



Extruded Polystyrene Foam Board Insulation

A Balanced Solution to Today's Environmental and Performance Challenges for XPS

Honeywell Solstice® Gas Blowing Agent (GBA) is among Honeywell's latest advances in blowing agent technology and is ideal for residential and commercial insulation.

The blowing agent causes the polystyrene foam to expand, creating highly energyefficient closed-cell insulation. The choice of blowing agent directly impacts the performance of the finished product and operating costs of the structure. Honeywell's technical team can work with you to optimize the use of Solstice GBA in your formulation.

Performance

Solstice GBA increases the insulation value of XPS foam insulation boards. This can translate into a thinner panel required to achieve the desired performance, or higher thermal insulation value with the same thickness.

- The long term insulation performance of XPS foam insulation boards made with Solstice GBA is 7% better than HFC- 134a and 26% better than CO₂.
- Solstice GBA has an ultra-low global warming potential of less than 1, even lower than CO₂.

Cost Effectiveness

Solstice GBA is designed to be a straightforward, cost-effective solution.

- Near drop-in replacement for gaseous blowing agent technologies.
- Limited investment in plant equipment necessary to meet flammability safety standards.

Environmental Impact

The use of Solstice GBA can yield substantial improvements in the environmental impact of foam blowing agents right away. With a global warming potential (GWP) of less than 1, its widespread adoption could save about 60 million metric tons per year of CO₂ equivalent, comparable to eliminating carbon dioxide emissions from more than 11.8 million cars every year.

(Source: GHG Equivalencies Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>)

Safety

Solstice GBA is nonflammable, unlike other gaseous blowing agents or hydrocarbon alternatives, which require explosion-proof handling.

For more information

www.honeywell-blowingagents.com

fluorines.europe@honeywell.com

Honeywell Advanced Materials

Honeywell Belgium N.V
Gaston Geenslaan 14
3001 Heverlee Belgium
Tel: +32 16 391 212
Fax: +32 16 391 317



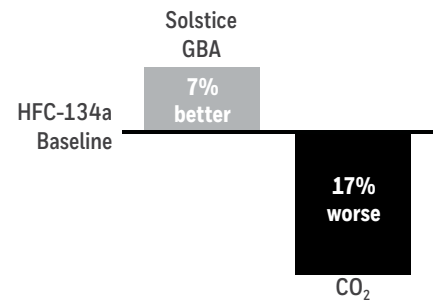
Solstice is a registered trademark of Honeywell International.

2047 FP BA EU A4 v3 | November 2017
© 2017 Honeywell International Inc.

BENEFITS OF USING SOLSTICE GBA IN XPS

- GWP of less than 1 is 99.9% lower than HFCs
- Improved energy efficiency
- Non-ozone-depleting
- Nonflammable (ASTM E-681 and EU A11)
- VOC-exempt (U.S. EPA)

Long Term Insulation Lambda Performance in XPS Insulating Foam (EN-13164)



Environmental and Safety Properties

	Solstice GBA	134a	CO ₂
Global Warming Potential	<1	1300	1
VOC	No	No	No
Flammable	No	No	No
Exposure Limit, ppm	800	1000	5000
Molecular Weight, g/mol	114	102	44
Boiling point, °F/°C	-2.2/-19.0	-15.1/-26.2	70.6/-57.0

Regulatory

Honeywell Solstice GBA is:

- EPA SNAP-listed
- Listed on the TSCA inventory
- VOC-exempt (U.S. EPA)



Scan to learn more about how blowing agents work

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.

Honeywell