



## Environmental Benefits of EPS

Date: October 12<sup>th</sup>, 2017

Expanded polystyrene (EPS) offers many environmental advantages and is an ideal choice for green building designs. EPS is used in hundreds of applications, often hidden as a core in many building products. From the actual product composition to after use recycling options, EPS has several environmental benefits, which are outlined in the bullets below.

- Unlike extruded polystyrene (XPS), EPS does not contain and has never contained HFC-R134a. This blowing agent is an extremely potent greenhouse gas with a global warming potential (GWP) rating of 1430, which means that R134a has a GWP that is 1430 TIMES the GWP of CO<sup>2</sup>. R134a has been outlawed by the EPA as of 2017 for all applications in the US except the XPS industry, which will be required to phase out R134a by 2021.
- EPS has never contained harmful materials such as chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC), hydrofluorocarbon (HFC), or formaldehyde. In fact, EPS is comprised of 98% air.
- EPS no longer contains HBCD, a flame retardant that has been phased out. HBCD has been replaced with a second generation brominated flame retardant which has been designated by the EPA as a safe alternative to traditional fire retardants used with other foam plastics.
- In non-load bearing applications, such as EIFS or exterior cavity wall applications, EPS products are available and still meet performance requirements, while using 40-80% LESS plastic material than XPS or polyiso sheathing, resulting in both cost savings and reduced carbon footprint.
- With the advent of graphite enhanced expanded polystyrene (GPS), designers can substitute low density material for traditional XPS & polyiso sheathing, without having to accommodate thicker installation details.
- Since there are so many EPS molders, expanded polystyrene is almost always locally manufactured, reducing the fuel consumption for delivery to a site.
- EPS is the most vapor open of the common rigid foam plastic sheathing products. The designer is able to plan the proper vapor control in the assembly for a given climate without interference from the rigid insulation, reducing the formation of mold or moisture induced damage.
- EPS is recycled for use in foam packaging parts or re-processed into new resin, which can be used for a variety of applications. In 2013, the EPS industry recycled more than 125 million pounds of EPS. A map of recycling locations can be found at [www.EPSPackaging.org](http://www.EPSPackaging.org)

In conclusion, expanded polystyrene is a sustainable solution for a wide range of applications. From building applications to packaging material, EPS is a durable and environmentally friendly solution.

The EPS industry has published an Environmental Product Declaration that can be used for substantiating many of the benefits described in this bulletin.

This bulletin is current as of the date above.

Please visit our website at **AtlasEPS.com** for the most recent technical information.