



GUARDIAN
BUILDING PRODUCTS

Guardian Fiberglass Insulation - Exceeding the toughest indoor air quality standards.



ENSURING A
HIGHER
QUALITY OF LIFE

FOR YOUR HEALTH

Indoor air quality is a growing concern with today's tighter construction practices for homes and buildings. According to the U.S. Environmental Protection Agency most people spend about 90% of the time indoors where "thousands of chemicals and biological pollutants are found", thus negatively affecting their health. That is why Guardian Fiberglass has made a point to achieve the highest possible product certification - Greenguard Certification™. Greenguard Certified Products can reduce indoor air contaminants and promote a better indoor environment.

WHAT IS THE GREENGUARD CERTIFICATION PROGRAMSM?

The Greenguard Certification Program was founded in 1999 to establish a true third party certification based on proven emissions criteria used by U.S. Environmental Protection Agency, the state of Washington, the U.S. Green Building Council's LEED program, OSHA and the World Health Organization.

RIGOROUS TESTING (see back for testing standards)

Greenguard Certified Products must pass rigorous emissions testing for certification. Critical components (such as volatile organic compounds, formaldehyde and other product specific components) are monitored quarterly. All Guardian Fiberglass loose fill and batt insulation products continue to meet the Greenguard Certification Program's establishment emission standards.

IDENTIFYING A CERTIFIED PRODUCT

Look for the Greenguard Indoor Air Quality® mark prominently displayed on all Guardian Fiberglass packaging. You can be confident that you are insulating your home with the best fiberglass available and that you are choosing the most effective means of creating a quality home environment.





TESTING STANDARDS

TESTING PROCEDURES

The most reliable and scientifically proven way to test for product emissions is through environmental chamber testing. Guidelines for measuring chemical emissions using environmental chambers were established by the American Society of Testing Materials (ASTM). The standards, ASTM D5116-97 and D6670-01, are the foundation for all product-specific test protocols.

Products are loaded into controlled environmental chambers. These testing chambers are dynamic, which means that purified air streams into the chamber and we collect samples from the exhaust air. This dynamic process resembles the airflow patterns in rooms and buildings and provides data, which can be easily translated into real world scenarios. Environmental chamber testing provides a controlled and representative indoor environment that allows the product to produce the emissions in a realistic manner similar to the way the product would emit in a home or office. Products are tested for formaldehyde, volatile organic chemicals (VOCs), respirable particles, ozone, carbon monoxide, nitrogen oxide, and carbon dioxide emissions. Environmental chamber testing allows the wide spectrum of VOC emissions to be determined rather than just the primary components of the product. Many times, the primary components of a product are not the primary volatile emissions from a product. Frequently, the reaction by-products of the primary components or contaminants in the primary components comprise the majority of the volatile emissions from a product. Environmental chamber testing emissions data can be mathematically modeled to determine exposure concentrations produced by the use of the product in many different indoor environments. Modeling of a product's emission data allows the product use to be evaluated for health, irritation, and odor concerns for a wide range of indoor environments.

WHAT MEASUREMENTS ARE TAKEN

The three basic measurement values are needed to get how much a product emits at a certain point in time; the emission rates or to what degree do the emissions change over time; and the predicted air concentrations or how the test results translate into real building environments.

PERFORMANCE STANDARD FOR INSULATION

Individual VOCs	<0.1 TLV*
Formaldehyde	0.05 ppm
Total VOCs	0.5 mg/m ³
Total aldehydes	0.1 ppm
Respirable particles (for HVAC ductwork)	0.05 mg/m ³

Listing of measured carcinogens and reproductive toxins as identified by California Proposition 65, the U.S. National Toxicology Program (NTP), and the International Agency on Research on Cancer (IARC) must be provided.

Any pollutant regulated as a primary or secondary outdoor air pollutant must meet a concentration that will not generate an air concentration greater than that promulgated by the National Ambient Air Quality Standard (U.S. EPA, code of Federal Regulations, Title 40, Part 50).

* Any pollutant not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, Cincinnati, Ohio 45211-4438).



GUARDIAN FIBERGLASS INSULATION

1 000 EAST NORTH STREET, ALBION, MI 49224

517-629-9464, 800-211-8430

WWW.GUARDIANFIBERGLASS.COM