A Variety of Insulation Products are Available to Mitigate Moisture Problems

Protecting Walls and Foundations with Below-Grade Polyiso Insulation

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When polyiso is used as a below-grade foundation, it is frequently produced with all paper facers that can absorb moisture. Some require more material to achieve the same R-value. Polyiso, which is itself water resistant because of its closed-cell structure, is also sold with durable, non-absorbing facers—aluminum foil or polyethylene that require more material to achieve the same R-value. Polyiso is noted for its compressive strength. Below grade, the soil that is backfilled against a foundation exerts lateral pressure on the foundation and can mean a foundation is more than 5' below grade. However, Polyiso insulation protects the foundation from freezing at shallower depths than the prescribed local frost line.

In addition, resources including such as industry laboratories for physical properties, fire and moisture resistance testing, and expert systems. He has expertise in building enclosure and product manufacturing encompassed-research and development, testing, product conception and development, and computer modeling/analysis.

PIMA, the Polyisocyanurate Insulation Manufacturers Association, is one of the most popular insulation products on the market today. Made of water-resistant rigid foam sandwiched between two protective facers, polyiso insulation is commonly used on commercial and residential roofs and walls because of its high R-value per inch of thickness, its capacity to serve as a vapor retarder, low water absorption, high compressive strength, and offers consistent thermal resistance by eliminating thermal bridging.

Benefits of Polyiso in Below-Grade Applications:

- Reduces thermal bridging, improving thermal efficiency
- Water-resistant aluminum foil facers
- Protects the waterproofing or damp-proofing from damage caused by backfill during construction
- Keeps the wall warm, reducing the potential for condensation on the interior surface of the wall
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- Keeps the wall warm, reducing the impacts of freeze-thaw structural damage
- Reduces the risk of moisture infiltration
- Improves the durability of the foundation as it protects against moisture migration
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