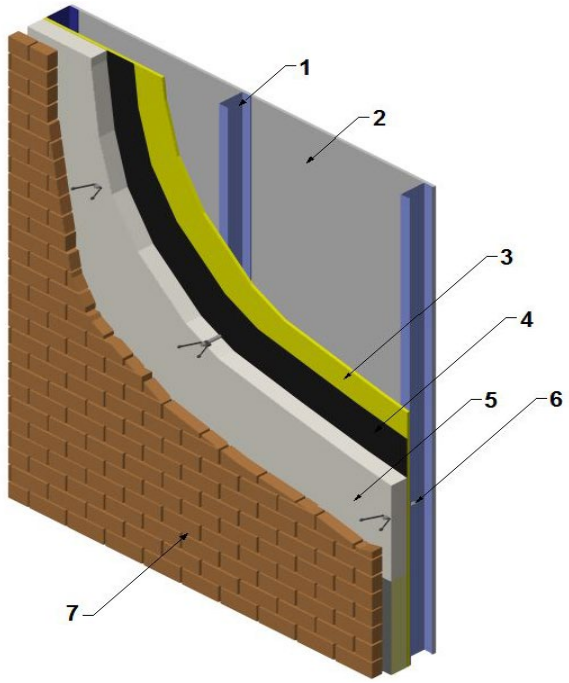
Airfoam Industries Ltd.
Design No. AFI/FBI 30-01
Exterior Wall Assembly
Korolite® Expanded Polystyrene (EPS) Thermal Insulation
NFPA 285
Rating: Meets Conditions of Acceptance



1. **INTERIOR BASE WALL:** Nominal 3-5/8 in. 25 GA galvanized steel studs spaced a max. of 24 in. on center (oc), secured into 25 GA top and bottom tracks with #8 x 1/2 in. self-drilling screws. Steel studs must be braced horizontally every 4 ft. above any window opening.

   A. FIRESTOPPING AT FLOOR (Not Shown) – Install a 4 x 4 x 24 in., 4 pcf mineral fiber safing insulation at the floor line in each wall cavity.

   B. INTERIOR BASE WALL INSULATION (Not Shown, Optional) – A nominal 3-1/2 in. thick Class A, B, or C fiberglass batt insulation (faced or un-faced), or noncombustible insulation, installed between the steel studs (Item 1).

2. **INTERIOR GYPSUM BOARD:** Apply one layer of 5/8 in. thick, Type X gypsum board on the interior side of the exterior wall assembly, with the long dimension perpendicular to the steel framing (Item 1), fasten gypsum board with #6 x 1-1/4 in. long, Type S, self-drilling screws, spaced 8 in. oc around the perimeter and 12 in. oc in the field.

   A. JOINT TAPE AND COMPOUND (Not Shown) – Apply a level 2 finish of joint compound over two coats to all exposed joints and fastener heads. Incorporate and embed min. 2 in. wide paper, plastic, or fiberglass tape in the first layer of compound over all joints in the gypsum board (Item 2).

3. **EXTERIOR SHEATHING:** Install one layer of 1/2 in. thick exterior gypsum sheathing to the exterior side of the steel studs (Item 1) with the long dimension perpendicular to the steel framing. Secure the sheathing with #6 x 1-1/4 in. long, self-drilling screws, spaced 8 in. oc around the perimeter and 12 in. oc in the field.

4. **WATER RESISTIVE OR AIR BARRIER (Optional):** Apply to the exterior side of the exterior sheathing (Item 3). Tremco EXOAir 230 Air Barrier applied in multiple coats to a wet film thickness of 70 mils (23 $ft.^2$/gal). Approved alternate barriers include:
   - BASF Enershield®-HP
   - BASF Enershield®-I
   - CCW Barriertech NP™
   - CCW Barriertech VP
   - DuPont Tyvek® CommercialWrap®
   - Grace Perm-A-Barrier® VPS

5. **CERTIFIED MANUFACTURER:** Airfoam Industries Ltd.

   CERTIFIED PRODUCT: Korolite® Expandable Polystyrene (EPS) Thermal Insulation

   CERTIFIED MODEL: Types I, VIII, II, II+, IX, XIV, and XV

   FOAM INSULATION PANEL – Install nominal 4 ft. wide x 8 ft. long Korolite EPS Insulation panels, having a total mass per unit area not more than the max. allowable 3-1/4 in. EPS with a 3 pcf density. Alternatively, the thickness may be increased linearly with decreasing density. Max. thickness is 9-3/4 in. EPS with a 1 pcf density.

   When installing around an opening, start the Korolite EPS Insulation boards 1 in. above the opening to allow for installation of mineral fiber insulation prior to installing the opening flashing (Item 9).

6. **BRICK VENEER ANCHORS:** Install 1-1/2 in. X-Seal™ Anchors (Hohmann & Barnard) with 3/16 x 3 x 3 in. VB Vee Byna Ties, secured on each steel stud (Item 1) vertically at 24 in. oc, using #12 x 3 in. hex-head self-drilling screws with washers, to create a nominal 2 in. air space.

7. **BRICK VENEER:** Install using 4 in. common (3-1/2 x 7-3/4 x 2-1/4 in.) clay brick, laid in a running bond pattern using Type S mortar. Provide a max. 2 in. air gap between the unexposed side of the brick and the outermost side of the insulation panels (Item 5).

   Approved alternative cladding include:
   - Concrete – Min. 2 in. thick
   - Concrete Masonry Units (CMU) – Min. 4 in. thick
   - Limestone – Min. 2 in. thick with non-open joint installation technique such as ship lap
   - Natural Stone Veneer – Min. 2 in. thick with non-open joint installation technique such as ship lap
   - Precast Artificial Stone – Min. 1-1/2 in. thick complying with ICC-ES AC51 with non-open joint installation technique
   - Terra Cotta Cladding – Min. 1-1/4 in. thick (solid) with non-open joint installation technique
   - Stucco – Min. 3/4 in. thick exterior cement plaster and lath

8. **LINTEL (Not Shown):** Install a 4 x 4 x 1/4 in. thick steel angle lintel above the window opening, extending past the opening by 8 in. on each side. Install a 1 in. thick 4 pcf piece of mineral fiber insulation at the top of the opening, spanning the entire length, under the steel lintel prior to installing the flashing (Item 9). Depth of the steel angle lintel and the mineral fiber insulation must be increased accordingly for thicker EPS insulation.

9. **FLASHING (Not Shown):** Install 24 GA sheet steel, L-shaped, 2 x 14 in. flashing with the 2 in. section fastened to the interior gypsum board (Item 2) using #12 x 3/4 in. long self-drilling screws spaced 8 in. oc. Secure the 14 in. leg of the flashing into the steel framing (Item 1) using #12 x 3/4 in. long self-drilling screws spaced 8 in. oc, and into the brick veneer (Item 7) using 3/16 x 1-1/4 in. long Tapcon concrete anchors spaced 8 in. oc.