



Polystyrene Insulation and Climate Change



Plastics

The Material for the 21st Century

Way ahead of other insulation when it comes to fighting climate change

Among the many types of plastics, Polystyrene (PS) foam is a lightweight, rigid plastic insulation material, and is widely recognised as the most immediate and affordable means to fight climate change. It is available either as EPS (Expanded Polystyrene, produced from polystyrene beads) or as XPS (directly Extruded Polystyrene).

The durable panels achieve optimum levels of energy efficiency and provide constant insulation over their 50 year lifespan. They also reduce heat loss in buildings from heating or air conditioning systems. They are typically used for interior and exterior walls, floors and flat and steeped roofs. Buildings insulated with PS panels meet

the most stringent pieces of relevant legislation, including the EU Directive 2002/91/EC on the Energy Performance of Buildings.

PS has no global warming potential. As the material does not decompose at the end of its life it does not release any ozone-depleting substances.

There is currently little need for recycling polystyrene panels as they have a long life in buildings. However, polystyrene is one of the most recycled plastics and

PS manufacturers recycle both

factory waste and post-consumer PS packaging into new PS boards to help optimise costs and reduce the need for virgin materials.





The results of a study conducted by Denkstatt (2010) showed that PS insulation (over the total lifecycle) consumes on average 16% less energy and produces 9% less greenhouse gas emissions than other insulation material.

Studies also show that PS insulation materials enable significant energy savings during their entire lifecycle. For example, the energy needed to produce the panels is offset by the energy savings recovered during their first four months use. In fact, across their total life cycle, PS insulation boards save 150 times more energy than is needed for their production.

PS panels are sustainable, good for the environment with a positive impact on climate change, and an extremely cost effective insulation material.

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