Arlington, VA, February 11, 2020 – The Polyisocyanurate Insulation Manufacturers Association (PIMA) today issued a performance bulletin – Polyiso Insulation’s Low-GWP Blowing Agent Solution – highlighting the polyiso industry’s use of and the benefits provided by the pentane blowing agents used in polyiso formulations.

Closed-cell foam insulation products such as polyiso are manufactured with captive blowing agents. The blowing agents are primarily used to increase the final product’s thermal resistance or R-value. Polyiso products are manufactured using pentane or pentane blends. Pentane is a hydrocarbon with zero ozone depletion potential (ODP) and low global warming potential (GWP).

More than 20 years ago, the polyiso industry transitioned to pentane blowing agents after years of research and development. These pentane products replaced formulations using CFCs and HCFCs, which are no longer permitted for use in insulation products in major markets, including the United States and Canada.

“For more than 20 years, the polyiso industry has utilized pentane in product formulations,” said PIMA President Justin Koscher. “As a result of our industry’s efforts to eliminate the use of CFCs and HCFCs, the polyiso industry was recognized by the U.S. Environmental Protection Agency with the Stratospheric Ozone Protection Award for leadership in the phase-out of CFCs and exceptional contributions to global environmental protection.”

In closed-cell insulation products such as polyiso, the blowing agents are retained within the cell structure to provide long-term thermal performance. While closed-cell insulation products can exhibit an initial drop in R-value due in large part to the diffusion of air into the foam, all polyiso insulation products are tested to determine an aged R-value. Insulation products manufactured without captive blowing agents (e.g., expanded polystyrene, fiberglass, mineral wool) result in lower R-values per inch. Therefore, these products must be installed at greater thicknesses to equal the high R-value of polyiso insulation.

“Many states have, or are in the process of, instituting measures to eliminate the use of hydrofluorocarbons (HFCs) which are significantly more potent in terms of their contributions to global warming,” added Koscher. “Understanding a product’s impact on the environment, such as GWP, is a factor many designers are taking into consideration as they make product selections.”

PIMA’s performance bulletin can be found here.

About PIMA
For more than 30 years, the Polyisocyanurate Insulation Manufacturers Association (PIMA) has served as the voice of the rigid polyiso industry, proactively advocating for safe, cost-effective, sustainable, and energy-efficient construction. Organized in 1987, PIMA is an association of polyiso manufacturers and industry suppliers. Polyiso is one of North America’s most widely-used and cost-effective insulation products. To learn more, visit www.polyiso.org.

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