

Solstice® Liquid Blowing Agent Performs to High Standards in Church Roof Repair

“What intrigued us about closed-cell spray foam technology is that it is cost-effective, environmentally friendly and competitive with other roofing products.”

Father Rossi – Pastor, St. Benedict The Moor Catholic Church

The Challenge: A church in Winston-Salem, North Carolina was experiencing roof problems that required significant repair.

The Solution: A closed-cell spray polyurethane foam (ccSPF) roofing system from North Carolina Foam Industries (NCFI) using low global warming potential Honeywell Solstice® Liquid Blowing Agent (LBA).

When the Pastor of a North Carolina church needed guidance on options to repair the rectory’s aging roof, he didn’t have to search very far. With over 46 years of spray foam experience, NCFI Polyurethanes teamed up with Honeywell to develop an innovative new spray foam roof system that would meet the challenges of this unique project.

After a thorough evaluation, NCFI chose Solstice LBA as the blowing agent for the project’s ccSPF roof formulation. “It turns out we created a product that will have the industry standard six-month shelf life, as well as being capable of spraying a quality roof system,” said Rick Stoehr, director of Research and Development, NCFI.

According to Honeywell’s Mary Bogdan, senior principal scientist, Solstice LBA is an ideal replacement for HFC-245fa and other HFC blowing agents because it offers a number of key advantages including:

- A significantly lower global warming potential (GWP) of 1, making it a superior environmental



substitute for 245fa. This is two orders of magnitude (99.4%) lower than current HFCs used in the industry

- Better R-values
- A slightly lower molecular weight so you can use less material when spraying
- A higher boiling point and a lower vapor pressure which improves handling and foam application

Solstice LBA is the latest advancement in non-ozone depleting blowing agent technology from Honeywell and it is **now commercially available**.

In addition to the benefits mentioned earlier, Solstice LBA is:

- The world’s first 4th-generation blowing agent intended to replace HFCs, HCFCs and other less advanced alternatives
- A non-flammable liquid
- Approved by the U.S. Environmental Protection Agency under the Significant New Alternatives Policy (SNAP) to replace ozone depleting substances
- Listed under the TSCA inventory
- Not a volatile organic compound (VOC) as determined by the U.S. EPA

How Did the Spray Foam System Perform?

With a strong reputation for job safety and quality work, American Coatings and Insulation (ACI) Systems Inc. was enlisted to apply the new ccSPF system to the rectory roof. On the day that the roof was sprayed, ACI Systems president, Jeff Rumsey said, “The temperature is kind of cold to be out here and also breezy but the foam is reacting very well.”

Rumsey also observed that:

- the foam has a smooth surface
- good adhesion to the roof deck, and
- good self-adhesion when sprayed

The energy efficiency benefits of Solstice LBA, combined with its ease of use and improved environmental performance, made it an outstanding choice. Father Rossi remarked, “We would definitely recommend this as a viable solution for other churches or local communities that are struggling with roof problems.”



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