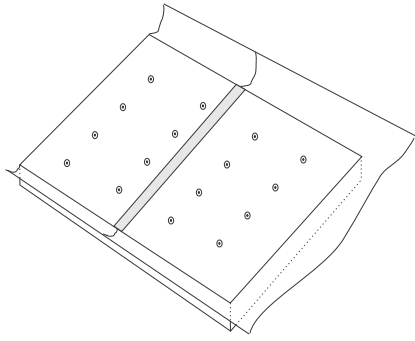
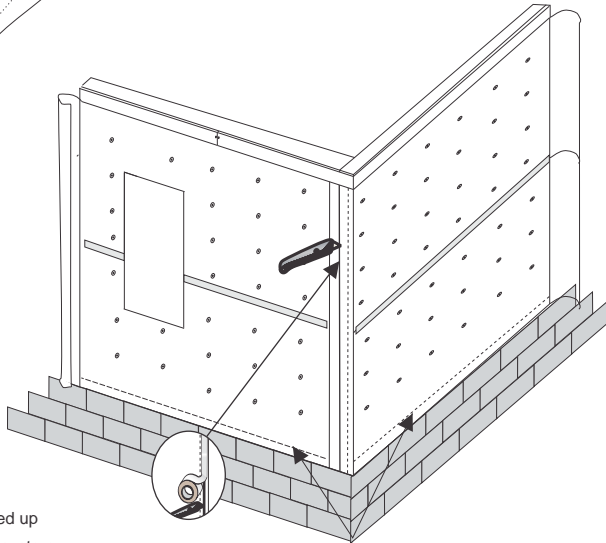


Low-E Housewrap™ Installation Sheet

Tilt Wall Installation Method



Place Low-E Housewrap™ on wall system leaving excess material approx 12" on both sides and bottom.
(Areas where common splice will be made once wall is tilted up do not need any fasteners at this time)



Once wall system has been tilted up

1. Overlap excess material on wall system that's been adjoined. Make sure that product is plumb and square with housewrap already in place.
2. Locate center of overlapped materials and make common splice through both layers of material using utility knife.
3. Remove cut material from both sides of previously installed material
4. Use additional fasteners in as needed.
5. Apply Low-E Tape over common splice.

Make sure Low-E Housewrap™ overlaps bottom plate

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Low-E HouseWrap™ Installation Guide

ESP Inc
313 W Golden Lane
New Oxford, PA 17350
1-800-289-5693
www.low-e.com

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General Information

Low-E Housewrap™ is the trade name for ESP Inc's perforated reflective insulation product. Low-E Housewrap™ products are not to be used where a vapor barrier is required. ESP Inc. manufactures other products that do act as vapor barriers. ESP Inc. does not determine where the vapor barrier is required in a wall system. Please consult your local codes for proper placement of vapor barriers.

Before You Proceed

The best time to install Low-E Housewrap™ is:

- After walls have been constructed
- After sheathing has been installed
- After flashing details have been installed
- Before the doors and windows have been set inside framed openings
- Prior to installation of primary wall covering

Additional Information

As with any weather resistant barrier Low-E Housewrap™ is not intended to be used as the primary barrier for the structure. It is important to coordinate the installation of the primary barrier in a timely manner.

Specifications & Data

Low-E Housewrap™ Product Information

Product Identification:

Product Name: Low-E Housewrap™ Insulation

Product Codes: 4PFNS, 5PFNT, 4PMPS, 5PMPT

Other Information:

Finished Dimension: 48" Width x 125' Length (Standard)

60" x 100' (Special Order) Shipped in roll form.

1/8" Product Available Upon Special Order.

Core Material: Polyethylene

Facing: 99.4% Polished Aluminum non reinforced one side

Perm Rating: ASTM E-96: 5 or 35 Grams/(day-m2) (based on single sided house-wrap)

ASTM D 779: 9 hrs

FULL SCALE FIRE TEST (walls): NFPA-286 Passed

R-Value: R-4* †

Notes and Warnings:

*System R-Values calculated by GEOSCIENCE LTD. Report available upon request.

