquid form and expands approximately 100 times to provide air leakage control and insulating value at the same time.

## 8. Flue Shaft

Requirements: Opening around flue is fully sealed with flashing and any remaining gaps are sealed with fire-rated caulk or sealant. Combustion clearance between flue and combustible materials (e.g. OSB) are properly closed with UL-approved metal collars.

Comment: Icynene® is a combustible insulation material (although flame spread less than 25) and therefore is not suitable for this application.

## 9. Attic Eaves

Requirement: Solid baffles are provided at framing bays to avoid wind washing of attic insulation.



Comment: Icynene® adheres to the substrates to which it is applied such that it resists air currents, even high wind pressures.

## 10. Dropped Ceiling / Soffit

Requirement: Air barrier is fully aligned with insulated framing and any gaps are fully sealed with caulk, foam or tape.



Comment: Use and application of Icynene® reduces the need for additional sealing. Potential savings are dependant on intricacy of the design.

## 11. Fireplace Wall

Requirement: Air barrier is fully aligned with insulated framing in framed shaft behind fireplace and any gaps are fully sealed with caulk, foam or tape.



Comment: In this instance the concern for alignment with insulation is not necessary with Icynene® because it is an insulation as well as an air barrier. Icynene® should not be installed against substrates where the surface temperature is expected to remain Above 200° F (93° C).

## 12. Staircase Framing at Exterior Wall / Attic

Requirement: Air barrier is fully aligned with insulated framing and any gaps are fully sealed with caulk or foam.



Comment: Many builders install fiber insulation in these exterior cavities but do not enclose them with an air barrier / drywall – drywall is only applied on the wall that encloses the space under the stairs. Icynene® in the exterior wall cavity deliver both the required insulation and air barrier.

## 13. Recessed Lighting

Requirement: Airtight IC-rated recessed light fixtures are sealed to drywall with gasket, caulk or foam.



Comment: Icynene® is foam.

#### 14. Porch Roof

Requirement: Air barrier is installed at the intersection of the porch roof and exterior wall.



Comment: Icynene® is an air barrier.

#### 15. Whole-House Fan Penetration at Attic

Requirement: Fan insulated cover is provided that is gasketed or sealed to the opening from either the attic side or ceiling side of the fan.

Comment: Insulation contractor may be able to supply.

#### 16. Common Walls Between Dwelling Units

Requirement: Air barrier is installed to seal the gap between a gypsum shaft wall (i.e. common wall) and the structural framing between units in duplex and townhouse construction.

Comment: Although Icynene® provides the required air seal, use and application should conform to fire rated and tested wall assembly and use classification of the building.