# **CHEMBOARD EPS**



#### **EXPANDED POLYSTYRENE RIGID BOARDS FOR INSULATION**

EPS (Expanded Polystyrene) Insulation is supplied in many shapes and sizes for a broad range of insulating applications in buildings and industries.

EPS is a closed cell, light-weight, resilient, foamed plastic composed of hydrogen and carbon atoms. EPS has a compressive strength between 10-60 psi for most construction applications. Within that range EPS can be molded to meet specific application requirements.

Applied in foundations, walls and roofs, EPS has a successful history of efficient use in industrial, commercial, cold storage and residential buildings. Where energy efficiency and cost effectiveness have long been primary design considerations, architects have made EPS the dominant thermal insulation.

## Features and Advantages include:

Long-term Insulation Value EPS insulation (1.0 pcf) provides a typical R-value of 3.85 per inch (k-factor =0.26) at a mean temperature of 75°F, and a typical R-value of 4.17 per inch (k-factor = 0.24) at a mean tem-perature of 40°F.

R-value means the resistance to heat flow. The higher the R-value, the greater the resistance to heat flow. When properly installed and protected from moisture, the R-value of EPS insulation remains constant. This is because the cellular structure of EPS contains only stabilized air. The R-value of EPS will not decrease with age. As a result, the thermal resistance, or R-value, of EPS may be used without any adjustment for aging.

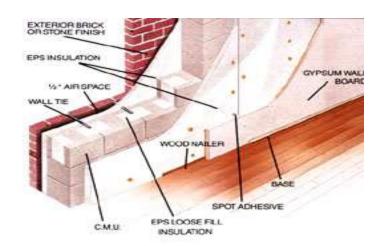
#### **Moisture Resistance**

A study by the Energy Materials Testing Lab (EMTL) has shown that EPS insulation installed in well constructed roofs does not absorb appreciable

moisture, even under conditions characteristic of prolonged, cold, damp winters. The small amount of moisture absorbed (an average of 0.2% by weight) has little or no effect on the compressive or flexural strength, and the EPS insulation retains between 95% and 97% of its thermal efficiency.

## **Temperature Cycling**

EPS is able to withstand the abuse of temperature cycling, assuring long-term performance.



#### **Environmental Impact**

EPS insulation is an inert, organic material produced from petroleum and natural gas by-products. EPS insulation does not contain chlorofluoro carbons (CFCs) or hydro chloro fluoro carbons (HCFCs). It is manufactured with hydrocarbon blowing agents. It provides no nutritive value to plants, animals or microorganisms. It will not rot, and is highly resistant to mildew.

EPS is recyclable. After its original life as insulation, EPS could be recycled into a variety of consumer and industrial products.



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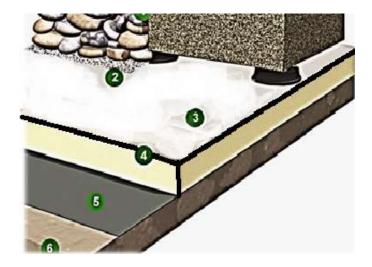
## Strength

For foundation and wall applications in which EPS bears a minimal load, ASTM C 578-92 Type I EPS material is adequate. The resilience of EPS insulation board provides reasonable absorption of building movement without transferring stress to the outer skins at the joints. In roofing, EPS material provides the dimensional stability and compressive strength necessary to withstand light roof traffic and equipment weight at reasonably high surface temperatures.

## **Standards Compliance**

EPS insulation may be manufactured to meet or exceed the requirements of major building codes, ASTM C 578-92, HUD Use of Materials Bulletin #71, and DOE/RCS Standards.

For more information, please give us a call.



- 6. Slab/ Leveling Screed to receive waterproofing
- 5. Waterproofing
- **4 Insulation Boards**
- 3. Separation layer, Geo Textile/ Polyethylene sheet
- 2. Protection screed
- 1. Final finishes/ screed/tile/ gravel.

