OWENS CORNING®
INNOVATIONS FOR LIVING®

EnergyComplete® Sealant

Product Data Sheet

Physical Properties

Properties	Test Method	Results
Freeze-Thaw Stability (Part A)	24 hour cycles	> 5 cycles
Tack-free Time	Dry to touch	Within 10 minutes
Pressure Build	AAMA 812	< 0.1 psi
Water Vapor Permeance	ASTM E 96 (dry cup) ASTM E 96 (wet cup)	2.5 perm 30 perm
Durability[1]	ASTM C 719	> 10 cycles; no cohesive failure or cracking
Flame Spread[2]	ASTM E 84	5
Smoke Developed[2]	ASTM E 84	0
Fireblock[3]	ASTM E 814	Pass
Fungi Resistance[4]	ASTM G 21	Does not support mold growth
Air Infiltration	ASTM E 283	< 0.01 cfm/ft.^{2} at 1.57 psf (75 Pa) and 6.24 psf (300 Pa) pressure.

1. Modified - water soak and 60° bend not applicable to this application.
2. The surface burning characteristcs of the EnergyComplete® Sealant were derived from products tested in accordance with ASTM E 84 using ASTM E 2690 Standard Practice for Specimen Preparation and Mounting of Caulks and Sealants to Assess Surface Burning Characteristics. This standard is used solely to measure and describe properties of products in response to heat and flame under controlled laboratory conditions, and should not be used to describe or approve the fire hazard of materials under actual fire conditions. However, the results of these tests may be used as elements of a fire risk assessment that takes into account all of the factors pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.
3. Modified - see ICC-ES Evaluation Report No. ESR-3110
4. While the EnergyComplete® Sealant resists mold and mildew, the system cannot prevent or mitigate mold if the conditions necessary for mold growth otherwise exist in your building wall or ceiling cavities.

Description

EnergyComplete® Sealant is a two-part, non-allergenic, high performance latex-based foam used to seal cracks and penetrations through a building envelope and from floor to floor in a building.[1] These two components are to be used in the EnergyComplete® machine, which has been specifically designed for this foam.

The liquids are pumped into the reactor and then into the applicator, where the two liquids mix and start to react. After the foam leaves the gun it begins to expand. After about 20 minutes (depending on temperature and relative humidity), the foam is tack free and insulation can be installed. This product is installed by Owens Corning certified installers.

Uses

Air leakage (infiltration and exfiltration) can account for 30 percent or more of a home's heating and cooling costs and contribute to problems with moisture, noise, dust, and the entry of pollutants.[2] EnergyComplete® Sealant can be used in a wide range of air sealing applications. The product can be installed in any common form of wood-framed construction. It is intended to fill in gaps that occur in the building envelope from joints and penetrations.

Features and Benefits

Reduced Air Infiltration

EnergyComplete® Sealant will dramatically reduce the amount of air infiltration by sealing the joints and penetrations in the building envelope. It is this infiltration of air that wastes energy. Use of EnergyComplete® Sealant in the home can reduce the heating and cooling energy consumption by up to one-third. Reduced air leakage also affects thermal comfort by reducing the feeling of draftiness and humidity-related sensations, where moist air that infiltrates in the summer makes a person feel warmer and dry air that infiltrates in the winter makes a person feel cooler.

Reduced Risk of Moisture

One cause of moisture damage in wall cavities is moisture-laden air that infiltrates/exfiltrates through the walls. When that moisture-laden air encounters a surface where the temperature is cool enough, the water can condense and, in some conditions, accumulate. EnergyComplete® Sealant significantly reduces the air infiltration, thereby reducing the chances that this condition can occur.

Long Term Performance

EnergyComplete® Sealant maintains its flexibility, air sealant properties, and adhesion to common building material substrates over time, as demonstrated through accelerated aging tests designed to represent typical wood frame movement and climatic changes throughout the United States over a fifty-year period. EnergyComplete® Sealant also maintains an air seal after

being subjected to the pressure from 3-second gust hurricane wind speeds of up to 150 mph. EnergyComplete® Sealant adheres and is non-corrosive to typical materials found in residential construction such as wood, cardboard, PVC, ABS, copper, steel, galvanized steel, concrete, masonry block, and expanded/extruded polystyrene.

Wide Range of Application Temperatures

EnergyComplete® Sealant can be applied at ambient and surface temperatures as low as 20°F and high as 110°F.

Safe

EnergyComplete® Sealant is safe to install and DOES NOT require a chemical mask or fresh air ventilation suit, and other trades can work in the house while the sealant is being applied. Insulators can install fiberglass in the walls shortly after the foam is applied. Owens Corning recommends that installers use chemical gloves, goggles or a face shield, a long sleeved shirt, and, if the installation site is dusty, a dust mask. Additionally, unlike polyurethane spray foam, there is no need to quarantine the work area. Other trades are welcome to work in and around the home during the installation of the EnergyComplete® Sealant.

