

BEHIND THE SCENES EPS FREE PACKAGING

At IKEA we believe that being big comes with a responsibility. We are large enough to make a real difference and we are committed to having a people and planet positive impact. That is why we decided to develop a more sustainable packaging solution than the widely used EPS foam. We hope this initiative will drive the entire home furnishing industry towards better packaging solutions.

Changing fixed patterns of thinking

Expanded polystyrene (EPS) foam has been extensively used all around the world for many years. It is a cheap, durable, lightweight and easy to form material. But it is also an oil-based product that is not everywhere recyclable in an industrial scale. EPS foam often ends up in nature where it is not degradable. Instead it is atomized into small parts which are possibly harmful to humans and animals in the long run.

Still, there was a big resistance regarding phasing out EPS foam packaging, both internally and at many suppliers. It was hard to grasp why IKEA should replace a material with many good qualities that had been used for ages. To convince the sceptics, we set out to develop a new recyclable material that was at least equally cheap and easy to use as EPS foam.

Applying existing solutions to a new context

Together with many co-workers and suppliers IKEA began a journey to find a new and better packaging solution. The material selected had to be cheap, possible to recycle many times and compatible with the recycling systems used by most countries today. IKEA solved this by using fiber-based materials like corrugated paper and molded paper for the new packaging solution.

FACTS

Expanded polystyrene (EPS) foam is a common packaging material used as filling material. It is oil-based and cannot everywhere be recycled on an industrial scale. It is not degradable in nature and possibly harmful to humans and animals in the long run.

Various industries, for example the toy industry and now with IKEA also the home furnishing industry, are more and more trying to replace EPS foam with fiber-based materials like corrugated paper or molded paper which is easy to recycle and can be recycled many times.



To keep the durable and lightweight properties of the EPS foam, IKEA decided to use a honeycomb construction made of the fiber-based materials. A honeycomb is a mass of hexagonal cells inspired by the constructions built by honey bees to contain larvae and store honey. It has been used by IKEA for many years as a core material in for instance doors and board based products. The turning point in the development process was the realization that the honeycomb construction could be used in a different context. It could be used as a recyclable shock absorber in the new packaging solution; making it light, yet strong.

Replacing EPS

It took four years to phase out EPS foam in almost all IKEA flat packs and replace it with the new recyclable packaging solution. The change from EPS foam to fiber-based materials means that IKEA has reduced the use of EPS foam by 8 000 tons per year. This equals more than half the volume of the Empire State Building. The decision to change filling material in IKEA flat packs is valid for all packaging except for appliances. At the moment IKEA is too small in this segment to be able to affect the global industry.

“We are working on a more sustainable solution even within this field. Phasing out EPS foam is a step towards changing the packaging solutions throughout the home furnishing industry and making them more sustainable,” says Peter S Larsson, Packaging Sustainability Leader at IKEA of Sweden.

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Peter S Larsson, Packaging
Sustainability Leader
IKEA of Sweden