



“As one of the largest Systems Houses in Europe, we are leading the development of a closed-cell spray foam system using Honeywell’s new Solstice® Liquid Blowing Agent. Not only do we want to be well ahead of legislation calling for the elimination of HFC blowing agents, we are pleased with the improvements in product performance.”

— **Tony Belmonte, Commercial Director for Polyurethane Systems, Synthesia Internacional**

Synthesia’s Spray Foam Featuring Honeywell’s Solstice® LBA Debuts in Europe

A New Closed-Cell System Sprayed Under a Warehouse Roof in Norway Exceeds Expectations

THE OPPORTUNITY

Conduct a field demonstration of Synthesia’s new closed-cell spray polyurethane foam system (ccSPF) formulated with Solstice® Liquid Blowing Agent (LBA). The event involved representatives from Synthesia, Honeywell, Elmico, equipment manufacturer Garraf Maquinaria (Gama Spray Equipment), and Scandinavian spray foam contractors.

THE SOLUTION

Synthesia’s new ccSPF system was applied (approx. 10 cm in thickness) to a portion of the underside of a warehouse roof at Elmico’s facility in Galterud, Norway. Product parameters, such as thermal performance, adhesion, foam rise and consistency were evaluated. The demo also focused on how Solstice LBA performs with the new polyol in Synthesia’s formulation.

First Application of Spray Foam Using Solstice LBA in Europe Generates Excitement

At a picturesque location in Norway, another important step was taken by Synthesia Internacional toward the development of a closed-cell spray foam system formulated with Honeywell’s Solstice LBA for the European marketplace. Elmico, a Synthesia distributor, hosted a gathering in early 2016 of insulation contractors for the Scandinavian region and experts from Synthesia, Honeywell, and Gama Spray Equipment. The focus of the meeting was to demonstrate Synthesia’s new ccSPF formulation by spraying it on the underside of Elmico’s warehouse roof. This type of interior ceiling application is common in Norway and other European countries and provided an opportunity to evaluate how the new ccSPF system with Solstice LBA would perform. The system received high marks from everyone involved and generated excitement about the next stage of product development.



Tony Belmonte
Commercial
Director, Synthesia

“As a company, Synthesia has been involved in the polyurethane business for over 50 years and we are vertically integrated,” said Tony Belmonte, commercial director for Polyurethane Systems, Synthesia. “This was a very important test for us today and it has been very, very positive. The new product is adhering well to the roof and the foam finish is tremendous. We want to see how Solstice LBA in our formulation performs with our new polyol and the results are very good.”

CASE STUDY RESULTS

Some benefits of Solstice® LBA include:

- Insulation values similar or better than existing HFCs
- Ultra-low global warming potential of 1 (99.9% lower than the HFC blowing agents it replaces and equal to carbon dioxide)
- Non-ozone depleting
- Nonflammable (ASTM E-681)
- Spray yield similar or better than HFCs
- REACH registered in Europe for unlimited quantities
- Listed under the U.S. EPA's Significant New Alternatives Policy (SNAP) program to replace ozone depleting substances
- Listed on the TSCA inventory
- VOC-exempt per U.S. EPA
- Commercially available since 2013/ reliable global supply from Honeywell



Josep Gimeno, technical manager, Honeywell Europe, presented an overview of changes to blowing agent regulations and the benefits of converting to Solstice LBA for closed-cell spray foam formulations.

Changing Regulatory Landscape

According to Mr. Belmonte, Synthesia is committed to environmental responsibility and it wants to be at the forefront of new technologies, such as bio-based polyols. He indicated that F-Gas Regulation is calling for a ban of hydrofluorocarbon (HFC) blowing agents by 2023, and additionally its CO₂ quota scheme will accelerate the phase-out much earlier. Therefore, Synthesia is developing this new spray foam system well in advance not only to meet changing regulations, but because of the foam's superior performance. He added, "With Solstice, we are reaching higher levels of thermal insulating performance, dimensional stability and compression resistance."

Solstice LBA, which is based on hydrofluoro-olefin technology (HFO), has an ultra-low global warming potential (GWP) that is significantly lower than the HFC blowing agents it replaces. Josep Gimeno, technical manager, Honeywell Europe, said, "Solstice LBA is an ideal solution for Systems Houses seeking to replace common HFC blowing agents, such as HFC-245fa or HFC-365. While the legislative and environmental drivers are important, the outstanding technical performance of the foam is another reason to make the switch. It is outperforming many of the present products in the market."

Elmico distributes spray foam products from Synthesia to Nordic countries. According to Elisabet Norderup Michelson, general manager, Elmico, the adoption of Solstice LBA in spray foam formulations can offer tax advantages in Norway which lowers costs. "Norway legislation calls for taxation on high GWP blowing agents. Because Solstice is HFO-based with an ultra-low GWP, it is not affected by this legislation thus allowing us to be cost competitive in the market," she said. She added that spray foam is an excellent choice for the colder areas of Europe because as a continuous insulation, it prevents cold, humid air from entering the building.



Elisabet Norderup Michelson,
General Manager, Elmico

A Successful Product Demonstration

The applicators who sprayed the new system during the trial were very impressed. Jaume Garcia, application technician, Synthesia, said, "The foam behaved very well during this demonstration and met the correct formulation parameters. I really liked the rise on the foam. Overall, we are very happy with the results." Bennie van Bulzen, sales engineer, Gama Spray Equipment, set up the equipment and the spray gun used during the test. After spraying the system, he said, "The demo went very well today. We completed the test without any clogging of the gun or problems with the application."

His colleague at Gama, Marc Ferré, sales and marketing, agreed that the new product sprayed well, "We are very happy that our equipment was used in this event. We believe this new product represents a tremendous opportunity for our company and in the overall efforts to reduce global warming."

What's Next?

Following this successful demonstration, Synthesia and Honeywell are preparing for the new product launch. "We have a long relationship with Synthesia and will continue to work diligently with their team," said Gimeno. "They are very flexible and fast-reacting. From the beginning, they have been pushing forward with this product development. Honeywell is well positioned to meet the demand with our world-scale Solstice plant."

Belmonte said Synthesia is eager to complete the development work in the coming months and looks forward to commercializing the system as early as 2016. He summed it up by saying,

"We are a company that likes to provide our customers with the right product, at the right price, and in the right condition. We want to develop the best product possible. This will be an important solution in our portfolio."



Synthesia's new system was sprayed on the underside of Elmico's warehouse roof. Feedback on the foam's performance was excellent.



Gama's spray equipment was used during the demonstration and performed flawlessly with the new system.



The system was sprayed on a wall assembly to test properties and evaluate the performance of Solstice LBA in the formulation.

Contact Honeywell to Learn More

To learn more about the benefits of Solstice LBA for your ccSPF system, call Honeywell at 1-800-631-8138 or visit honeywell-solsticelba.com.

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May 2016
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