

## **GREENGUARD Environmental Institute Formaldehyde Free Verification Requirements**

Products verified as Formaldehyde Free by GREENGUARD Environmental Institute (GEI) must conform to the following requirements:

1. **Verification Requirements:** Products verified as formaldehyde free must be certified under one of GEI's low emitting product certification programs following methods and procedures governed by GEI's ISO 65 Certification Body Accreditation.

2. **Testing Requirements:** For a product or material to be verified as formaldehyde free, product samples must have a measured formaldehyde emission factor of less than or equal to 5  $\mu\text{g}/\text{m}^2\cdot\text{hr}$  at 24 elapsed exposure hours or 3  $\mu\text{g}/\text{m}^2\cdot\text{hr}$  at 336 elapsed exposure hours. An emission factor of 5  $\mu\text{g}/\text{m}^2\cdot\text{hr}$ , corresponds to a measured chamber concentration of 2.5  $\mu\text{g}/\text{m}^3$  for a typical loading ratio of 0.5  $\text{m}^2/\text{m}^3$ . This chamber concentration is comparable to, or below, typical outdoor air concentrations. This demonstrates that formaldehyde exposure from products labeled as formaldehyde free will not contribute airborne formaldehyde at levels greater than those found in the natural outdoor environment.

Emissions must be measured following the testing requirements found in GGTM.P066, "Standard Method for Measuring and Evaluating Chemical Emissions from Building Materials, Finishes, and Furnishings using Dynamic Environmental Chambers" by an accredited GEI technical partner. These testing and measurement methodologies are consistent and comply with California Department of Public Health's CDPH/EHLB/Standard Method V1.1 "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," (CA Section 01350).

### **3. Product Documentation and Attestations:**

a. **Material Safety Data Sheets (MSDS):** The manufacturer or supplier(s) of component(s) must submit all MSDS's for the products and product components being considered for formaldehyde free certification. The MSDS's must show that the product and product components contain no formaldehyde.

b. **Attestations:** The manufacturer or supplier(s) of component(s) must attest that there is 1) no added formaldehyde, 2) no added formaldehyde precursors, 3) no added formaldehyde polymers and 4) that no formation of formaldehyde is expected under typical product usage conditions. This Attestation must pertain to the product(s) and/or component(s) being certified and must be signed by an authorized representative of the manufacturer or supplier and provided to GEI.