ORI WALL

Extruded polystyrene rigid foam with skin, colored blue throughout, according to ASTM standard C 578-95, as manufactured by Oriental Polystyrene (OriFoam). Material thickness should be as indicated in the drawing and have the following properties:

1. Thermal conductivity of 0.028 W/m^{o}K (0.19 Btu.in/fr.h.°F) when tested at 10oC (50'F) in accordance with or ASTM C 518.

2. Compressive strength of 410 kPa (60 psi) average, when tested according to ASTM D 1621.

3. Water absorption of <3% in volume average when tested in accordance with ASTM D 272.

4. Water vapor permeability of 1.1 perm –inch average when tested in accordance with ASTM E 96 00.

5. Edge Treatment Ship lap or Butt Edge

BROCHURE OF EXTRUDED POLYSTYRENE

Insulation, why?

Increasing energy costs and availability problems emphasize the need for immediate energy conservation even in the oil producing countries. An effective way of saving energy is to improve the thermal insulation of buildings. This is particularly important in hot climates where the energy demand for cooling by air conditioning is very high. In addition to the need for energy saving, high insulation standards are justified by improved comfort levels and increased building life. A well-insulated building will have a higher value.

Product Description

ORIFOAM thermal insulation boards are manufacture by the ORIENTAL POLYSTYRENE PRODUCTS CO LLC. Through advance processes, products and application research and development work has taken place various countries. Today, a variety of grades of ORIFOAM INSULATION BOARDS manufactured for many applications and industries, is available in various sizes and with various edge treatments.

Extruded polystyrene foam is used in many parts of the world under widely differing climatic conditions. For example, use in the Middle East at ambient temperatures of more than +40°C (+104°F), while, at the other extreme, Orifoam boards has been used in Alaska to protect the delicate permafrost at temperatures as low as -50°C (¬58°F) along 200 km of gravel road servicing the Trans Alaska Oil Pipeline.

Orifoam Thermal sheets are manufactured by a continuous extrusion process which imparts a characteristic closed cell structure giving the product its unique physical properties. Extruded polystyrene rigid foam has a high resistance to water absorption and good mechanical properties. The manufacturing process, combined with inherent qualities of the inert component thermo plastic material gives Orifoam predictable long-term performance and high insulating value.

PRODUCT	DESCRIPTION	APPLICATIONS	BOARD DIMENSIONS
ORIWALL	Extruded Polystyrene rigid foam with skin. It is available with or without toungue and groove edge treatment	Thermal insulation for - Walls - Tile Backing - Core Materials for sandwich panels. - Low temperature space Blowing Agent	Wall mate with tounge& groove, butt edges or shiplap edges Thickness - 20,30,40,50,60,80,90 & 100mm Width 600mm Length 2500mm CFC& HCFC Free

SPECIFICATION

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Interior Wall Insulation

Interior thermal insulation is used for:

- Building with special exterior finishes.
- Building with intermittent air conditioning.
- Insulating existing buildings.

For the interior lining of buildings, **Ori-Wall*** and **Ori-Styro**can be used.

Where bonding of **Ori-Styro**or**Ori-Wall**is necessary, suitable solvent free Adhesives should be applied.

The interior lining should be covered with a thermal barrier equivalent to a minimum of 9.5 mm thick gypsum plasterboard or 8mm thick cement board.

1) Interior wall finish:

Two possible alternatives, either:

a) Modified gypsum lime or cement plaster 20 mm thick applied to a plaster carrier (an Expanded Metal Rib Lath - EMRL). The plaster carrier is mechanically fixed to the wall through **Ori-Wall .**Application of plaster and installation of EMRL should be in accordance with plaster manufacturer's instructions. (For further details and technical advice, contact us or visit our website.

or

b) Gypsum wallboard (min. 9.5mm thick), cement boards (min. 8 mm thick).

2)**Ori-Styro or Wall mate** , fixed with a compatible adhesive or mechanically by means of metal studs or wood battens. The metal rib lath is installed over the insulation and fixed to the wall through the insulation by means of screws. Alternatively, Ori-Wall with Gypsum Board as one factory assembled composite element can be installed using same methods described above.

3)Structural Wall: Brick or concrete wall, with a smooth dry, clean and dust-free surface.

4)Interior gypsum or cement plaster.

Cavity Wall Insulation

Cavity wall insulation is an advantage where an exterior brick finish is required, and for both periodically and permanently air-conditioned buildings.

