



# ICA-GEOFOAM: Green Roofs

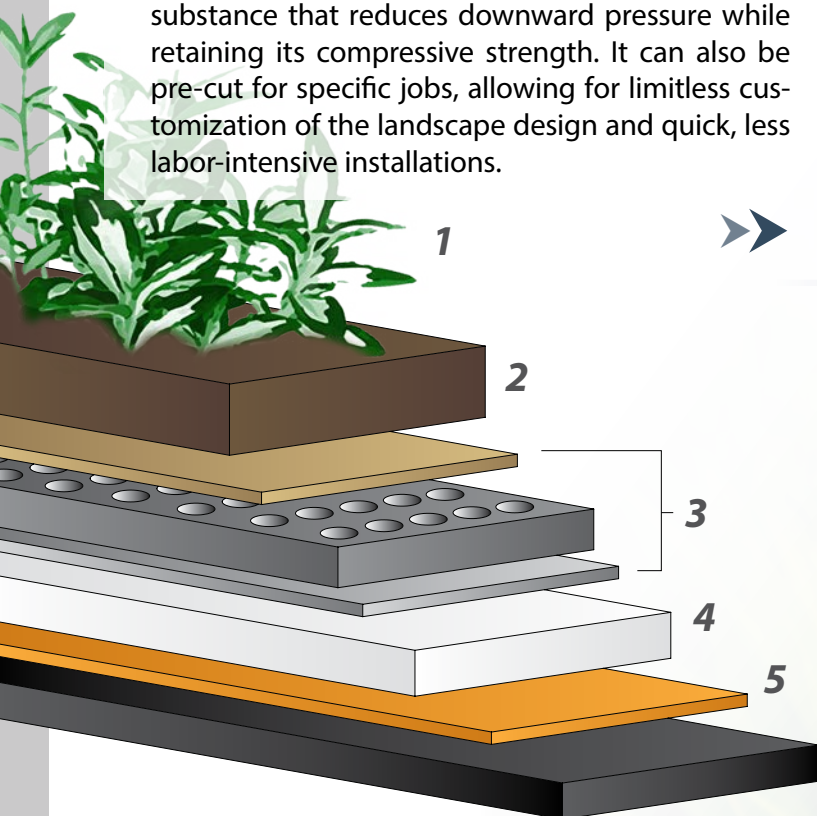
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## With Geofoam, It IS Easy Being Green!

Growing awareness and concern for our environment have increased the interest and applications of green roofs. This environmentally sound roofing construction also offers long term cost savings. The benefits that vegetative green roofs offer make them highly desirable in new constructions and in major roof retrofits. Environmental benefits include storm water management and temperature regulation. For the consumer, green roofs insulate, which reduces energy costs and extends the life of the roof, saving on replacement costs. Implementing the proper materials elevates the impressive values these green spaces offer to the environment and the consumer.

## Why Geofoam?

Insulation is a key element for a successful green roof. Geofoam, made of expanded polystyrene (EPS), provides an insulation layer that maintains its R-value over time. Available in various densities, R-Values and sizes, it is the perfect solution for installation under the plants and growing medium of a green roof. Geofoam is also a lightweight substance that reduces downward pressure while retaining its compressive strength. It can also be pre-cut for specific jobs, allowing for limitless customization of the landscape design and quick, less labor-intensive installations.



ICA Geofoam makes a green roof even greener since it is CFC, HFC, HCFC and formaldehyde-free in addition to being recyclable. Clean and dry EPS is recycled in-house at ICA. The EPS remnants go through the grinder while beads and dust particles are separated. The beads are then reincorporated into the EPS production process to make more EPS blocks. The captured dust particles are densified into cubes which are exported and eventually used to create other objects such as picture frames, coat hangers, CD cases, etc.

## LEED-ing the Way

In accordance with U.S. Green Building Council (USGBC) standards, Insulation Corporation of America's ICA-LITE® EPS Panels and Geofoam may provide LEED® points for construction projects. Members of USGBC developed the Leadership in Energy and Environmental Design (LEED®) Green Building Rating System to establish practices for designing, constructing, and certifying sustainable buildings. The LEED rating system has become a recognized benchmark for sustainable building practices. More extensive information on the LEED program can be found at [www.usgbc.org](http://www.usgbc.org) as well as our LEED Guide webpage at [insulationcorp.com/leed-guide](http://insulationcorp.com/leed-guide).

## ➤ Structure of a Green Roof

- 1. Vegetation**
- 2. Growing Medium**
- 3. Drainage, Aeration, Water Storage & Root Barrier**
- 4. Insulation - Geofoam**
- 5. Waterproof Barrier**
- 6. Roof/Structural Support**

# Benefits of a Green Roof:

- Stormwater management
- Reduces heating & cooling costs
- Increases roof longevity
- Improves air quality
- Fire retardation
- Can contribute to LEED® points
- Reduces urban heat-island effect
- Noise reduction
- Adds aesthetic value
- Creates valuable amenity space

## ICA-GEOFOAM Specifications

ICA-GEOFOAM meets or exceeds the requirements of ASTM D6817, *Standard Specification for Rigid Cellular Polystyrene Geofoam*.

Type		EPS12	EPS15	EPS19	EPS22	EPS29	EPS39	EPS46
Property	ASTM Test	Values						
<b>Density</b> lb/ft <sup>3</sup>	D1622	.70 min.	.90 min.	1.15 min.	1.35 min.	1.80 min.	2.40 min.	2.85 min.
<b>Compressive Resistance</b>								
Min. psi at 1%	D1621	2.2	3.6	5.8	7.3	10.9	15.0	18.6
Min. psi at 5%	D1621	5.1	8.0	13.1	16.7	24.7	35.0	43.5
Min. psi at 10%	D1621	5.8	10.2	16.0	19.6	29.0	40.0	50.0
<b>Flexural Strength</b> Min. psi	C203	10	25	30	35	50	60	75
<b>Oxygen Index</b> Min. Volume %	D2863	24	24	24	24	24	24	24
<b>Water Absorption</b> (by total immersion) Max. % by volume	C272	4.0	4.0	3.0	3.0	2.0	2.0	2.0



**MADE IN AMERICA**

\*The LEED® green building certification program is the nationally accepted benchmark for the design, construction, and operation of green buildings. ICA is a manufacturer of products that contribute to LEED Points. 'LEED®' and related logo is a trademark owned by the U.S. Green Building Council® and is used with permission.

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