



THE ORIGINAL GREEN  
SEAL OF APPROVAL  
SINCE 1989

# GS-54 **Green Seal™ Standard for Architectural Thermal Insulation Materials**

## ***A Guide To Leadership in Sustainable Insulation***

All insulation materials provide net benefits in reduced energy use, global warming impacts, air pollution, and increased occupant comfort. Many insulation products also contain VOCs and other chemicals that may be toxic, and users risk exposure through inhalation and exposure to skin. The raw materials used in many types of insulation can have negative effects on our environment as well.



To reduce these negative impacts, Green Seal developed the GS-54 standard as a comprehensive benchmark for sustainable insulation materials. Certification to this standard lets manufacturers identify their products as leaders in the industry, and it helps purchasers, installers, and consumers easily identify greener options for a wide variety of insulation choices.

## ***Scope of GS-54***

This standard establishes environmental, health, and performance requirements for architectural insulation materials that provide thermal resistance and are used in buildings. Insulation materials may be in the form of batts, blankets, rolls, boards, blown-in / loose fill, spray foam, rigid foam, low-density foam, or rigid fiber.

The scope includes products made from fiberglass, rock wool, and other mineral wools; polyurethane; polystyrene; polyisocyanurate; paper, wood, and other cellulose materials; reflective insulation; denim and other fabrics; vermiculite; perlite; animal wool, and other materials that provide thermal resistance.

## ***Key Areas Addressed***

GS-54 establishes performance criteria for products, and helps protect air quality, human health, and the environment by prohibiting harmful chemicals, limiting VOC content and requiring protective measures for installers and occupants.

### **Performance Requirements**

GS-54 ensures that certified insulation materials perform effectively. Manufacturers must provide test results for the key performance parameters for the intended use of each product.

### **Health and Environmental Requirements**

GS-54 promotes the creation of safer insulation materials by prohibiting the intentional introduction of harmful chemicals, including heavy metals, phthalates, formaldehyde, PBDE, and brominated- and short-chain chlorinated- paraffin flame retardants. Certain exceptions are made for MDI, sodium borate, and boron oxide due to their necessity for acceptable performance and the lack of feasible alternatives. Despite these exceptions, products that contain these chemicals are still environmentally preferable to most other products available on the market. Insulation materials must also meet predetermined percentages for recovered content.

ENVIRONMENTAL  
LEADERSHIP STANDARDS



CERTIFICATION FOR  
PRODUCTS, SERVICES,  
PROPERTIES & COMPANIES



PARTNERSHIPS IN  
GREEN PURCHASING &  
FACILITIES MANAGEMENT



SUSTAINABILITY  
RESEARCH & LIFE CYCLE  
ANALYSIS



## Packaging Requirements

- Paper and cardboard packaging must be made with at least 10% recovered materials.
- Heavy metals cannot be introduced above minimally allowed levels.
- Plastic packaging must be recyclable and cannot contain intentionally introduced phthalates or halogenated substances.

## Labeling Requirements and Consumer Information

Green Seal standards are based on a scientific evaluation of the entire life cycle of a product. The use and disposal of a product are important aspects of this cycle. The proper installation of insulation materials is vital to both performance and the protection of human health.

- Installation instructions, training materials and proper labels, including alerts on products that should only be installed by professionals, must be included.
- Manufacturers of spray polyurethane foam must have a product stewardship program that limits the use of their products to trained professionals and includes comprehensive training requirements for installers & prominent installation instructions.

**This is only a summary of  
the GS-54 standard.**

**The full standard is available at:  
<http://www.green seal.org/GS54>**

*Green Seal is an independent, non-profit organization dedicated to safeguarding the environment and transforming the marketplace by promoting the manufacture, purchase, and use of environmentally responsible products and services. Founded in 1989, Green Seal provides life cycle, science-based environmental certification standards that are credible, transparent, and essential to creating a more sustainable world.*

For more information visit: [www.green seal.org](http://www.green seal.org), call: 202.872.6400 or email: [green seal@green seal.org](mailto:green seal@green seal.org)