The most recognized protocols for testing carpet for volatile organic compound (VOC) emissions are:
1. Carpet and Rug Institute's Indoor Air Quality Testing Program
2. Carpet and Rug Institute's Green Label Plus Program
4. Collaborative for High Performance Schools (CHPS) Indoor Air Quality Test - Section 1350

Generally, carpet tends to offgas at the highest rate for the first four hours following its manufacture and then diminishes its output greatly. Many specifiers may indicate that they want flooring products that are “VOC free” or “zero VOC”, but this is not possible. No flooring product is “VOC free” or “zero VOC”; however, flooring products from Interface are designed to be the lowest VOC emitting products in our industry.

CRI Test:
The CRI test follows the most stringent test methodology approved by the EPA Dialogue consensus and has been accepted by the American Society of Testing and Materials (ASTM) for inclusion as a standardized test method (ASTM D-5116-1990). The CRI test evaluates carpet for the rate of total volatile organic compound (TVOC) emissions based on the amount of chemicals given off from the carpet in one hour after a 24-hour period in a test chamber with one air change per hour. The limit for TVOCs for CRI is 0.500 mg/m²/hr.

The CRI test requires manufacturers to submit random production samples quarterly so they can be tested and verified by approved independent laboratories. Samples must be sent to an approved independent test laboratory within 48 hours of manufacture and tested after the 24-hour air chamber period. In addition to the independent testing of Interface products, we also conduct our own internal testing in accordance with the same test methodologies (EPA and ASTM). That testing is conducted at Interface Research Corporation in LaGrange, GA. Tests are required on a quarterly basis. CRI also tests adhesives and carpet cushion in a similar fashion to that in which carpet is tested, but each with its own requirements.

Which Interface products meet the CRI Guidelines?
All Interface Flooring Systems modular carpet products meet or exceed the guidelines set forth in the CRI IAQ Test. For specific laboratory results contact Interface Sales Support at 1.800.336.0225 ext. 6511.

Re:Source Technologies brand adhesives are the only adhesive brand recommended in Interface Flooring Systems' Standard Warranty for use when installing its carpets. All Re:Source Technologies traditional and spray adhesives are “low VOC” or “zero calculated VOC”, meaning that no solvents are used in their manufacture. These adhesives meet or exceed CRI's guidelines for adhesives.

To see CRI's guidelines for carpet, adhesives and cushion, visit the CRI web site: http://www.carpet-rug.com.

State of Washington Protocol:
The State of Washington (SOW) Protocol is a test that measures the level of TVOCs in a given area. Samples for the SOW Protocol must also be sent to an independent test laboratory within 48 hours of manufacture (similar to the CRI protocol). After storage in a chamber with one air exchange per hour, the sample is tested at 24, 48, 72 and 96-hour intervals, thereby showing a decay curve. This protocol measures the concentration of VOCs or chemicals that are offgassed within a given area. The SOW Protocol provides more information than the CRI test, and due to the time interval before data is taken, the VOC emission rates may be lower than those obtained with the CRI method. The TVOC limit in the SOW Protocol is 0.500 mg/m³. It also includes requirements for maximum levels of formaldehyde, 4 phenyl cyclohexene (4PCH) and particulate. The SOW test is more expensive than the CRI test. Interface Research Corporation has the internal capability to test the company's products according to the SOW Protocol.

Which Interface products meet the State of Washington Protocol Guidelines?
All Interface Flooring Systems modular carpet products meet or exceed the guidelines set forth in the SOW Protocol. For specific laboratory results contact Interface Sales Support at 1.800.336.0225 ext. 6511. Unlike the CRI test, there is no SOW test for adhesives or carpet cushion.
Collaborative For High Performance Schools (CHPS) Test Protocol

CHPS is currently being used for California Schools. The Collaborative is an extensive document of special environmental requirements for high performance schools. The indoor air emission test requirements are similar to CRI's Green Label protocol, except the conditioning time is extended to fourteen days. Sampling is identical to the Green Label method and a 96-hour test is run on the samples. Only one independent test verification is currently required for a product to meet the CA 01350 Protocol. Quarterly TVOC reviews are not currently required.

The reporting requirements for CA 01350 include listing all chemicals emitted from the sample that are on the current list of “Chemicals of Concern” as published by OSHA in California. Chemicals of Concern include the California EPA ARB list of Toxic Air Contaminants, the California Proposition 65 and the Chronic Reference Exposure Levels lists. Any chemicals appearing on those lists must be below the safe levels indicated for those chemicals.

Which Interface products meet the CHPS Guidelines?

As part of Interface's certification to Scientific Certification Systems’ Environmentally Preferable Products (EPP) Certification for Carpet, all Interface products have been independently tested to the CA 01350 protocol, and all of the products meet the requirement. Because CA 01350 requires testing of the whole building assembly, (i.e., carpet plus adhesive), Interface has also conducted independent testing to verify that the Re:Source Technologies brand Grid Set Green Glue used to install Interface carpet also meets the CA 01350 requirement. The Grid Set Green Glue does meet the requirement.

Carpet and Rug Institute's (CRI's) Green Label Plus Program

As other states became interested in the CHPS Protocol, the Carpet and Rug Institute began to develop an enhanced indoor air quality criteria that would meet the CHPS requirement and create an industry-wide standard to reduce confusion surrounding various requirements for indoor air quality as it pertained to carpet. CRI worked in partnership with the California Department of Health Services’ Indoor Air Quality Program (DHS/IAQ) and the California Sustainable Building Task Force to establish a testing protocol for TVOC emissions that was compatible with Section 01350. The Green Label Plus program is a 14-day test that follows the test protocol of Section 01350 with stringent requirements for chemical emissions. The Green Label Plus program measures TVOC emissions as well as setting a maximum concentration level for a number of “Chemicals of Concern” as defined by the State of California's OSHA Proposition 65. The Green Label Plus goes beyond the requirements of Section 01350 to test emissions of six additional chemicals. The Green Label Plus program has been granted equivalency to CHPS Section 01350 by the California Indoor Air Quality Program and the Sustainable Buildings Task Force as long as the products:

1. Annually pass specific testing for compounds as outlined in Section 01350
2. TVOC emissions less than 0.5 mg/m2 tested quarterly.

All Interface carpet products meet the requirements of Section 01350 and CRI's Green Label Plus Certification and the Re:Source Technologies brand Grid-Set Green Glue meets the requirements of CA 01350.

VOCs, Indoor Air Quality and LEED™ IEQ Credits

The U.S. Green Building Council's LEED™ New Construction (LEED-NC) Building Rating System requires that carpet systems meet or exceed the requirements of the Carpet and Rug Institute Green Label Indoor Air Quality Test Program for IEQ Credit 4.3. All Interface Flooring Systems (IFS) carpeting products meet the requirements of IEQ Credit 4.3. IEQ Credit 4.1 requires that the VOC content of adhesives and sealants used must be less than the current VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule #1168.

Re:Source Technologies brand adhesives are the only adhesive brand recommended in Interface Flooring Systems' Standard Warranty for use when installing their products. All Re:Source Technologies brand traditional and spray adhesives are “low VOC” or “zero calculated VOC”, meaning that no solvents are used in their manufacture. All Re:Source Technologies brand traditional and spray adhesives meet or exceed the requirements of SCAQMD Rule #1168.

For more information about Interface products and services, contact your local Account Executive or visit us on the web at www.interfaceflooring.com.