†R-Values may vary depending on facing assembly

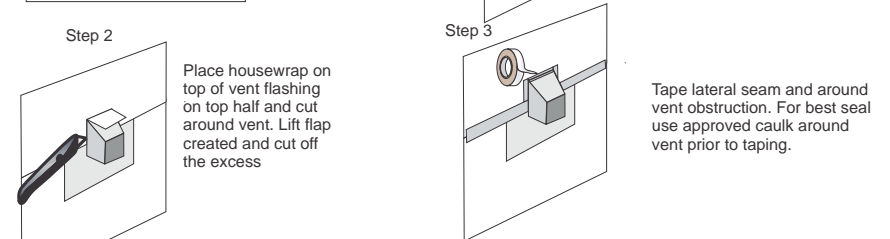
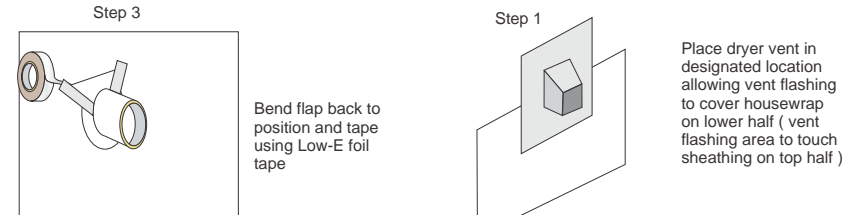
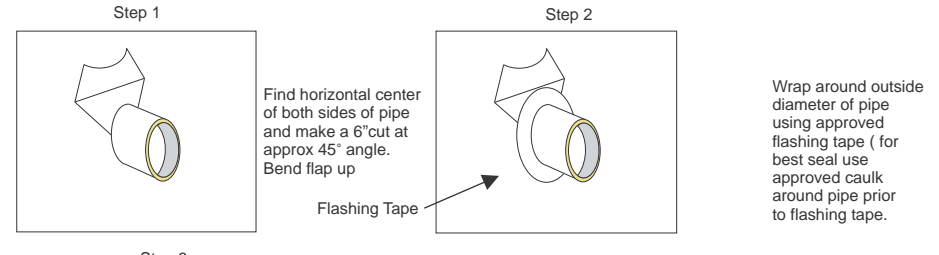
DO NOT install with foam exposed. DO NOT leave this product exposed on interior walls or ceilings where ceilings are under 10'. Areas under 10' should be covered with a proper thermal barrier. See your local Code Official for more information.

Warning: Although ESP Low-E® Insulation Products are all ASTM fire tested, it is recommended that they or any insulation material should not be exposed to open flame or other ignition sources of sufficient intensity during shipment, storage or installation.

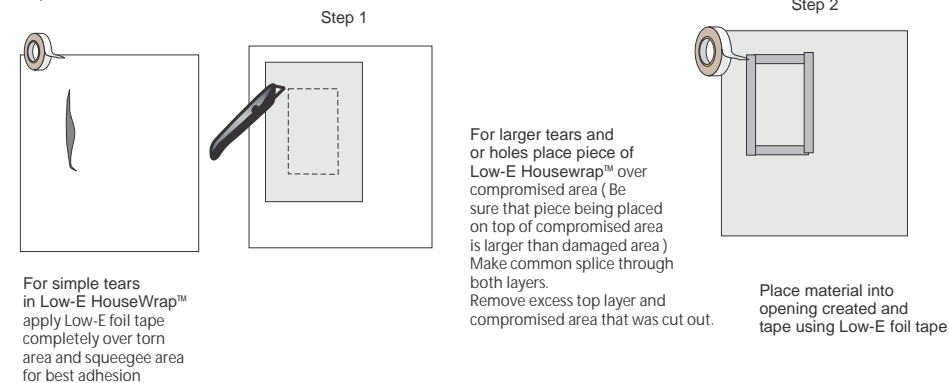
Caution: Aluminum is an electrical conductor. Please use caution when working around electrical sources including overhead power lines.

Low-E Housewrap™ Installation Sheet

Penetration Installation Diagrams



Tears and Holes Repair



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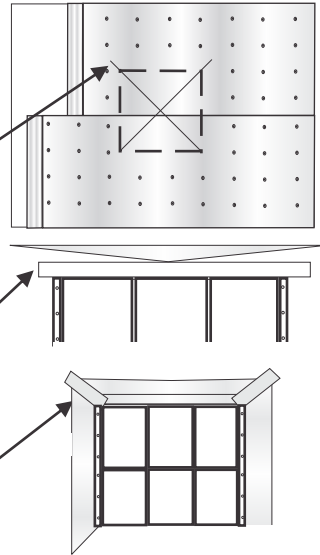
Low-E Housewrap™ Installation Sheet

