

---

Reduce seat foam weight by 20% without compromising comfort or durability

---

## **SOLSTICE® LIQUID BLOWING AGENT**

Reduce Foam Weight in Vehicles While Retaining Required Physical Properties

# Honeywell Solstice® LBA

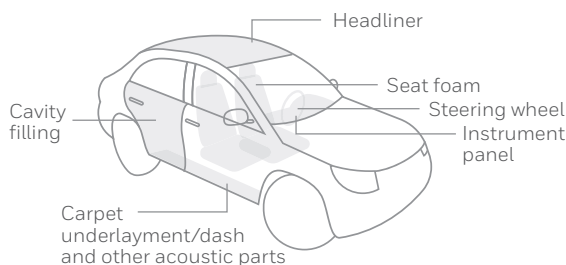
## A Cost-Effective Solution for Molded Flexible Foam

### What is the technology?

- Use a small amount of Solstice® LBA additive in existing polyurethane (PU) foam formulations to reduce the weight of final parts by 10-20% without compromising physical properties such as durability, comfort, acoustics, and others
- Helps achieve the lowest densities without using TDI

### Where can you reduce weight?

A typical mid-size vehicle contains approximately 20-23 kgs. of foam. Solstice® LBA in your formulation can help save up to 3.5 kg./vehicle of weight across the different foam applications:



### Proven and Ready for Adoption

- Blowing agent is fully emitted at the time of part manufacture and does not contribute to VOC (not expected to contribute to TVOC when tested using ISO 16000 – 6)
- Nonflammable (ASTM E-681)
- Lower viscosity results in improved foam processability
- Approved by the U.S. EPA under the Significant New Alternatives Policy (SNAP) Program
- Registered under the European Union's REACH program
- Commercially available

We're working with leading Tier suppliers to trial the technology in commercial formulations.

### Lightweighting PU Foam with Solstice® LBA vs. Incremental Water\*

Unlike adding water, Solstice® LBA allows you to achieve density reductions greater than 20%, while keeping wet compression set, hysteresis and resilience within specifications.

DESCRIPTION	CONTROL	SOLSTICE® LBA	ADDITIONAL WATER/CO <sub>2</sub>
Overall Density kg/m <sup>3</sup>	56.8	48.6	45.3
Core Density kg/m <sup>3</sup>	48.2	38.2	37.8
IFD 25% (N)	126	121	158
IFD 65% (N)	341	347	463
Support Factor	2.7	2.9	2.9
Hysteresis Loss (%)	24.9	24.8	37.1
Wet Comp % set	6.6	6.5	16.9
Resilience % rebound	59	56	50

\*All three formulations shown in the table use the same level of baseline water, with the foam shown in the third column having incremental water added. Experimental foam using Solstice® LBA also includes <2pphp of other additives.

■ Properties highlighted in red have been shown to stay in spec. when Solstice LBA is added compared to when water/CO<sub>2</sub> is added.

### Interested in learning more?

To discuss your foam requirements or to start a trial with Honeywell additives today, call **1.800.631.8138** or visit: [www.honeywell-blowingagents.com](http://www.honeywell-blowingagents.com).

Although Honeywell International Inc. believes that the information contained herein is accurate and reliable, it is presented without guarantee or responsibility of any kind and does not constitute any representation or warranty of Honeywell International Inc., either expressed or implied. A number of factors may affect the performance of any products used in conjunction with user's materials, such as other raw materials, application, formulation, environmental factors and manufacturing conditions among others, all of which must be taken into account by the user in producing or using the products. The user should not assume that all necessary data for the proper evaluation of these products are contained herein. Information provided herein does not relieve the user from the responsibility of carrying out its own tests and experiments, and the user assumes all risks and liabilities (including, but not limited to, risks relating to results, patent infringement, regulatory compliance and health, safety and environment) related to the use of the products and/or information contained herein.



January 2017  
© 2017 Honeywell International Inc. All rights reserved.

### Honeywell Advanced Materials

115 Tabor Road  
Morris Plains, NJ 07950

