

“Solstice LBA is a very important part of Demilec’s future in that we have already made commitments with this latest product which will be launched in 2016. We’ve made a further commitment that by the end of 2017 all of Demilec’s closed-cell foams will be utilizing this blowing agent and this technology.”

— **Paul Valle, President, Demilec**

Excitement Grows for Demilec’s Spray Foam System Featuring Solstice® LBA

A Fresh Solution For An Urban Farm Focused on Energy Efficiency



THE CHALLENGE

Insulate a new building to be used as a market and restaurant at the Virts’ farm, while preserving its historical architecture.

THE SOLUTION

Demilec’s new closed-cell spray foam system (ccSPF) formulated with Honeywell’s Solstice® Liquid Blowing Agent (LBA) was sprayed on the exterior walls, as well as under the roof deck from the interior.

The Project

Since the late 1700s, Donald Virts’ family has been farming in Loudoun County, Virginia, just outside of Washington, D.C. Just as traditional farming has evolved, so too has the technology used on his farm. Virts describes his “farm to forks” concept as a showcase for modern urban farming, where vegetables are grown in a controlled environment within the greenhouse.

Simply put, his vision is to “grow and serve the healthiest food possible,” and to do so in a highly sustainable and productive way. He is focused on lowering energy consumption, using renewable energy and sharing this model with students and the educational community.

For Demilec, a North American spray foam leader with a heritage of environmental stewardship, this project represented a perfect opportunity to take its new spray foam system featuring Honeywell’s Solstice LBA from the lab to the field – literally.

CASE STUDY RESULTS

Some benefits of Solstice® LBA include:

- Ultra-low global warming potential (GWP) of 1, which is 99.9% lower than the HFC blowing agents it replaces and equal to carbon dioxide
- 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
- Listed on the TSCA inventory
- Not a volatile organic compound (VOC) as determined by the U.S. EPA

Compared to HFC systems, additional benefits observed while installing Demilec's new ccSPF system included:

- Minimal temperature adjustments required (used typical processing conditions and equipment)
- Excellent foam consistency
- Lower odor
- Good elasticity (removal of any overspray on the equipment was easier)
- Reduced clogging of the spray gun
- A smoother finish



Virts is also breaking ground on unique greenhouses that will be entirely covered with ccSPF. Unlike a traditional greenhouse (shown) where temperature fluctuations can impact crops, the growing environment can be totally controlled and is ideally suited for certain types of produce. Fluorescent lighting will provide heat and light for the crops.

Solstice LBA Growth Continues

"To have Demilec on board with a Solstice LBA system is really exciting for us," said Laura Reinhard, global business manager for spray foam at Honeywell. "The list of customers adopting Solstice LBA continues to grow and we are really proud to have Demilec among them." According to Reinhard, there are two main trends driving adoption of Solstice LBA. "First, builders and architects are looking for high performance insulation with better energy efficiency and environmental attributes. A second driver is the global regulatory movement to phase out HFC blowing agents. HFCs have a much higher global warming potential than Solstice LBA, which is based on hydrofluoro-olefin (HFO) technology."

Tom Fishback, technology vice-president at Demilec, said, "Demilec is developing spray foam systems using Solstice LBA because it is an HFO. It's a next generation blowing agent that is well on its way to becoming the blowing agent of choice. Demilec is committed to sustainable solutions in building construction, specifically in the insulation and air barrier market. We recycle 35 million pop bottles a year into our insulating foams and coupling the HFO blowing agent with recycled materials in our insulation just makes sense for us."

Smooth Installation, Exceptional Results

Demilec's new ccSPF product was applied to the exterior walls of the 40' X 70' structure, as well as under the roof deck from the inside. According to Fishback, "It exceeded my expectations and the expectations of the chemists in our lab. We're very confident in this system. It outperformed what we thought we would see in the field. Again, this is largely because of all of the benefits that were brought to the table by Solstice LBA — the great sprayability, incredible adhesion to a multitude of surfaces, and the excellent solubility of the blowing agent in the resins side makes it much easier to process."

Ken Thacker, an experienced contractor from Nova Spray Foam, was also impressed by the system's performance, "My crew members spraying Solstice today liked it very much. They were impressed with the yields and sprayability. They also liked the control it had for exterior and interior applications. We look forward to spraying it a lot in the future."

Harvesting Success with Solstice LBA

Given the success of this trial, Demilec is eager to complete testing and introduce this new product commercially in 2016. Douglas Brady, vice-president, marketing, at Demilec, sees a bright future for the new ccSPF system. "Demilec sees the advantages of the Solstice product in providing a polyurethane foam with a next generation blowing agent which offers little to no odor and superior sprayability to any other offering out there today." From the contractor's perspective, Thacker added, "We have a lot of customers that are very eco-friendly, very environmentally conscious. This is going to help us with sales to them and it will help the environment too. We're very happy to see this come along."



Valle said, "Our experience with Honeywell on this project has been nothing short of amazing. This is a true partnership starting with the technological sharing of best practices, as well as helping with the formulations. But we are taking it further into the business development part of the program. We're looking at the commercial application of this product and most recently, how we market this solution to the rest of the world."

For Demilec and Honeywell, success with Solstice LBA is taking root.

Safety: A Top Priority

Safety guidelines were closely followed throughout the spray foam application. David Wilkes, research chemist and lab supervisor, at Honeywell, was on-site during the installation. He said, "Safety is always of key importance and the contractor did a great job. In addition, the spray foam system performed exceptionally today."

"Our experience with Honeywell on this project has been nothing short of amazing."



It was important to preserve the historical design of the new structure, including the hand-hewn post and beam construction.



Demilec's new closed-cell spray foam system made with Solstice LBA was sprayed on the building's exterior.



The spray foam system demonstrated excellent adhesion as the roof deck was insulated from the interior.



The team worked together to ensure that the project was completed successfully.

Contact Honeywell to Learn More

To learn more about the benefits
of Solstice LBA in new residential
construction or retrofits, call
Honeywell at 1-800-631-8138 or visit
honeywell-solsticelba.com.

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