GLAVEL

FOAM GLASS GRAVEL®

Spec Sheet

Glavel, Inc. | 50 Lakeside Avenue, Suite 861, Burlington VT 05401 | 802.540.0843 | **glavel.com**

Company

Glavel is a foam glass gravel manufacturer based in Burlington, Vermont. Foam glass gravel is a lightweight, insulating aggregate that replaces foam board insulation, geofoam, and other lightweight fills in construction and industrial applications.

Foam glass gravel enables builders, architects, and engineers to meet carbon reduction goals on projects by providing an environmentally safe alternative to the carbon intensive materials traditionally used for subslab insulation and lightweight fill.

Glavel's first manufacturing facility is located in Essex, Vermont. Each year, a single production line transforms 7,500 tons of recycled glass into foam glass gravel.

Production

Processed glass aggregate is milled into a superfine powder and combined with a foaming agent before being heated in a kiln to 1,600°F. The glass softens at that temperature and sinters into a foam glass slab while the foaming agent off-gases and and creates a network of closed cell micropores. The foam glass slab exits the kiln and begins fracturing into aggregate due to the thermal stress from leaving the kiln and hitting ambient temperatures.

Foam glass gravel kilns are traditionally powered by natural gas. Glavel's kilns have been electrified and powered with renewable energy, contributing to a low embodied carbon material.

Technical Data

Density (Unit Weight)	
Uncompacted dry bulk density (ASTM C29)	9 - 10pcf
Estimated Dry Density	
1.11 Compression Ratio (10% compaction of each lift)	10 - 11pcf
1.25 Compression Ratio (20% compaction of each lift)	11.25 - 12.5pcf
Compressive Strength (EN 1097-11)	
20% deformation	100-110psi
30% deformation	155-160psi
Typical Gradation Characteristics (uncompacted) (ASTM C136 / ASTM C117)	
Measured in sieve size	
4”	100%
2”	85-100%
3/8”	0-15%
Physical Characteristics	
Hydraulic conductivity (ASTM D2434-68)	.086 cm/s
Moisture content	
Volumetric	47%
Gravimetric (ASTM C566)	62%
Particle Specific Gravity (ASTM C127)	.54
Soundness	
Sodium sulfate (ASTM C88)	4.7 - 5.3% loss
Impurities	
Clay lumps (ASTM D4791)	0
Organic impurities (ASTM C40)	0
Chemical Characteristics	
Sulfates (AASHTO T 290)	<10ppm
Chlorides (AASHTO T 291)	<10ppm
TCLP (SW 846)	Non-leaching

Foam Glass Gravel Advantages

Frost Heave Resistant - Will reduce impacts of freeze and thaw cycles

Produced from Recycled Glass - Categorized as ‘clean fill’

Non Combustible - Will not burn, nor propagate fires

Closed Cell - Closed cell structure facilitates drainage

Inert - Prevents rodents, termites, bacteria, and rot

Thermal Insulation - R1.7 per compacted inch

Lightweight - 10 pounds per cubic foot