Framed Openings

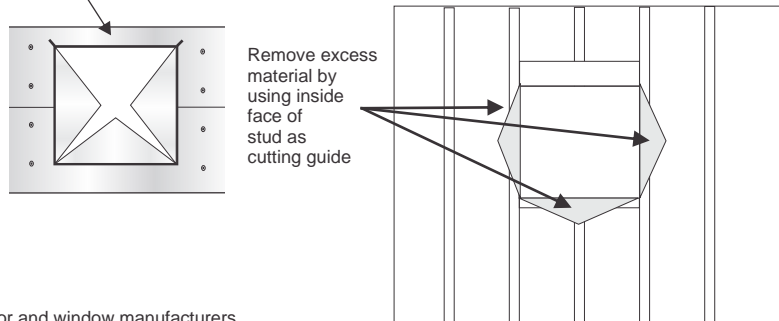
When installing Low-E Housewrap™ over the exterior of structure be sure to run product horizontally over entire wall including framed openings. (please refer to page 5 for more detailed instructions)

Once Low-E Housewrap™ has been securely fastened to exterior sheathing make cuts as shown in Figure 2. Try not to cut past exterior side of framed opening (exception for top of framed opening) but in the event that occurs use Low-E foil tape to repair area that was compromised.

1. An additional flap should be cut above the top exterior side of framed opening for the installation of head flashing.
2. Bend flap away from wall to allow installation of window and flashing
3. Apply window and head flashing
4. Reset Low-E Housewrap™ and tape seams



Once side and bottom flaps have been cut, bend these flaps toward the interior of structure using staples or adhesive to attach Low-E housewrap™ to the face of the jamb.



Follow door and window manufacturers instructions for flashing and installation relating to their respective products.

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Environmentally Safe Products, Inc.
313 West Golden Lane
New Oxford, PA 17350
1-717-624-3581

PRODUCT IDENTIFICATION

Product Name , Low-E HouseWrap™

Code# 5PFNT
4PFNS

Other Product Identifiers: Code #'s
Contact for further information: Thomas M. Miller

CHEMICAL & PHYSICAL PROPERTIES

Color:	Aluminum, White
Physical State:	Solid
Boiling Point:	N/A
Freezing Point:	N/A
Vapor Density:	Not Volatile
Melt Point (foam):	106C
Product Type:	Foil / Polyethylene foam / Polyethylene film
Odor:	None
Specific Gravity (foam):	0.02 - 0.04
Bulk density:	1.0 - 1.2 lb./cu. Ft.
Percent Volatile:	Nil
Hazardous Ingredient:	None
Family / Chemical name:	Plastic / Aluminum / Polyethylene
Flammable Limits:	N/A
Decomposition / Combustion Products:	Thermal decomposition may include carbon monoxide, carbon dioxide, aldehydes and organic vapors.

FIRE PROTECTION INFORMATION

Flash point (foam core):	Above 450F
Recommended extinguishing media:	CO ₂ , water, Dry Chemical, Foam
Polymerization:	Will not occur
Stability:	Stable
Toxic products which may form:	No toxicity, safe physical form

STORAGE AND REACTIVITY

Storage Conditions:	Store large quantities in area protected by automatic sprinklers
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TRANSPORTATION

Hazard classes:	None - not hazardous
Hazard labels:	None required
Hazard determination:	Material safety data
Size shipping container:	Varies according to product ordered

HEALTH HAZARD DATA

Short term exposure

Route of entry:	Precautionary treatment
Inhalation:	N/A
Skin:	Wash affected area with soap and water
Eyes:	N/A
Ingestion:	Contact poison control data

Long term exposure

Carcinogen:	None
Target organ effects:	None
Other health hazards:	None known

PERSONNEL PROTECTION

Respiratory Protection:	None required
Protective clothing:	None required
Other protective measures:	None

SPILL OR LEAK PROTECTION

Steps to be taken:	N/A
Other impacts on wastewater treatment:	None
Recommended wastewater treatment:	N/A

RECOMMENDED WASTE DISPOSAL METHOD

Unused material:	Reuse, if possible If unavailable, incinerate or dispose of in government approved solid waste landfill
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CONTAINER LABELING

Container disposal:	N/A
Hazardous disposal:	N/A
Explanation of unique labeling system:	None used

Product Guarantee

Low-E Insulation products are guaranteed against defects in material and workmanship for 20 years. Blister or bubbles in product surface will not affect performance. Product thickness for products with foil on both sides may vary +/- 10%. All other products may vary +/- 20%.

Defective Material

The following criteria may be considered a defect;

- (1.) 1 inch wide or more of foil delamination on the edges for more than 15 feet of the roll.
- (2.) More than 1 inch of foam showing on 20 feet or more of a roll.
- (3.) Large areas (more than 1 square foot) of delaminated foil.

