

Environmental Sustainability of StarSilent Acoustical Plaster from Pyrok, Inc.

Organized according to Green Format:
A Reporting Guide for Sustainable Criteria of Products.*

1. MasterFormat 2004

Section:
09 25 00 – Acoustical Plastering
09 51 00 – Acoustical Ceilings
Product: StarSilent®
AcousticalPlasterSystem

2. Manufacturer's information

Trade Name(s): StarSilent®
Product: Acoustical Plaster System
Manufacturer: Pyrok, Inc.®

3. Product description

StarSilent acoustical plaster system consists of acoustical panels manufactured from recycled crushed glass finished with a thin, two-coat acoustical plaster finish. The system can also be installed on ceilings, walls, and other interior features.

If a suspension system is required for the installation of StarSilent, the sustainability of the suspension system can also be considered.

4. Regulatory agency sustainability approvals

New York City Department of Buildings Report of Materials and Equipment Acceptance Division, MEA #279-05-M.

Material Safety Data Sheet (MSDS) is available upon request.

5. Sustainable standards and certifications

StarSilent acoustical plaster system can impact the following prerequisites and credits under the USGBC's LEED-NC 2.2 program (www.usgbc.com).

EA Prerequisite 1 - Fundamental Commissioning of the Building Energy System

Provide access doors if required for commissioning or maintaining building systems located above ceilings.

EA Credit 1 - Optimize Energy Performance

Lighting Efficiency: The light reflectivity of StarSilent is 74.4 in accordance with ASTM E 1477 "Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers".

Thermal Insulation: R-value = 1.60 based on thermal conductivity 0.6246 BTU-in/hr-ft²-°F (0.09 W/mK) per DIN 52613 - Thermal Insulation Testings; Determination of Thermal Conductivity by the Tube Method when tested in a horizontal position.

MR Credit 2.1 - Construction Waste Management: Divert 50% from Disposal

MR Credit 2.2 - Construction Waste Management: Divert 75% from Disposal

Packaging: 120 panels (31 sq. ft. each) on a pallet – 3720 sq. ft. per pallet. Plaster finish is packaged in recyclable plastic pails.
Scrap: See Articles 10 and 12, below.

MR Credits 4.1 and 4.2 - Recycled Content

StarSilent panels weigh one pound per sq. ft. and are 96% (by mass) recycled glass granulate. The recycled glass granulate is made from 100% post-consumer waste.

EQ Credit 4.2 - Low-Emitting Materials

StarSilent products have been tested in accordance with procedures outlined in CPA method 24 "Volatile Organic Content (VOC) of paints and related coatings". The VOC was calculated using the equation referenced in ASTM D3960 "Determination of Volatile Organic Compound (VOC) Content of paints and related coatings".
StarSilent Finish: 1 gram/liter
StarSilent Basecoat: 9 grams/liter
These are extremely low values.

EQ Credits 8.1 and 8.2 - Daylight and Views

See comment on lighting efficiency at EA Credit 1, above.

6. Sustainable performance criteria

No criteria have been identified.

7. Sustainable composition of product

StarSilent panels are made from post-consumer recycled expanded glass granulate. See MR Credits 4.1 and 4.3, above.

8. Material extraction and transportation

StarSilent products are shipped from Europe in containers to ports on the East Coast of North America. They are then transported by truck. Alternative arrangements can be made for large shipments. The light weight of the StarSilent system minimizes energy expended in transport.

9. Manufacturing phase

A small quantity of water is used during panel manufacturing to cool the press. No by-products are produced in the manufacturing process. No toxic or hazardous materials are used or produced. See MSDS.

10. Construction phase

Scrap: In typical installations, less than 5 to 10 percent of StarSilent panels are lost due to cut pieces that are too small to use elsewhere.

Unused finish coat materials can be saved for use on other projects. The light weight of StarSilent materials simplifies handling and reduces installation energy use.

11. Facility operations phase

The acoustical properties of StarSilent ceilings improve the acoustic quality of a space. Studies have shown that building occupants are more satisfied and productive in optimal acoustic environments. StarSilent can provide noise reduction coefficients (NRC) up to 0.80 in accordance with ASTM C423 - Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.

The StarSilent system is mold resistant.

12. Deconstruction / recycling phase

Panel scraps that are not covered with finish may be acceptable in mixed-glass recycling facilities. Demolition debris may be acceptable as a fill material or roadway base material.

13. Additional information

The StarSilent system is durable and can last the life of a building with minimal maintenance. The surface can be vacuumed with a stiff bristle brush. Small smudges can be removed with a soft pencil eraser. If necessary, the StarSilent finish can be reapplied; existing finish coats can be removed by moistening and scraping.

A ceiling can also be rejuvenated by applying low-VOC paint that is compatible with the ceiling's acoustical performance.

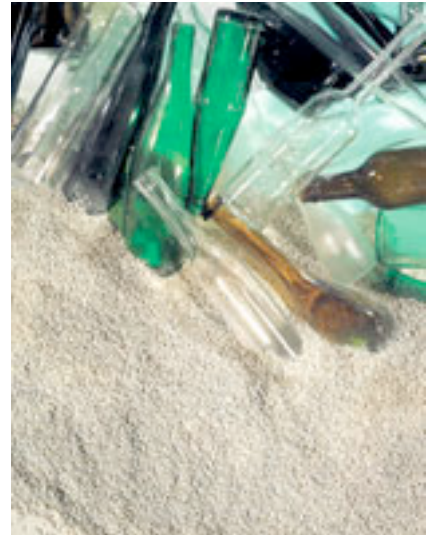
14. Certification

The information provided herein concerning the sustainability of StarSilent ceilings is true, correct, and verifiable.



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*GreenFormat is a format for organizing information pertaining to the environmental sustainability of building products. It is being developed by the Construction Specifications Institute (CSI). At the time this document was issued, GreenFormat has not been finalized. For additional information, see www.greenformat.com or http://www.csinet.org/s_csi/docs/13700/13644.pdf.



StarSilent panels are 96% recycled glass

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