

ESP Low-E®

Architectural Specs

GENERAL

1.1 SECTION INCLUDES

- A. Foil / PE Foam / Foil reflective insulation

1.2 RELATED SECTIONS

- A. Thermal protection and damp proofing in walls, ceilings, and under floors.

1.3 REFERENCES

- A. Thermal Resistivity: Where thermal resistivity properties are designated by R-values, they represent the rate of heat flow through a studded wall cavity as measured in an ASTM C-236 hot box test.

- 1. ASTM C 236 Standard Test Method for Steady State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box - See manufacturer's technical data sheet for test results.

- B. Fire Performance Characteristics: Provide insulation materials which are identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is a part, have been determined by testing, per methods indicated below:

- 2. Surface Burning Characteristics: ASTM E-84 Standard Test Method for Surface Burning Characteristics of Building Material.

1.4 SUBMITTALS

- A. Submit manufacturer's product literature and installation instructions.
 - 1. Certified Tests: With product data, submit copies of certified test reports showing compliance with specified performance values, including R-values, fire performance characteristics, and perm ratings.

1.5 PRODUCT HANDLING

- A. Protection: Protect insulation from physical damage and from becoming soiled or covered with ice or snow. Comply with manufacturer's recommendation for handling, storage and protection during installation. Deliver insulation to project site as close as possible to installation time.



PRODUCT

2.1 INSULATING MATERIALS

A. General:

1. Provide insulating materials which comply with requirements indicated for materials, compliance with referenced standards, and other characteristics.
2. Preformed units: Sizes to fit applications indicated, selected from manufacturer's standard thickness', widths', and lengths'.

A. Foil Faced Low Density Polyethylene Foam Insulation:

1. Acceptable Manufacturer:
 - a. ENVIRONMENTALLY SAFE PRODUCTS INC.
 - b. ESP WEST, LLC.
2. Single layer of low-density polyethylene foam highly polished .000285 aluminum foil both sides.
3. Radiant Energy Control 95 -97%
4. Vapor transmission rating of 0.068 perms.
5. Surface burning characteristics: Maximum flame spread 25, smoke developed 50, ASTM E-84.
6. Emissivity: .03 -.05

2.2 AUXILIARY INSULATING MATERIALS

A. Adhesive for bonding insulation: Aluminum foil tape recommended

B. Mechanical anchors: Type and size shown or, if not shown, as recommended by insulation manufacturer for type of application and condition of substrate.

C. Aluminum foil tape, 3 inch wide, acrylic adhesive, for seams of Foil / PE foam / foil insulation:

1. Acceptable Manufacturers:
 - a. Environmentally Safe Products Inc.
 - b. Or equal.
2. Provide pressure sensitive aluminum foil tape for taping all seams where conditions dictate.

EXECUTION

3.1 INSPECTION AND PREPARATION

- A. Examine substrates and conditions under which insulation work to be performed. Do not proceed with insulation work until unsatisfactory conditions corrected.
- B. Clean substrates of substances harmful to insulation or vapor barriers, including removal of projections which might puncture vapor barrier.

3.2 INSTALLATION

A. General:

- 1. Comply with manufacturer's instructions for particular conditions of installation. If printed instructions not available or does not apply to project conditions, consult manufacturer's technical representative for specific recommendations before proceeding with work.
- 2. Extend insulation as shown over entire area to be insulated. Cut and fit tightly around obstructions. Remove projections interfering with placement.
- 3. Apply single layer of insulation of required thickness, unless otherwise shown.
- 4. Apply insulation units to substrate by method indicated complying with manufacturer's recommendations. If no specific method indicated, bond units to substrate with adhesive or use mechanical fasteners to provide permanent placement and support of units.
- 5. Vapor barrier faced units:
 - a. Set to warm side of construction except as otherwise shown. Do not obstruct ventilation spaces.
 - b. Tape all seams and ruptures in vapor barrier and seal each continuous area of insulation to ensure vapor tight installation.
- 6. Reflective foil faced units:
 - A. Set accurately with air space in front of foil as shown. Provide not less than 0.75 in airspace.

3.3 PROTECTION

- A. Protect installed insulation and vapor retarders from harmful weather exposures and possible physical abuses where possible by non delayed installation of concealing work or, where not possible, by temporary covering or enclosure.