

POLYETHYLENE FOAM PRODUCTS

Ivex, a division of the Specialized Packaging Group L.P., makes polyethylene foam rolls and planks. These protective packaging materials are then transformed into custom-made secondary packaging products for specialized businesses.

Protective packaging

Ivex makes polyethylene foam rolls and planks for the other divisions of the Specialized Packaging Group L.P. and its many clients. These products are made of polyethylene foam and pigments. The polyethylene foam is produced using butane as a foaming agent.

The butane does not remain in the finished product, however, and IVEX uses special equipment to collect it to limit its air emissions. As such, 40% of the butane used by IVEX in North America is collected, transformed, and released into the air in the form of water, oxygen, and carbon dioxide with a 99.5% efficiency rate.

Polyethylene is an ethylene polymer identified with code 4 of the SPI (Society of the Plastics Industry) classification system. Although it is non-compostable, this material is 100% recyclable.

Polyethylene foam products are 100% recyclable and can be made of 100% recycled materials.



ivex

POLYETHYLENE FOAM PRODUCTS

Pre-and post-consumer recycling

Ivex is very active in both pre- and post-consumer recycling, primarily because Ivex has the equipment needed to recycle polyethylene foam products and reintroduce them directly into its manufacturing process.

This means that even though average productivity at the foam extrusion plant is approximately 87%, Ivex does not, in effect, have any production waste.

Nevertheless, as part of its continual improvement process, Ivex strives to optimize productivity to minimize energy consumption. Because even though Ivex recycles all of its production waste, it firmly believes that the best waste is waste that is never produced.

Inks and glues

Only a few different products are used to make polyethylene foam products: polyethylene, pigments, and butane. Raw materials such as glue and inks are not required.

Butane is used as a foaming agent to produce the actual polyethylene foam. The finished products sold by IVEX contain only a trace of residual butane, as it escapes before the product is sold, while it is curing.



IVEX

POLYETHYLENE FOAM PRODUCTS

VOC emissions

The butane emissions that escape from the polyethylene foam products during the manufacturing and curing processes can be quantified as volatile organic compound (VOC) emissions.

Based on the amount of butane consumed at the Ivex plants in North America and the percentage that is recovered, average annual VOC emissions are approximately 143 tonnes. This represents less than one thousandth of the VOC emissions from the residential sector's wood combustion in Canada for 2006.

Carbon emissions

The equipment used to manufacture the polyethylene foam rolls and planks all run on electricity. As this electricity is provided entirely by Hydro-Québec, it is considered by Quebec's Ministry of the Environment, Sustainable Development and Parks to be a renewable energy that does not emit a significant amount of greenhouse gases (GHG).

The majority of the IVEX plants' GHG emissions in North America stem primarily from the butane recovery and disposal procedures.

IVEX clients are entirely responsible for transporting the finished products. Recognizing that this variable cannot be controlled, IVEX implemented a decentralization policy for its production units several years ago. Distributing its production units across the entire geographic area it serves allowed IVEX to develop many local markets. This, in turn, allows IVEX to be closer to its clients and limit the GHG emissions related to transportation.



IVEX

POLYETHYLENE FOAM PRODUCTS

Carbon emissions (cont.)

Regarding the GHG emissions from manufacturing the finished products made from polyethylene foam, the average butane capture rate for the IVEX plants in North America is 40%. The butane recovered is then eliminated by special equipment with an efficiency rate of 99.5%. This equipment releases CO₂ into the air, but these emissions represent only 0,5% of the total volume of butane recovered.

Taking into account the fact that the Intergovernmental Panel on Climate Change (IPCC) does not consider butane as such to be a greenhouse gas that directly contributes to global warming, IVEX's average annual GHG emissions from manufacturing the finished products are only 1.03 tonnes. This represents less than one thirtieth of the GHG emissions of an average Canadian household.



The IVEX logo, featuring the word "IVEX" in white, bold, sans-serif capital letters inside a red oval.