

Certified Low-Emission Carpet Adhesives and Carpet

Last Updated: 06/16/2017

Scope



In living spaces, utilize third-party certified low-emission carpet products that are designed to reduce human exposure indoors to individual VOCs. The [How to Find Indoor airPLUS Compliant Low Emission Products](#) document provides guidance on identifying compliant products including industry databases and examples of product labeling.

See the [Compliance Tab](#) for related codes and standards requirements, and criteria to meet national programs such as DOE's Zero Energy Ready Home program, ENERGY STAR Certified Homes, and Indoor airPLUS.

Description

VOCs are emitted through off-gassing from many household products, including carpets and carpet adhesives. The [How to Find Indoor airPLUS Compliant Low Emission Products](#) document provides guidance on identifying compliant products including industry databases and examples of product labeling.

The Green Label Plus program tests carpets for emissions levels of 13 different chemicals, and tests carpet adhesives for 12 different chemicals. All Green Label Plus certified carpet and adhesives undergo a three-tier testing process, including follow-up testing to monitor continual compliance with emissions limitations.

As specified by the Green Label program, cushion products are characterized as prime polyurethane, bonded polyurethane, mechanically frothed polyurethane, rubber-hair, rubber-jute, synthetic fiber, resinated or coated synthetic fiber, rubber and rubberized polyurethane. Carpet cushions are tested for the following:

- total volatile organic compounds (TVOCs)
- butylated hydroxytoluene (BHT),
- formaldehyde,
- 4-phenylcyclohexine (4-PCH).

The maximum emissions limits for these are as follows:

- 1000 µg/m² hour for TVOCs,
- 300 µg/m² hour for BHT,
- 50 µg/m² hour for formaldehyde,
- 50 µg/m² hour for 4-PCH.



Green Label and Green Label Plus are independent product certification programs run by the Carpet and Rug

Institute (CRI). These certifications include third party verification to ensure products meet strict emissions limits. Each certified product is listed in the CRI certified products database, located on their website at www.carpet-rug.org.

Material	How to find certified products
Interior wall and ceiling drywall	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling paint	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling primer	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling adhesive	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling fabric	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling trim	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling paneling	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling insulation	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling acoustic tiles	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling tiles	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling panels	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling grids	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling supports	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling accessories	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling lighting	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling fans	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling speakers	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling switches	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
Interior wall and ceiling ceiling outlets	Look for GREENGUARD Gold or GREENGUARD Gold Plus labels on products, including in the specs.
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Using certified products lowers occupants' risk of exposure to high levels of VOCs from construction materials.

These Indoor airPLUS specifications can be implemented by requiring documentation of material certification for each material submittal package from sub-contractors. Any submittal requirements, such as manufacturer documentation of product certifications, should be clearly outlined in the project specifications and/or subcontractor bid package. Information for each third party certification and emissions standard required by Indoor airPLUS can be found in the [How to Find Indoor airPLUS Compliant Low-Emission Products](#) document.

Ensuring Success

To ensure Indoor airPLUS Item 6.3 requirements are met, incorporate the requirements for product certification into the project's specifications and/or bid package. Require documentation of product compliance for each product submittal from sub-contractors and suppliers.

Climate

No climate specific information applies.

Training

Right and Wrong Images

None Available

CAD

None Available

Compliance

The Compliance tab contains both program and code information. Code language is excerpted and summarized below. For exact code language, refer to the applicable code, which may require purchase from the publisher. While we continually update our database, links may have changed since posting. Please contact our [webmaster](#) if you find broken links.

[DOE Zero Energy Ready Home](#)

Zero Energy Ready Home (Rev. 03) Exhibit 1, Item 6 “Indoor Air Quality” requires that builders meet the EPA Indoor airPLUS Verification Checklist and Construction Specifications.

[EPA Indoor airPLUS](#)

The Indoor airPLUS Verification Checklist (Version 1 Rev. 03) states:

6.3: Carpets and Carpet Adhesives

- At least 90 percent of the interior surface area covered by carpet and carpet adhesives must use products labeled with, or otherwise documented as meeting, the [Carpet and Rug Institute \(CRI\) Green Label Plus](#) testing program criteria.
- For carpet cushion (i.e., padding), use only products certified to meet the [CRI Green Label Plus or Green Label](#) testing program criteria.

The [How to Find Indoor airPLUS Compliant Low Emission Products](#) document provides guidance on identifying compliant products including industry databases and examples of product labeling.

More Info.

Access to some references may require purchase from the publisher. While we continually update our database, links may have changed since posting. Please contact our [webmaster](#) if you find broken links.

Case Studies

None Available

References and Resources*

1. [Carpet and Adhesive Requirements](#)
Author(s): Carpet and Rug Institute
Organization(s): Carpet and Rug Institute
Publication Date: January, 2012
Standard describing a green labeling program for low VOC carpets.
2. [CRI's Green Label Plus for Indoor Air Quality Fact Sheet](#)
Author(s): Carpet and Rug Institute
Organization(s): Carpet and Rug Institute
Publication Date: July, 2011
Downloadable fact sheet covering carpet-related topics including Indoor Air Quality, Asthma and Allergy, Cleaning Products, and Environmental Sustainability.
3. [Cushion Requirements](#)
Author(s): Carpet and Rug Institute
Organization(s): Carpet and Rug Institute
Publication Date: May, 2014
Standard describing a labeling program for carpet cushions.
4. [DOE Zero Energy Ready Home National Program Requirements](#)
Author(s): Department of Energy
Organization(s): DOE
Publication Date: April, 2017
Standard requirements for DOE's Zero Energy Ready Home national program certification.
5. [How to Find Indoor airPLUS Compliant Low Emission Products](#)
Author(s): U.S. Environmental Protection Agency
Organization(s): EPA
Publication Date: October, 2015
Companion document to the Indoor airPLUS Construction Specifications, providing guidance on identifying compliant products, including industry databases and examples of product labeling.
6. [Indoor airPLUS Construction Specifications Version 1 \(Rev. 03\)](#)
Author(s): U.S. Environmental Protection Agency
Organization(s): EPA
Publication Date: October, 2015
Document outlining specifications that were developed by the U.S. Environmental Protection Agency (EPA) to recognize new homes equipped with a comprehensive set of indoor air quality (IAQ) features.

*Publication dates are shown for formal documents. Dates are not shown for non-dated media. Access dates for referenced, non-dated media, such as web sites, are shown in the measure guide text.

Contributors to this Guide

The following authors and organizations contributed to the content in this Guide.

U.S. Environmental Protection Agency, Indoor airPlus program and PNNL.