

Adhesives

Covered Products

This specification covers general construction and flooring adhesives.

Goal

To set a hierarchy of preferences for connecting materials together and to encourage the use of adhesives that have fewer health and environmental hazards in order to create a healthier indoor environment during both construction and building occupancy.

Background

Adhesives can contain a variety of chemicals that are potentially hazardous to human health, including some that are classified as carcinogens and/or asthmagens.

Examples of chemicals that are used in adhesives include but are not limited to:

- Chemicals that are on the [Prop 65 list](#) of substances that are known to the State of California to cause cancer, birth defects or other reproductive harm. These may include, for example, benzene, formaldehyde, methylene chloride, n-hexane, perchloroethylene, or toluene;
- Chemicals that are listed by the Association of Occupational and Environmental Clinics (AOEC) as an asthmagen. This may include, for example, epoxy resins, diisocyanates, ~~and latex,~~ ~~and urea formaldehyde~~. The AOEC list can be accessed at: <http://www.aoecdata.org/expcodelookup.aspx>

Adhesives can also be a source of Volatile Organic Compounds (VOCs) which impact indoor air quality, and with proper specification, these impacts can be reduced.

Definitions

Association of Occupational and Environmental Clinics (AOEC)

A non-profit organization committed to improving the practice of occupational and environmental health through information sharing and collaborative research. Some adhesives may contain ingredients that can cause or worsen asthma in a workplace environment. Of particular concern are substances that can cause respiratory sensitization or are generally known to be asthmagens. These substances are noted on an asthmagen list that is maintained by the Association of Occupational and Environmental Clinics (AOEC) with an Rs or G code. A full list of AOEC asthmagens can be found at <http://www.aoecdata.org/expcodelookup.aspx>.

California Proposition 65 - known as the Safe Drinking Water and Toxic Enforcement Act of 1986, requires the State of California to publish a list of chemicals known to

cause cancer, birth defects or other reproductive harm. The California Office of Environmental Health Hazard Assessment follows a rigorous scientific and open, public process to evaluate available scientific information and lists chemicals based on recommendations from State committees of scientists and health professionals, presence on an authoritative list of chemicals of concern (e.g. IARC or NTP), identification by a state or federal agency as a carcinogen or teratogen, or satisfaction of certain criteria defined in the California Labor Code.

Environmental Product Declaration (EPD) – An independently verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of products meeting ISO 14025 *Environmental labels and declarations — Type III environmental declarations — Principles and procedures*.

Health Product Declaration (HPD) – A disclosure of product contents and potential associated human and environmental health hazards completed in compliance with the HPD Open Standard. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator, and when available, full GreenScreen assessments.

Standard Setting and Certifying Programs

CRI – Carpet and Rug Institute, is a not-for-profit trade association representing the manufacturers of more than 95 % of all carpet made in the United States, as well as their suppliers and service providers. <http://www.carpet-rug.org/>

The Cradle to Cradle Certified Products Standard - is a multi-attribute eco-label that evaluates a wide range of products across five categories of human and environmental health. The standard includes material health, material reutilization, renewable energy and carbon management, and water stewardship. For more information visit the Cradle to [Cradle Products Innovation Institute](#) website.

CRI Green Label Plus - is a labeling system developed by CRI that identifies carpets with very low emissions of volatile organic compounds (VOC's) represented as micrograms per square meter per hour. <http://www.carpet-rug.org/green-building-and-the-environment.html>

Green Seal - is a non-profit, independent, third party standard setting and certification organization that follows the Guiding Principles and Procedures for Type I Environmental Labeling adopted by the International Organization for Standardization (ISO 14024). Green Seal has developed environmental standards and certifies products for more than 40 major product categories. It has a standard for hand cleaners.

SCS FloorScore

FloorScore is an indoor air quality (IAQ) certification standard for hard surface flooring materials, adhesives, and underlayments. Developed by SCS with the [Resilient Floor](#)

[Covering Institute](#) (RFCI), it qualifies for many green building schemes including LEED v4, WELL, BREEAM, and CHPS.

UL EcoLogo - is an independent, third party standard setting and certification program that follows the Guiding Principles and Procedures for Type I Environmental Labeling adopted by the International Organization for Standardization (ISO 14024). Since its establishment in 1988, EcoLogo has been recognized or referenced in hundreds of specifications and standards. It has standards for cleaning products, sanitary paper, mobile devices, adhesives and more. UL EcoLogo certified products are listed on the UL SPOT database at: www.ul.com/SPOT.

UL GREENGUARD Gold is a single-attribute certification for low-emitting products such as flooring, adhesives, paints, furniture, building construction products, insulation and many others. UL GREENGUARD Gold products are listed on the UL SPOT Database: www.ul.com/SPOT.

Specifications

When form, function and utility requirements are met (which includes performance characteristics), affected entities are encouraged to use the following hierarchy for attaching materials, which is listed in order of preference:

1. Mechanical attachment (i.e. screws or brads);
2. Solid-state peel and stick adhesives that are fully reacted
3. Adhesives meeting this specification

If an adhesive is used, the product should meet the following specifications:

1. The product should be certified to one of the following standards, which are listed in order of precedence:

Strong, Multi-attribute Third Party Certification Programs

- Cradle to Cradle Silver or higher
- Green Seal
- UL EcoLogo

Acceptable, Single-attribute Third Party Certification Programs

- Carpet and Rug Institute (CRI) Green Label Plus
- Scientific Certifications Scorecard (SCS) FloorScore
- UL GREENGUARD Gold (Please note that the UL Spot Database contains products certified to the UL Greenguard standard as well as UL Greenguard Gold, and only products meeting the Gold standard meet the requirements of this specification.)

2. The product should have an Environmental Product Declaration (EPD), Health Product Declaration (HPD) or equivalent document that provides full product content information.
3. The product should not contain chemicals that are on the [Prop 65 list](#) of substances that are known to the State of California to cause cancer, birth defects or other reproductive harm.
4. The product should not contain chemicals that are listed by the Association of Occupational and Environmental Clinics (AOEC) as an asthmagen. The AOEC list can be accessed at: <http://www.aoecdata.org/expcodelookup.aspx>.

Packaging

Packaging shall comply with Environmental Conservation Law section 37-0205. Packaging shall not contain inks, dyes, pigments, adhesives, stabilizers, or any other additives to which any lead, cadmium, mercury or hexavalent chromium is intentionally added or contain incidental concentrations of lead, cadmium, mercury or hexavalent chromium which together are greater than 100 parts per million by weight (0.01%).

New York State encourages affected entities to adopt the following:

- The use of bulk packaging.
- The use of reusable packaging.
- The use of innovative packaging that reduces the weight of packaging, reduces packaging waste, or utilizes packaging that is a component of the product.
- That all packaging remain the property of the supplier and not become the property of the affected state entity under any circumstance or condition. The vendor shall certify that the packaging material will be reused, recycled, or composted, and managed in compliance with applicable local, state, and federal laws.
- Packaging that maximizes recycled content and/or meets or exceeds the minimum post-consumer content level for packaging in the U.S. Environmental Protection Agency Comprehensive Procurement Guidelines.
- Packaging that is recyclable or compostable.

Bulk Delivery and Alternate Packaging

New York State encourages the use of innovative packaging that reduces the weight of packaging and the generation of packaging waste. A Contractor is encouraged to use reusable materials and containers and to utilize packaging configurations that take advantage of storage containers designed to be part of the Product for the shipment of multi-unit purchases. New York State recognizes that these packaging methods are in the development stage and may not be currently available. Authorized Users are urged to inquire about these programs at the time of purchase and determine the best solution for their needs.