



Case Study

ecomate[®]

BLOWING AGENT TECHNOLOGY

Ecomate[®] Blowing Agent Technology Helps XPS Manufacturer Reduce GWP and Increase Thermal Performance – At No Additional Cost

A manufacturer of Extruded Polystyrene (XPS) rigid foam insulation board needed an alternative blowing agent because of the EPA-mandated phaseout of HCFC-142b, due to its global warming potential (GWP) and ozone depletion potential (ODP). The company's XPS insulation boards feature a continuous closed cell structure and extruded skin surface that offers excellent moisture resistance and thermal performance for a variety of residential/commercial construction, manufacturing and industrial applications, including...

- Insulated walls and roofs in building construction
- Walk-in freezers
- Cold storage
- Refrigerated trailers
- Geotechnical insulation
- In-floor heating systems
- And more

Reducing Greenhouse Gases and Improving Product Quality

After a thorough review of available options and extensive testing, this XPS board manufacturer chose Ecomate[®] from FSI as part of its new blend of blowing agents to replace HCFC-142b. Ecomate[®] is non-GWP, non-ODP, contains no VOCs (does not produce smog), and is US EPA SNAP compliant.

Results That Are Better for the Environment

By changing blowing agents to an Ecomate[®] blend, this manufacturer was able to reduce the GWP of their insulation board by 67%, as well as increase its thermal performance, without raising manufacturing costs.

In fact, since converting to its Ecomate[®] blend, the company has eliminated the equivalent of more than 430,000 metric tons of carbon dioxide per year. That's equal to the annual greenhouse gas emissions from over 90,000 passenger vehicles, and the CO₂ emissions generated annually by the electricity used in more than 59,000 homes!

Results That Are Better for Customers

In addition to dramatically reducing the environmental impact of the manufacturer's XPS insulation board, the Ecomate[®] blend also increased its insulating properties.



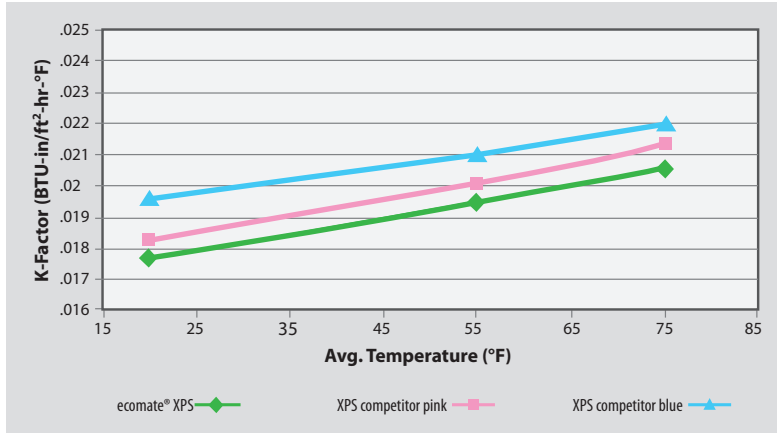
XPS insulation board made with an environmentally friendly Ecomate[®] blend keeps 430,000 metric tons of carbon dioxide equivalent out of the environment every year.



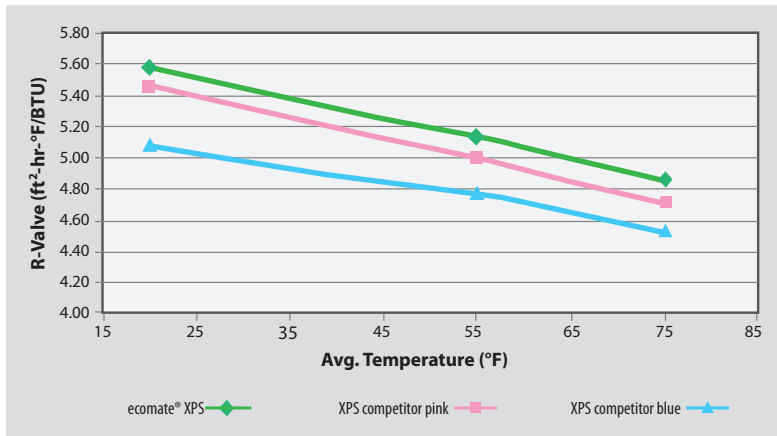
You'll find highly efficient XPS insulation boards in the walls and roofs of residential and commercial buildings, as well as in many other applications.

As shown in the charts below, when this manufacturer's XPS insulation board made with the Ecomate® blend was compared to two competitive products, the Ecomate® blend XPS insulation board was the clear winner – in both R-Value and K-Factor performance.

K-Factor Thermal Performance



R-Value Thermal Performance



The Bottom Line: Everyone Wins with Ecomate®

Add up all the advantages and it's easy to see that an Ecomate® blend was the ideal choice for this manufacturer. The company came out a clear winner with XPS products that are better for the environment and that beat the competition in thermal performance – and they did it without increasing their production costs. Homeowners, building owners and other end users of this company's XPS insulation board will benefit from its better insulating properties, enjoying lower heating and cooling costs for years to come. And everyone on the planet wins thanks to the environmental benefits of Ecomate®.

Examples of what switching to an Ecomate® blend can eliminate from the environment every year:

ANNUAL GREENHOUSE GAS EMISSIONS FROM:



90,500 passenger vehicles



154,000 tons of waste sent to landfills

CO₂ EMISSIONS FROM:



59,100 homes' electricity use



461,868,000 pounds of coal burned



48,385,000 gallons of gasoline consumed



Our chemistry builds a better tomorrow.

**fsi.co
ecomatetechnology.com**



Ecomate® has been approved by the US EPA's Significant New Alternatives Policy (SNAP) Program to replace harmful ozone depleting and global warming polyurethane foam blowing agents since 2003.



RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

FSI is a member of the American Chemistry Council, and supports the Responsible Care initiative for member companies to continuously improve their health, safety and environmental performance.