

Arkema announces new low GWP blowing agent for PU foams

Arkema announced a new molecule, Forane 1233zd, for use as a low global warming potential (GWP) blowing agent for polyurethane foams. The new molecule, known in its development phase as AFA-L1, is high purity trans-1-chloro-3,3,3-trifluoropropene, a liquid halogenated olefin.

Arkema has patented the use of Forane 1233zd as a blowing agent in the manufacture of polyurethane foams: US Pat. No. 8,314,159 and EP Pat. No. 2,129,709. According to the company, Forane 1233zd blowing agent provides exceptional energy performance and environmental benefits over existing blowing agents, such as HCFC, HFC, and hydrocarbon molecules.

Forane 1233zd blowing agent is a liquid, non-ozone depleting, non-flammable, high performance blowing agent with a global warming potential of 7. In trials at a manufacturer of household refrigerators and freezers, an unoptimised system based on Forane 1233zd blowing agent delivered a 3 % improvement in energy efficiency versus HFC 245fa and surpassed 2014 DOE energy standards, according to Arkema. In other evaluations conducted by the company, Forane 1233zd blowing agent provided a 6 % improvement in insulation value versus HFC 245fa, a 7 % improvement versus HCFC 141b, and a 16 % improvement versus hydrocarbons.

“In all of these evaluations, in several different polyurethane foam applications, Forane 1233zd blowing agent has consistently demonstrated outstanding ease of use,” noted **Nancy Storoz**, Global Business Manager for Arkema fluorochemicals foams and 134a refrigerants, “It requires minimal equipment modifications and formulation changes, while outperforming HCFCs, HFCs and hydrocarbons in terms of energy efficiency, R value, and vapour pressure.”

Target markets for Forane 1233zd blowing agent include polyurethane foams used in the manufacture of household refrigerators and freezers, commercial refrigeration, spray foam, and polyurethane panels for commercial and residential building and construction applications.

As a fluorochemical producer with global reach, Arkema says it is committed to supporting its customers through technical development, competitive solutions, and production investments. Fundamental to this commitment is the company’s strategy to bring next-generation, low GWP technology to its global markets, says Arkema. The development of the Forane 1233zd blowing agent, in addition to the company’s recent announcement of planned production for the next-generation refrigerant, **HFO-1234yf**, are the latest milestones in this strategy.

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