Corrective Instructions

Occasionally there may be imperfections in product that may affect appearance but not performance. In the event this is encountered, the following solutions are advised;

- (1.) If there is foam showing on one side, either tape the seam on that side when installed or install product with the foam side in.
- (2.) If there is an edge that is delaminated, either tape the seam on that side when installed or install product with delaminated edge in.
- (3.) If there are areas that have a delamination that cannot be installed without correcting this defect, the following may be done with an iron; set the iron about half to three quarters temperature setting. Make a small slit with a razor knife in the center of the delamination and carefully, with light pressure, iron the foil towards the slit, allowing trapped air to escape. When finished, cover the slit with a small piece of Low-E tape.

Return Policy

- (1.) It is our opinion that our Distributors should handle customer problems directly and ESP in turn will issue a credit or replace materials to the Distributor. The Distributor must make available to ESP a copy of the product label or the information on the label [lot#, initials, product description], samples of the defect, or the roll of material. Upon inspection of the defect, ESP will credit or replace defective material at ESP's discretion. If a section of a roll is bad, remove the bad area and use the rest of the roll. Retain the bad section and label information for credit. If label is not available, return the bad section.

- (2.) All labels on the product must be saved for verification. If label is not sent back with completely filled out complaint form, the complaint will not be acknowledged. If everything is in order on the complaint form and sheets and ESP requests the return of the roll, ESP will pay the shipping, however no material is to be returned without ESP approval.
- (3.) If the customer elects to keep all the product that is considered seconds, and the complaint forms and labels are sent back, ESP will credit the customer for the difference in first quality and second quality pricing.
- (4.) If the product is shipped out of the continental United States, the representative is totally responsible for all replacement costs and shipping charges of the material.

ABSOLUTELY NO SHIPPING CHARGES WILL BE ACCEPTED WITHOUT APPROVAL FROM ESP

ASTM STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS: This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled laboratory conditions. ESP Low-E® products are tested within the strict standard of this test method. This test method is not necessarily representative of the manner in which the ESP Low-E® products are installed in a typical field installation. The numerical ratings on all ESP Low-E® insulation products or any other materials are not intended to reflect hazards under actual fire conditions.

Warning:

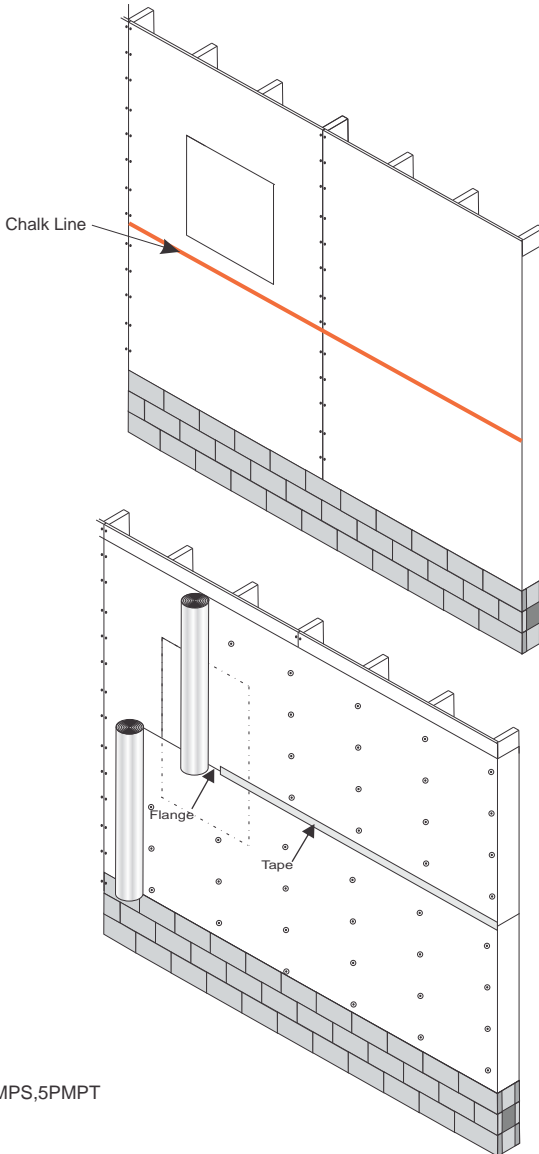
Aluminum is an Electrical Conductor. Please use caution when working around electrical sources including overhead power lines.

