

CHEMBOARD EXPS



EXTRUDED POLYSTYRENE RIGID BOARDS FOR INSULATION

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

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

Applied in foundations, walls and roofs, EXPS 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 EXPS the dominant thermal insulation.

Features and Advantages include:

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 EXPS insulation remains constant. This is because the cellular structure of EXPS contains only stabilized air. The R-value of EXPS will not decrease with age. As a result, the thermal resistance, or R-value, of EXPS may be used without any adjustment for aging.

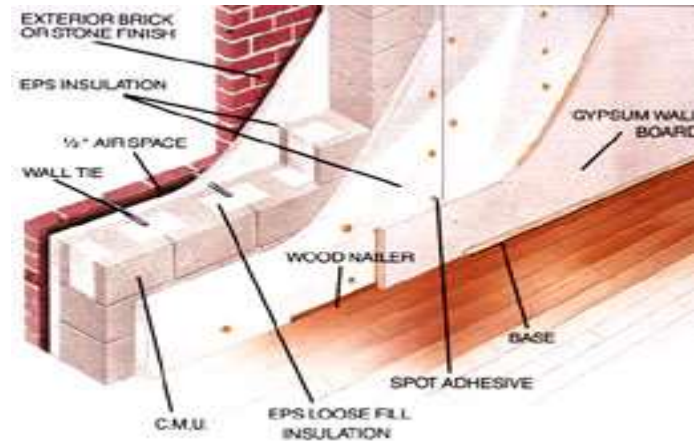
Moisture

A study by the Energy Materials Testing Lab (EMTL) has shown that EXPS 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 EXPS insulation retains between 95% and 97% of its thermal efficiency.

Resistance

Temperature Cycling

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



Environmental

EXPS insulation is an inert, organic material produced from petroleum and natural gas by-products. EXPS 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 micro-organisms. It will not rot, and is highly resistant to mildew. EXPS is recyclable. After its original life as insulation, EXPS could be recycled into a variety of consumer and industrial products.

Impact

Strength

For foundation and wall applications in which EXPS bears a minimal load, ASTM C 578-92 Type I EXPS 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, EXPS material provides the dimensional stability and compressive strength necessary to withstand light roof traffic and equipment weight at reasonably high surface temperatures.

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Technical Data Sheet

PROPERTIES	UNIT	RESULT	TESTING METHOD
Color		Green / Blue / Pink	
Cell Structure		Closed Rigid	
Density (Minimum)	Kg/m ³	32 - 40 or on request	ASTMD 1622 BS4370
Thermal Conductivity	BTU in/ft ² .hr°F W/mk	0.17 - 0.19 0.025 - 0.027	ASTM C-177 C-518
Compressive Strength	kPa	270 - 414	C-165 ASTM 1621-5
R-Value	ft ² -hr, F° /Btu	5.3 - 5.88	ASTM C-518
Fire Classification		A	BS3837
Size: Length Width	Ft	2'X4' 3'X4' 2'X6' 3'X6' 2'X8' 3'X8'	
Thickness	mm	20 ~ 1000	
Edge Profile		Butt/Shiplap/Tongue & groove	



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.

Standards Compliance

EXPS 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.