FWFO - Exterior Wall Systems

See General Information for Exterior Wall Systems

System No. EWS0001

February 19, 2015

ASTM E2357 - 0.0062 cfm/ft² (0.032 l/s·m²) @ 75 Pa (1.57 psf) - Category 1

ASTM E331 - 45 min. @ 300 Pa (6.27 psf)

Exterior Wall System

1. **Steel Studs** — Min 3-5/8 in. (92 mm) deep, formed of min 16 ga. galv steel spaced max 16 in. (406 mm) OC. Additional studs to be used to completely frame window openings.

2. **Interior Gypsum Board (BWFR)** — Min 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide, attached to steel studs with 1 in. (25 mm) long, Type S steel screws spaced max 8 in. (203 mm) OC. Joints oriented vertically and covered with paper tape and joint compound. Screw heads covered with joint compound.

**UNITED STATES GYPSUM CO** — Type SCX

3. **Exterior Gypsum Sheathing (BWFR)** — Exterior-grade glass mat sheathing gypsum board, minimum 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide. Attached to steel stud framing with 1 in. (25 mm) long, Type S steel screws spaced max 8 in. (203 mm) OC. Joints oriented vertically and covered with paper tape and joint compound. Screw heads covered with joint compound.
mm) thick, attached to steel studs with 1 in. (25 mm) long, Type S steel screws spaced max 8 in. (203 mm) OC. Joints oriented vertically or horizontally. Additional sheathing to be used to line framed window openings.

**UNITED STATES GYPSUM CO** — Type USGX

3A. **Exterior Wall System Component — Sealant** — (Not Shown) - Sealant applied to all exterior sheathing joints prior to application of air barrier sealant (Item 4).

**TREMCO INC** — Tremflex 834 or Dymonic 100

4. **Exterior Wall System Component — Combustible Air Barrier Sealant** — Applied to completely cover the gypsum sheathing at a min thickness of 35 mil (0.9 mm) dry, 70 mil (1.8 mm) wet thickness.

**TREMCO INC** — ExoAir 230

5. **Foam Insulation (BRYX)** — Nom 4 by 8 ft (1.2 by 2.4 m) by max 2-1/2 in. (64 mm) thick, max 1.55 pcf (24.8 kg/m$^3$) extruded polystyrene insulation secured to gypsum sheathing with min No. 8 by 3-1/2 in. (89 mm) self-tapping steel screws in conjunction with 2 in. (51 mm) diameter steel washers.

**AFM CORP** — Foam-Control EPS Type IX, Film Faced Foam-Control EPS Type IX, Foam-Control EPS Type XIV or Foam-Control EPS Type XV

**ATLAS EPS, DIV OF ATLAS ROOFING CORP** — ThermalStar

**OWENS CORNING FOAM INSULATION LLC** — Foamular 250 or Foamular CC

**THE DOW CHEMICAL CO** — Styrofoam Scoreboard

6. **Window Flashing Materials** — (Optional) - The following items may be used as window flashing materials:

A. **Exterior Wall System Component — Window Flashing Material** — Nom 6 in. (152 mm) wide extruded silicone rubber flashing attached to gypsum sheathing with sealant (Item 6D) to completely frame window opening.

**TREMCO INC** — Proglaze ETA

B. **Fiberglass Mesh** — Nom 0.012 in. (0.3 mm) thick open-weave glass-reinforcing fabric embedded within the air barrier sealant (Item 6C).

**TREMCO INC** — 2011 Mesh

C. **Exterior Wall System Component — Combustible Air Barrier Sealant** — Applied to completely cover sheathing lining the window opening in conjunction with a nom 0.012 in. (0.3 mm) thick open-weave glass-reinforcing fabric embedded within the sealant.

**TREMCO INC** — ExoAir 230

D. **Exterior Wall System Component — Sealant** — (Not Shown) - Sealant applied to all edges of window flashing material to adhere flashing to gypsum sheathing.

**TREMCO INC** — Spectrem 1

7. **Steel Lintel** — Nom 7 in. (178 mm) wide by min 3/8 in. (10 mm) thick steel used at top of window opening of brick veneer (Item 9) and extending min 8 in. (203 mm) beyond each side of the opening.

8. **Mineral Wool** — Nom 4 pcf (64 kg/m$^3$), 1 in. (25 mm) thick mineral batt insulation secured to the underside of steel lintel (Item 8) with two rows of steel batt pins located approx. 1 in. (25 mm) from the edges and spaced a max 8 in. (203 mm) OC. Also installed within each wall stud cavity at each floor line, minimum 4 in. thick, held in place with any standard installation method (floor line mineral wool not shown in diagram).

9. **Exterior Veneer — Brick** — Nominal 4-in.-thick clay brick offset to provide a nom 1 in. air gap between foam insulation (Item 5) and brick veneer with standard type veneer anchors spaced a max 24 in. (610 mm) on center.

10. **Steel Flashing** — Formed of min 22 ga. steel. Formed to completely line window opening and overlap onto both surfaces of the wall assembly a min 1/2 in. (13 mm).
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