

“A lot of our high performance contractors have been asking us to develop a new system using Honeywell’s Solstice® Liquid Blowing Agent.”

— Matt Martinson, Upper Midwest Territory Manager, Demilec



Demilec’s new Heatlok® HFO Closed-Cell Foam with Solstice® LBA installed at EnergySeal’s Regional Headquarters

Retrofit project showcases EnergySeal’s Net Zero Energy building expertise

THE OPPORTUNITY

Insulate a retrofit and addition at EnergySeal’s regional headquarters in Boise, Idaho while providing valuable feedback on Demilec’s new 2 lb. closed-cell foam. The expanded office will not only meet The Passive House Standard, but will also serve as a showcase for EnergySeal’s expertise in Net Zero Energy construction.

THE SOLUTION

Demilec’s new Heatlok® HFO closed-cell foam formulated with Honeywell’s Solstice® Liquid Blowing Agent was applied to the interior concrete block (CMU) walls of the addition, beneath the sloped unvented roof deck, and under the slab.

Demilec: Committed to Quality and Ecological Responsibility

As one of North America’s largest manufacturers of foam insulation and polyurea products, Demilec is committed to developing high quality products and to ecological responsibility. According to Matt Martinson, Demilec views its new Heatlok HFO closed-cell foam formulated with Honeywell’s Solstice Liquid Blowing Agent (LBA) as “the next-generation solution” for the industry. “We’ve made a commitment that Demilec’s closed-cell polyurethane systems are going to be blown with Solstice LBA,” he said.

This new wall foam system marks another milestone toward Demilec’s commitment to phase out high global warming potential (GWP) hydrofluorocarbons (HFCs) from its products in favor of ultra-low GWP blowing agents like Solstice LBA, which is based on hydrofluoro-olefin (HFO) technology. This commitment was announced by Demilec’s president and CEO Paul Valle to the Industry Leader Roundtable, organized by The White House Council on Environmental Quality in October, 2015. “The move to hydrofluoro-olefins marks an industry shift to curb greenhouse gas emissions produced by hydrofluorocarbons.” Since that announcement, Demilec has made significant progress in transitioning out of HFCs, well ahead of environmental regulations calling for their phaseout.



The closed-cell foam was applied directly to the concrete block (CMU) interior wall.

Some benefits of Solstice LBA include:

- Ultra-low GWP of 1, which is 99.9% lower than the HFC blowing agents it replaces and equal to CO₂
- Non-ozone-depleting
- Nonflammable (ASTM E-681)
- Listed under the U.S. EPA's Significant New Alternatives Policy (SNAP) program to replace ozone-depleting substances
- VOC-exempt per U.S. EPA
- Listed on the TSCA inventory and registered under REACH
- U.S. based reliable supply from Honeywell

Compared to HFC systems, additional benefits observed included:

- Enhanced yields
- Excellent foam density
- Improved dimensional stability
- Reduced gun clogging (longer spraying time before cleaning gun tips)
- Minimal adjustments to processing temperatures
- Very smooth finish (whether spraying side to side or up and down)
- Less dripping than traditionally seen in ceiling applications

Honeywell and Demilec – A Strong Collaboration

"We are excited to see the excellent progress that Demilec is making with its new wall foam formulated with Solstice LBA," said Laura Reinhard, global business manager for spray foam at Honeywell. "Momentum continues to build as a growing number of industry leaders like Demilec are accelerating efforts to introduce new Solstice LBA-based systems. They are driven not only by regulations calling for an HFC phaseout, but by contractors who are requesting these systems due to significant performance advantages."

Rob Simpson, lead chemist at Demilec, sees this transition to low-GWP products as the wave of the future. "Demilec's adoption of Honeywell's HFO blowing agent technology is a natural evolution, similar to when the industry transitioned from HCFC-141b to HFC-245fa. Honeywell is easy to work with and we get a lot of technical support. They have always been helpful, not only as it applies to Solstice, but for the past twenty years as formulations have evolved."

Martinson says that Solstice LBA is a natural fit for Demilec. "Our polyol products currently hold some of the highest bio-based or green content in the commercial closed-cell foam world. Solstice LBA, with its ultra-low GWP, used in conjunction with our proprietary polyols aligns perfectly with our environmental focus."

Demilec's Heatlok HFO Closed-Cell Foam Earns Top Marks

In addition to the environmental benefits, everyone involved with the project agreed that the system delivered exceptional performance. As Demilec technical service representative Kenny Bracken noted, "The product's sprayability was very good. The adhesion was superior and the surface characteristics were by far one of its best qualities." Mark Artiach, an experienced applicator from EnergySeal, gave this assessment: "I've sprayed and tested multiple foams in the past. This is by far the most impressive foam I've sprayed. It is a very efficient foam and I spent less time making adjustments. I sprayed about 3,700 strokes without having to drill out the gun once."

When identifying high-quality contractors to test Demilec's formulations, EnergySeal consistently ranks at the top. "We find that the climate zone where they apply our products can be somewhat extreme in terms of elevation and cold weather application. Their equipment is top notch and their sprayers are highly trained and efficient," said Martinson.

The Gold Standard

With an expected commercial launch in early 2017, anticipation is building for Demilec's new Solstice LBA-based wall system. "We've had several contractors looking at this product as a key way to build their businesses for the future," said Martinson. "We're finding that a lot of design professionals, building engineers, and architects around the country are highly interested in seeing this product perform as it is the next-generation industry solution."

Skylar Swinford, an energy and enclosure consultant with EnergySeal, said, "At EnergySeal, our clients are not only looking to improve their home's durability and efficiency, they are also concerned about the ecological impact of products used. We see this new system as the gold standard. We're excited to be using this fourth-generation blowing agent and feel we've got a future-proof product that we can use for years to come."



While spraying overhead, the foam demonstrated excellent adhesion which reduced dripping.



Demilec's new wall foam provided an exceptionally smooth surface finish.



Kenny Bracken (left) and Matt Martinson were among the Demilec team members on-site to evaluate how the new wall foam system performed at EnergySeal's regional headquarters in Boise, Idaho.

“It is the next-generation industry solution.”

— Matt Martinson, Demilec

Contact Honeywell

To learn more about the benefits of Solstice LBA for your next project, call 1-800-631-8138 or visit

www.honeywell-solsticelba.com.

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