



Fiber Glass & Rock and Slag Wool Insulations – Materials for a Sustainable Planet

Information from NAIMA

The key word in design and construction is sustainability — building for longevity while conserving the environment. Today's architects, specifiers and builders are choosing building products more diligently than ever before. They want products that are energy efficient, conserve virgin resources, minimize waste, and reduce pollution. In other words, they want products that are environmentally beneficial.

Fiber glass and rock and slag wool insulations are two such products.

Reduces Energy Waste

One of the most important environmental benefits of fiber glass and rock and slag wool insulations is their ability to make buildings more energy efficient. A thermally efficient building reduces the amount of energy required to maintain a comfortable living environment. A reduction in energy consumption conserves nonrenewable fuel supplies.

Reduces Air Pollution

Reduced energy consumption translates into a reduction in greenhouse gas emissions. A well insulated home reduces the amount of energy required to maintain a comfortable living/working environment.

Reduces Demand on Virgin Resources

Using recycled materials in the manufacture of insulation prevents depletion of natural resources. Today's fiber glass insulation contains up to 40 percent recycled glass, depending upon the manufacturer and the specific facility. Rock and slag wool insulation typically contain at least 20-25 percent slag, and can contain up to 70-85 percent slag depending on the specific product.

A TYPICAL POUND OF FIBER GLASS AND MINERAL WOOL INSULATION SAVES TWELVE TIMES AS MUCH ENERGY IN ITS FIRST YEAR IN PLACE AS THE ENERGY USED TO PRODUCE IT.¹

The North American Insulation Manufacturers Association (NAIMA), through an annual survey, tracks the use of pre- and post-consumer recycled materials in its members' insulation products. The most recent survey showed that together NAIMA member companies used more than 2.6 billion pounds of recycled post consumer glass and blast furnace slag in the manufacture of thermal and acoustical insulation in 2005 in North America.

More specifically, the data showed that facilities in the U.S. used more than 1.4 billion pounds of recycled glass and nearly 835 million pounds of

THE BUILDING INDUSTRY CONSUMES MORE THAN 50% OF PRIMARY RESOURCES, IS CURRENTLY RESPONSIBLE FOR 35 TO 40% OF TOTAL NATIONAL ENERGY CONSUMPTION, AND GENERATES 25% OF CANADA'S SOLID WASTE.²

slag in 2005. This represented an increase in recycled glass use of 18 percent and in reclaimed slag use of 25 percent over 2004. Use of recycled glass by NAIMA members has more than doubled since the first survey results in 1992.

Canadian facilities used more than 357 million pounds of recycled glass and more than 77 million pounds of slag in the manufacture of thermal and acoustical

An Industry Committed to Environmental Preservation

NAIMA member companies have a long-standing commitment to the promotion of energy efficiency and environmental preservation. They support a number of voluntary programs such as the ENERGY STAR Home Sealing and LEED Programs in the U.S., as well as the R-2000 Program in Canada.

INSTALLED INSULATION IN U.S. BUILDINGS PREVENTS THE EMISSIONS OF OVER 1.56 TRILLION POUNDS OF CARBON DIOXIDE ANNUALLY...THAT MEANS THAT TOTAL U.S. CARBON DIOXIDE EMISSIONS WOULD BE ALMOST FIFTEEN PERCENT HIGHER WITHOUT INSULATION.¹

insulation products in 2005, up 11 and 26 percent respectively since 2004. Data from NAIMA's recycled content survey are available upon request.

Saves Landfill Space

Using materials derived from secondary sources not only reduces the demand on virgin resources, it saves landfill space by diverting glass containers and blast furnace slag from the solid waste stream. NAIMA's data show that U.S. fiber glass and rock and slag wool insulation manufacturers have diverted nearly 29 billion pounds of recyclable materials from the solid waste stream since the introduction of an aggressive recycling program in 1992.

"FIBER GLASS INSULATION IS THE LARGEST SECONDARY MARKET FOR RECYCLED GLASS CONTAINERS" —
GLASS PACKAGING INSTITUTE

Industry Re-Engineers To Reduce Waste

Some insulation manufacturers have instituted conservation measures including:

1. Re-engineering manufacturing processes to incorporate production scrap back into the primary production process or reprocess it into other products.
2. Using compressed packaging cuts energy requirements for transportation allowing more insulation to be shipped in each truck.

References

1. *Green and Competitive: The Energy, Environmental, and Economic Benefits of Fiber Glass and Mineral Wool Insulation Products*. Energy Conservation Management; The Alliance to Save Energy; and Barakat & Chamberlin, 1996.
2. The National Steering Committee for Innovation in Construction, Canada, June 28, 2002.

About NAIMA

NAIMA is the association for North American manufacturers of fiber glass, rock wool, and slag wool insulation products. Its role is to promote energy efficiency and environmental preservation through the use of fiber glass, rock wool, and slag wool insulation, and to encourage the safe production and use of these materials.

For More Information NAIMA

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Aislantes Minerales, S.A. de C.V.
Amerrock Products, LP
CertainTeed Corp.
Evanite Fiber Corp.
Fibrex Insulations, Inc.
Guardian Building Products, Inc.
Isolatek International
Johns Manville
Knauf Insulation
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