

Solstice[®] Liquid Blowing Agent

Insulation Technologies for Polyisocyanurate
(PIR) Boardstock

Solstice® Liquid Blowing Agent

A Solution for Increasingly Challenging Insulation Performance Requirements

Honeywell Solstice® Liquid Blowing Agent (LBA) is the latest advancement in foam blowing agent technology. It is ideal for a variety of PIR board applications including:

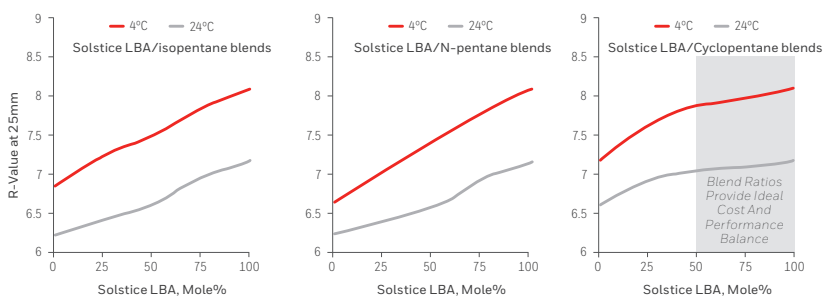
- Residential roofs, walls and floors
- Commercial construction

The blowing agent causes the polyurethane to expand, creating highly energy-efficient closed-cell PIR insulation. The choice of blowing agent directly impacts the performance of the finished product and the operating costs of the structure. Honeywell's technical team can work with you and/or your system provider to optimize a formulation for your specific application.

Better Performance

Solstice LBA increases the insulation performance of conventionally pentane based PIR foam. This can translate into a thinner board required to achieve the desired performance which helps maximize available space in renovation projects. Alternatively, improved insulation with the same board thickness helps architects maximize the energy efficiency of buildings independently if they are renovation or new construction projects.

R-Value* of Solstice LBA/Pentane Blends



Solstice LBA: Proven on the Production Line

For top notch performance, a pure Solstice LBA formulation for PIR boardstock can be considered. OEM trials using typical PIR boardstock production line conditions compared Solstice LBA to isopentane. As shown in the results,

Solstice LBA demonstrated an improvement of lambda value of 15% compared to isopentane¹

1. Field Trial Evaluations of Solstice LBA in Pour-in-place and Panel Applications. Ling, Jim Y.K., Qin, Ryan S.L., and Lu, Ben B. September 2013
2. Evaluation of Low Global Warming Potential Blowing Agent Solution in Pour-in-place and Panel Applications. Ling, Jim Y.K. and Qin, Ryan S.L. September 2011

* The higher the R-value, the greater the insulating power. Ask your seller for the fact sheet on R-values.

For more information

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Benefits of using Solstice LBA

- Lowest lambda¹
- Design with lower thickness board
- None or minor equipment modification required
- Near drop-in when replacing or blending with pentanes
- Ease of processing with better flowability
- Global warming potential of 1² (80% reduction vs. pentanes)
- Non-flammable (ASTM E-681)
- Improved reaction to fire

- Solstice LBA/pentane blends can be optimized to minimize costs, while allowing you to reach specific insulating performance levels
- A Solstice LBA/cyclopentane blend (50/50 molar ratio) can deliver similar insulating performance as pure Solstice LBA, while providing an ideal balance of cost and performance
- Because Solstice LBA improves the miscibility of pentane in polyols, this can reduce blending time depending on processing method

Production Line Evaluation of PIR Foam with Solstice LBA

Properties	Solstice LBA	Isopentane
Density, Kg/m ³	31.9	32.0
Initial lambda at 10°C, mW/mK	17.0	20.0
R-Value at 25mm (10°C)	0.12	0.14

Regulatory

Honeywell Solstice LBA is:

- EPA SNAP-listed
- REACH registered in Europe
- Non-ozone-depleting

- Ultra-low global warming potential (GWP) of 1 (equal to CO₂)
- Listed on the TSCA inventory
- VOC-exempt (U.S. EPA)

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