

CertainTeed Fiber  
Glass Insulation  
GREENGUARD® Certified

for Superior Indoor Air Quality Performance



**CertainTeed** 

***CertainTeed's fiber glass building insulation products for residential, commercial and HVAC systems are certified for superior indoor air quality (IAQ) performance.***

As a result of improved construction techniques, environmental concerns and the desire to save energy, residential and commercial structures are now more

airtight than ever before — a positive development that nonetheless has major implications for indoor air quality (IAQ). IAQ becomes more of an issue when the building envelope is tightly sealed, especially for individuals with allergies and respiratory ailments like asthma.

That's why the GREENGUARD® Indoor Air Quality Certified mark you'll see on every package of CertainTeed insulation is so important. It takes the worry out of your insulation decision.

CertainTeed has always been on the cutting edge when it comes to third-party testing of its products. GREENGUARD Certification provides credible independent confirmation of IAQ performance, covering a whole spectrum of indoor pollutants. And participation in the GREENGUARD Children & Schools Product Certification Program ensures that CertainTeed products have been tested to even more rigorous

standards, and found to meet or exceed them.

Certification is a multi-stage process that includes raw material and facility reviews as well as annual product certification testing and quarterly monitoring tests covering every manufacturing site.

GREENGUARD Certified products allow developers, builders and contractors to capitalize on the growing "green building" trend. GREENGUARD has been recognized by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program, which uses GREENGUARD Certification as one criterion for obtaining LEED credits.

**The science of safety.**

Products are tested for emissions of formaldehyde, volatile organic compounds (VOCs), respirable particles and other pollutants. Testing

takes place in dynamic environmental chambers designed to simulate product use in typical indoor environments. Environmental chamber operation and testing protocols follow scientific principles established by the U.S. Environmental Protection Agency (EPA) and its Environmental Technology Verification Program (ETV), the American Society for Testing and Materials (ASTM), California Section CA 1350 requirements, the State of Washington (SOW), Germany's Federal Environment Agency and other applicable government and industry programs.

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All test data is obtained on newly manufactured products delivered to the test lab within a few days of manufacture. Products are packaged, sealed and shipped to an accredited

GREENGUARD environmental chamber laboratory where testing begins within five days of receipt. Because pollutant emissions are generally higher for freshly manufactured products and tend to decrease with time, this rapid process ensures that the highest possible emissions (or “worst case”) are monitored. Products are tested for specific pollutants over a period of one week, so that emission profiles are monitored. Product-specific emission rates are measured and then used to determine exposure concentrations in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) or parts-per-million (ppm).

For most products, data is obtained for formaldehyde and other aldehydes, volatile organic compounds and respirable particles. When products are tested to GREENGUARD Children & Schools standards, emissions of phthalates are also measured. Additional gases, such as ozone, carbon monoxide and nitrogen oxide, are monitored for equipment and processes.

Exposure concentrations are compared against specific pollutant standards for each product type. All construction materials must meet these standard levels within a five-day period (seven days for the Children & Schools program). This allows for the typical outgassing and decay of pollutants associated with newly manufactured products.

All products found to meet GREENGUARD Certification standards will contribute very low levels of pollutants to the indoor environment.

### **Our insulation is good for the environment.**

A well-insulated home or office helps limit energy consumption, which in turn reduces carbon dioxide produced during the burning of coal, oil and gas used to heat and cool homes. Reducing carbon dioxide emissions is a key element of ongoing efforts to mitigate the effects of global warming.

For every BTU consumed in the manufacturing of fiber glass insulation, the building owner will save 12 BTUs annually for the life of the structure. In addition, pre-consumer and post-consumer recycled glass is a major component in the manufacture of fiber glass insulation. Pre-consumer is scrap left after the primary production process. Post-consumer recycled glass is primarily collected from curbside recycling programs. It is ground-up, cleaned and re-melted. At this point, it is then combined with sand and other ingredients. By using recycled glass, manufacturers like CertainTeed — whose insulation products average about 35% recycled content—use less energy and reduce manufacturing waste during the production process.



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