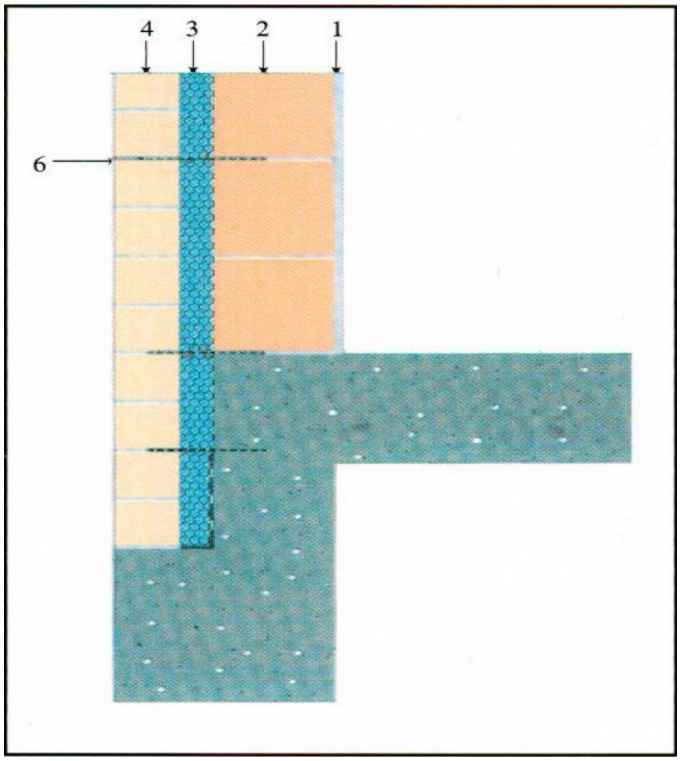
1. Interior plaster.
2. Structural wall, usually concrete or Masonry Concrete Unit (MCU), the wall should be smooth and clean.
3. Ori-Wall boards are installed with the long edge horizontal and fixed to the inner wall either mechanically, with the aid of wall ties, or bonded along the board joints with a suitable adhesive.
4. Outer brick wall and inner wall are connected with wall ties. Local building practices should be observed for wall tie specifications and number per square meter of wall area.
5. Concrete Slab.
6. Wall ties.

Exterior Insulation

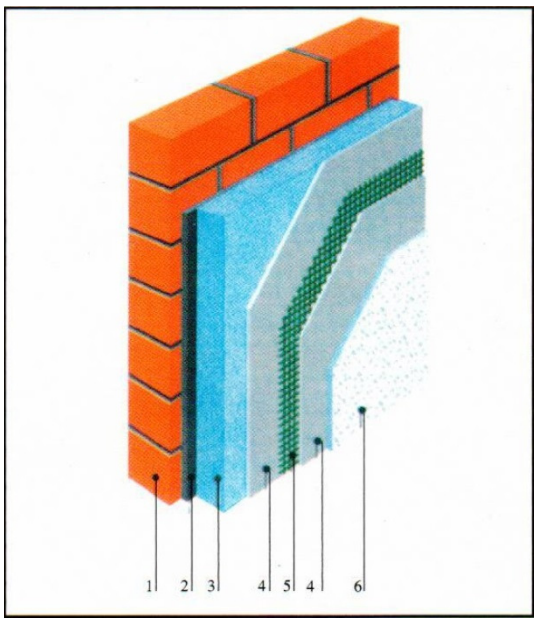
Exterior Insulation is the most efficient way of thermally insulating building due to the fact that it is not interrupted at structural elements like columns, beams and slabs

which create thermal bridges if un- insulated. Exterior insulation can be installed in two ways:

1. Behind mechanically fixed marble or granite panels. Thermal Insulation boards shall be fixed to external face of walls using either plastic dowel with 50 mm diameter disc head or with compatible solvent free adhesive.
2. As part of a complete Exterior Insulation and Finish System (EIFS) comprising:
    a. Polymer modified base coat with fiberglass reinforcement fully embedded in this coat.
    b. Acrylic or Silicone base finish coat.



System Components



1. Brick masonry or concrete wall
2. Adhesive to fix insulation to Substrate
3. Extruded Polystyrene insulation boards
4. Cement free, fiber reinforced, base coat
5. Glass Fibre Mesh reinforcing mesh
6. polymer modified finish coat

image of Ori-wall installation