



AssanChem

ASSANCHEM CONTINUOUS PANEL SYSTEMS

AssanChem, a product of sandwich panel technology designed for maximum-efficiency building insulation, cold room, storage, and transport applications with years of experience, combines 30 years of sandwich panel experience with Polyurethane.

The best quality B3, B2, and PIR material technology offers you excellent mechanical and physical properties and thermal insulation at the optimum level. You can build new buildings or improve the existing ones with high thermal insulation panels designed with AssanChem technology, being able to attain maximum efficiency from the energy consumed by taking steps to reduce heat loss and energy loss within buildings thanks to actual thermal insulation.

AssanChem Polyurethane with low thermal conductivity coefficient and low-density B3 foam is the best filling material used in sandwich panel production together with PIR and B2 foams with high fire resistance. Polyurethane systems can be manufactured by 2, 4, or 5 components based on the production line and formulated by various fire resistance levels based on custom needs.



Areas of Application

- Regular and Corrugated Roof Panels
- Wall Panels
- Cold room panels
- Insulation panels
- Cold storage containers
- Prefabricated Houses

Advantages

- Real-world application of thousands of m² and certified material
- Excellent mechanical properties
- Better thermal insulation with a lower lambda (λ) value
- Extremely strong adhesion properties to various types of surfaces
- High efficiency with minimum wastage
- Easy process conditions and excellent functionality
- High fire safety (best in class B2)

What is Polyurethane Insulation?

Polyurethane insulation comes in open or closed-cell forms in varying densities. In general, it is implemented for the purpose of thermal insulation of new buildings and roofs, walls, floors, and ceilings of new buildings. It is also used for insulation of various tools & equipment, piping, and other various products.

Versatility of hard polyurethane foam makes it perfect for a wide variety of insulation applications. It is preferred in residential and commercial roofs, walls, panels, and doors to reduce energy use and consumption in building applications.

Polyurethane insulation offers a sustainable material providing actual advantages to communities challenged by increased energy costs, decrease in fossil fuels, and faced with adverse environmental effects of climate change.



Polyurethane Foam Insulation Properties and Benefits

With its excellent insulation properties combined with insulation and air tightness, load bearing capacity, impact resistance, sealing, weight and space optimization, low maintenance and high durability characteristics, Polyurethane foam can be used in various types of buildings.

High Thermal Resistant Rigid Polyurethane foam is well known for its excellent thermal insulation value, which is the highest among any other insulation materials. This ensures efficient heat retention or, alternatively, consistent temperature control of cold or frozen product storage environments. About half of the energy used during the economic life of a building is intended for the purpose of heating and cooling, and therefore, efficient insulation is of top priority.



Compatibility

Rigid Hard Polyurethane foam is compatible with most building surfaces, including paper, glass fiber, aluminum, plywood, OSB, plastering, and foil. Many available combinations increase the natural strength of foam and allows for it to be used in semi-structural panels and coating.



Good Stability

Extreme temperatures ranging between -200°C and +100°C can be tolerated by rigid polyurethane-based foam products.



Water vapor permeability

Rigid polyurethane foam has low water vapor permeability. Polyurethane foam products with a surface such as aluminum foil or polyethylene film functions as a vapor barrier preventing mold growth.



Lightness

Rigid polyurethane foam consists of gas by about 97% and polyurethane polymers only by 3% in its cells in densities as low as about 2 lb / ft³. Lightweight material means reduced transport costs and easy on-site use and installation.



Chemical Resistance

Rigid polyurethane foam ensures excellent resistance against many commonly used chemicals, solvents, and oils.



Fire Performance

As all organic building materials (e.g., wood, paper, plastic, paint, etc.), rigid polyurethane foam is also inflammable; however, its flammability and combustibility ratios can be modified to comply with the requirements for various building applications. When using polyurethane insulation products, local building codes should be observed for guidelines on acceptable fire protection measures.

INSULATED PANELS

Polyurethane insulation products reduce demand for energy based on fossil fuels as used for heating and cooling of buildings; therefore, it helps reduce harmful greenhouse gases (GHG) associated with production and handling of these fuels. In addition, polyurethane insulation also offers a solution for the actual concerns of fossil fuel shortage and energy safety to reduce energy demand.

As a modern solution which is preferred in both residential and commercial building projects, sandwich panels are composite materials used in the construction of floors, walls, and roofs. Also known as insulated panels, sandwich panels contain an insulation layer called 'core' and sandwiched between two structural layers.

Designed to be resistant to various different internal and external factors today, these panels have become popular in both indoors and outdoors, used in walls and exterior walls as well as ceiling and roof systems. Hermetically sealed sandwich panels are also an excellent option for construction of cold rooms requiring for special indoor climate to safely store any kind of products from foodstuff to pharmaceuticals.