GREENGUARD

EnergyComplete® Sealant is certified for GREENGUARD Indoor Air Quality and GREENGUARD Children & Schools℠, meaning it meets the strictest standards for indoor air quality.

Design Considerations

This product is intended to seal gaps within a building's thermal envelope. Small gaps (anything up to ⅜") can be filled entirely with EnergyComplete® Sealant. Medium-sized gaps (between ⅜" and 3") should be stuffed with fiber glass insulation and then EnergyComplete® Sealant may be sprayed overtop to seal. Large gaps (greater than 3") should be fixed with rigid, nonporous sheathing material such as OSB or expanded polystyrene (FOAMULAR® insulation) and then the perimeter of the patch may be applied with EnergyComplete® Sealant. Providing an air barrier with EnergyComplete® Sealant product in conjunction with proper insulation such as fiberglass, can result in enhanced thermal performance and comfort for the building occupants.

EnergyComplete® Sealant should not be installed within 3" of a heat source. An exception is a recessed light fixture. EnergyComplete® Sealant can be used to seal the juncture between the recessed light fixture and the drywall. This seal can be accomplished either pre-drywall or post-drywall. Under no circumstances should EnergyComplete® be used to seal any openings on the recessed light housing. Any/all manufacturer's provisions and code requirements are to be followed when using EnergyComplete® Sealant around recessed lights.

This product does NOT replace the need for a drainage plane on the exterior of the building (e.g., housewrap).

EnergyComplete® Sealant is recognized for use as an alternative to the methods prescribed by the code for maintaining the integrity of penetrations of fireblocking. It has been tested in accordance with ASTM E 814 to establish that the integrity of the fireblocking is maintained when the fireblocking is penetrated. See ICC Evaluation Services Report number 3110 for more information.

Since there is potential for a house treated with EnergyComplete® Sealant to have extremely high air tightness, Owens Corning strongly recommends that a whole-house mechanical ventilation system be installed. Refer to the Tech Bulletin on Ventilation of EnergyComplete® Homes for general information. Refer to ASHRAE Standard 62.2-2007 and Manual J for specific sizing requirements.

Installation

Inside Wall Cavities

EnergyComplete® Sealant should be applied to the top and bottom of each wall cavity where the exterior sheathing meets the framing members. In addition to this, the sealant should be applied along vertical framing members behind which there is a joint in the exterior sheathing.

Top Plate

EnergyComplete® Sealant product should be applied to the face of the top plate and by doing so fill in the gap between the two framing

members. The pliable sealant will also act as a gasket when the drywall is installed, which seals the wall cavity from the unconditioned attic space on the top floor of a building. This top plate treatment should be done on all exterior walls and the interior partition walls on the top floor. The pliable sealant should not pose a problem to the installation of drywall.

Bottom Plate

EnergyComplete® should be applied along the intersection between the bottom plate framing member and the subfloor. This should be done on all exterior walls.

Wiring/Plumbing/Duct Penetrations

EnergyComplete® product should be applied around electrical wires, plumbing pipes, ductwork or any other penetrations between floors on exterior and interior walls.

Around Windows and Doors

EnergyComplete® is a low rise sealant that has an extremely low expansion force. It will not cause door or window frames to warp. In addition, EnergyComplete® Sealant remains flexible when cured, and will not transfer structural load to wall penetration systems.

Basement Band Joist and Exterior Penetrations

Any joints in the rim joist of the house should also be treated with EnergyComplete® Sealant product. This includes treating the interface between the concrete/masonry wall and the sill plate where there may already be a foam gasket, as well as the joints at the bottom of the rim joist with the sill plate and top of the rim joist with the sub-floor. Any penetrations to the exterior of the house should also be sealed with EnergyComplete® Sealant provided the risk of contact with bulk water is small.

Notes

1. This product does not contain natural latex.
2. Air Sealing, Office of Building Technology, State and Community Programs, Energy Efficiency and Renewable Energy, US Department of Energy. No. DOE/GO10099-767,1999.

EnergyComplete® Sealant

Product Data Sheet

Disclaimer of Liability
Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient's sole risk. Because conditions of use may vary and are beyond our control, Owens Corning makes no representation about, and is not responsible or liable for the accuracy or reliability of data associated with particular uses of any product described herein. Nothing contained in this bulletin shall be considered a recommendation.

The GREENGUARD INDOOR AIR QUALITY CERTIFIED Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute.

OWENS CORNING INSULATING SYSTEMS, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659
1-800-GET-PINK®
www.owenscorning.com

Pub. No. 10013809-A. Printed in U.S.A. March 2013.