Installation Method (Existing Walls)

1. Low-E Housewrap is installed over exterior wall sheathing, make sure reflective side faces out.
2. If product has foil flange make sure foil flange side of roll faces down.
3. Determine width of HouseWrap being used (4', 5', 6') for initial wrap (lowest point of wall surface)
4. Measure from sill plate up the wall, mark wall at level of determined width less 1" i.e. 5' HouseWrap Mark at 59"
5. Snap chalkline around perimeter
6. Starting at the corner of the preferred exterior wall unroll Low-E Housewrap in a horizontal manner. Fasten using corrosion resistant staples having minimum 1" wide crown, corrosion resistant nails having minimum 3/8" heads or corrosion resistant nails having minimum 1" diameter plastic heads. Fasteners to be spaced a maximum of 16" both vertically and horizontally.
7. If rolling Low-E Housewrap™ over door and window openings, (see pg. 6 for framed opening instructions). If windows and doors have been set, trim Low-E HouseWrap™ as close to window or door opening as possible and perform detailing as per door / window manufacturer and or code standards.
8. The bottom side of the Low-E Housewrap should extend over sill plate by minimum 1".
9. When applying second horizontal run of Low-E Housewrap™, butt foam ends together allowing foil flange to overlap 2". Make certain foil flange is to the outside to ensure water drainage plane downward.
10. Tape all vertical and horizontal flange seam areas with foil tape.
11. Continue method until Low-E Housewrap covers both top plates.
12. Use foil tape to repair areas that have been torn or compromised. (See page 7)
13. **Foil is a conductor of electricity. Use extreme caution when working with Low-E Housewrap™ around power lines, wiring and electrical devices.**

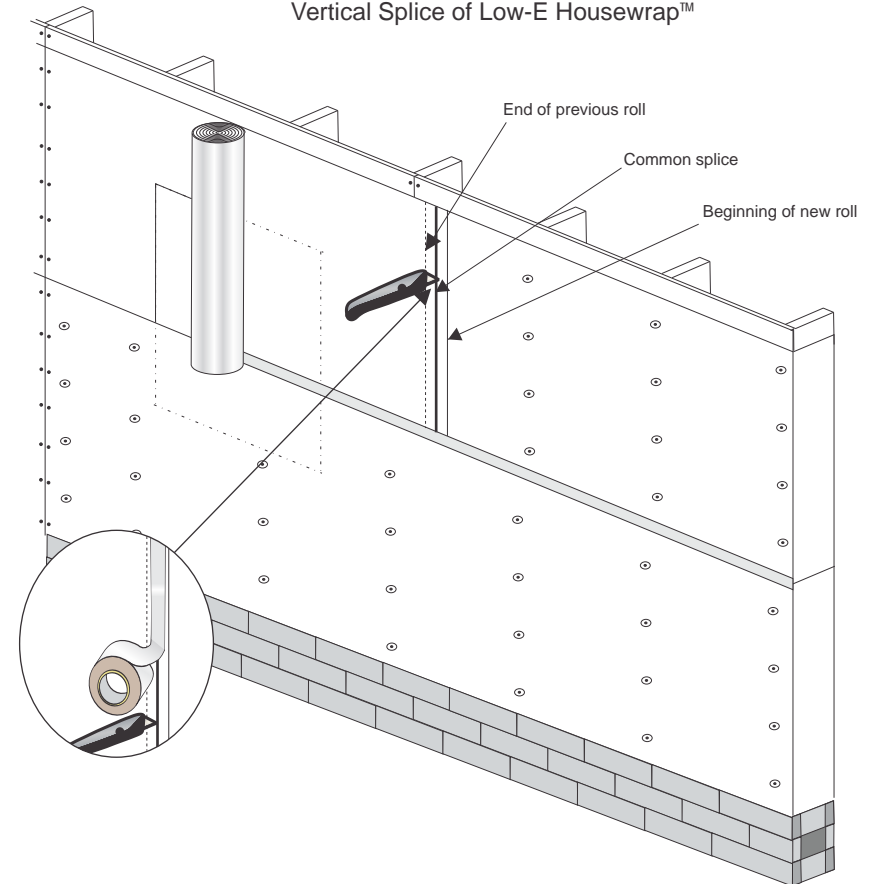
Suggested products for this application:

- Low-E Housewrap™ 4PFNS, 5PFNT, 4PMPS, 5PMPT
Low-E Foil Tape T0002



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Vertical Splice of Low-E Housewrap™



1. When coming to the end of existing roll in use, leave up to 12 inches of product unattached to wall system.
2. Remove new roll from packaging
3. Unroll Low-E Housewrap™ to desired area making sure that product is plumb and square with housewrap already in place and also overlap material past the end of previous material by approx 8 inches.
4. Locate center of overlapped materials and make common splice through both layers of material using utility knife.
5. Remove cut material from end of previous roll and start of new roll
6. Apply Low-E Tape over common splice, then continue installing Low-E Housewrap™ as described in Figure 1
7. If vertical splice is not performed product must overlap by minimum of 6"

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