

USG Corporation
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Manufacturer's Certificate of Compliance – Low VOC Emissions USG Corporation

USG Corporation certifies the following products have low VOC and formaldehyde emissions per the testing Standard established by the California Department of Public Health:

Astro® ClimaPlus™ [Tested]

Astro® ClimaPlus™ Illusion

Astro® ClimaPlus™ with FIRECODE™

USG certifies the above listed products are Low-Emitting, defined as a concentration for each individual volatile organic compound specified in the *Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1* (CDPH/EHLB/Standard Method V1.1-2010; aka, chamber testing portion of CA Section 01350) and ASTM Standard Guide D5116.

The actual test sample as indicated above was manufactured on December 17, 2013 and shipped to Berkeley Analytical as a representative sample. The test results are compliant with VOC emission requirements of the CA Section 01350 Standard as attested in Berkeley Analytical report 059-198-01A-Jan1414. Because USG's manufacturing specifications for ingredients and processes are substantially similar for all the products listed above and for the product actually tested, and because USG has in place a product quality program and VOC testing program, all listed products will meet the VOC emission requirements as defined in the Standard.

Meeting the strictest indoor environmental quality guidelines for zero and low-VOC emissions, is just one way USG is able to help our customers create sustainable spaces. Please visit our website at usg.com to learn more about EcoBlueprint, USG's sustainability initiative and how together we can reduce our overall impact on the environment and construct high-performing, healthy interiors.

Dated: February 20, 2014

A handwritten signature in black ink that reads "Lanita Stevens". The signature is written in a cursive, flowing style.

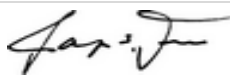
Lanita Stevens
Manager, Product Stewardship & Sustainability
USG Corporation



COMPLIANCE TESTED by berkeley analytical

VOC Emission Test Certificate

Product Name: ASTRO CLIMA PLUS 8221

Product Sample Information		Certificate Information	
Manufacturer:	USG Corporation	Certificate No:	140114-01
Manf. Website:	www.usg.com	Certified By:	
CSI Category & No.:	Acoustical Panel Ceilings (09 51 13)		Raja S. Tannous, Laboratory Director
Date Produced:	12/17/2013	Date:	January 14, 2014

Reference Standard: California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010 (Emission testing method for CA Specification 01350)

Acceptance Criteria and Results Demonstrating Compliance of Product Sample to Referenced Standard:

Exposure Scenario ¹	Individual VOCs of Concern ²		Formaldehyde ³		TVOC ⁴
	Criterion	Compliant?	Criterion	Compliant?	
School Classroom	≤½ Chronic REL	YES	≤9.0 µg/m ³	YES	≤ 0.5 mg/m ³
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m ³	YES	≤ 0.5 mg/m ³

Product Coverage⁵: Not applicable

1. Exposure scenarios & product quantities for classroom & office are defined in Tables 4-2 – 4-5 (CDPH Std. Mtd. V1.1-2010)
2. Maximum allowable concentrations of individual target VOCs are specified in Table 4-1 (*ibid.*)
3. Maximum allowable formaldehyde concentration is ≤9 µg/m³, effective Jan 1, 2012; previous limit was ≤16.5 µg/m³ (*ibid.*)
4. Informative only; predicted TVOC Range in three categories, i.e., ≤0.5 mg/m³, >0.5 – 4.9 mg/m³, and ≥5.0 mg/m³
5. Informative and applicable only to tests of wet-applied products; grams of sample applied per square meter of substrate

Standards & Codes Recognizing CDPH Standard Method V1.1 (partial list)

- CALGreen, CA Code of Regulations Title 24, Part II, 2012
- USGBC LEED CI, NC, Schools, Healthcare, 2009
- USGBC LEED Version 4, BD&C, ID&C, 2013
- Collaborative for High Performance Schools (CHPS), National Core Criteria, 2013
- Green Guide for Healthcare, V2.2, 2007

Narrative: USG Corporation selected a sample representative of its ASTRO CLIMA PLUS 8221 product and submitted it for testing commencing on 12/19/2013. Berkeley Analytical measured and evaluated the emissions of VOCs from this sample following CDPH/EHLB/Standard Method V1.1-2010. The results of the test are presented in Berkeley Analytical report, 059-198-01A-Jan1414.

Berkeley Analytical is an independent, third-party laboratory specializing in the analysis of organic chemicals emitted by and contained in building products, finishes, furniture, and consumer products. We are an ISO/IEC 17025 accredited laboratory (IAS, [TL-383](#)); all standards used in performing this test are in Berkeley Analytical's scope of accreditation.

DISCLAIMER: THIS CERTIFICATE OF COMPLIANCE AFFIRMS THAT: 1) A SAMPLE OF THE LISTED PRODUCT WAS TESTED ACCORDING TO THE REFERENCED STANDARD; 2) THE MEASURED VOC EMISSIONS FROM THE SAMPLE WERE EVALUATED FOR THE DEFINED EXPOSURE SCENARIO(S); AND 3) THE RESULTS MEET THE ACCEPTANCE CRITERIA OF THE REFERENCED STANDARD(S). BERKELEY ANALYTICAL IS NOT RESPONSIBLE FOR ANY CLAIMS REGARDING A PRODUCT OR PRODUCTS ENTERED INTO COMMERCE THAT MAY BE BASED ON THIS TEST. BERKELEY ANALYTICAL PROVIDES THIS CERTIFICATE OF COMPLIANCE "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.