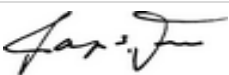




COMPLIANCE TESTED by berkeley analytical

VOC Emission Test Certificate

Product Name: Marmoleum® Sheet with TopShield2

Product Sample Information		Certificate Information	
Manufacturer:	Forbo Flooring	Certificate No:	121012-04
Manf. Website:	www.forbo.com	Certified By:	
CSI Category & No.:	Linoleum Sheet Flooring (096516-Linoleum)		Raja S. Tannous, Laboratory Director
Date Produced:	9/12/2012	Date:	October 12, 2012

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	
	Criterion	Compliant?	Criterion	Compliant?
School Classroom	≤½ Chronic REL	YES	≤9.0 µg/m ³	YES
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m ³	YES

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.*).

Potential Applications

- CALGreen, CA Code of Regulations Title 24, Part II, 2010, Sections 4.504.4/5.504.4.6: Resilient Flooring Systems
- ANSI/ASHRAE/USGBC/IES Standard 189.1-2009, Section 8.4.2.3: Floor Covering Materials
- USGBC LEED CI, NC, Schools, 2009, IEQ Credit 4.3: LEM - Flooring Systems
- USGBC LEED for Healthcare, 2009 (Feb 2011), IEQ Credit 4: LEM, Group 3 - Flooring
- Collaborative for High Performance Schools (CHPS) rating system, 2009 Criteria EQ2.2.3: Flooring Systems
- Green Guide for Healthcare, V2.2, 2007, EQ Credit 4.3: LEM - Flooring Systems

Narrative: Forbo Flooring selected a sample representative of its Marmoleum® Sheet with TopShield2 product and submitted it for testing commencing on 9/19/2012. 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, 135-044-02A-Oct1212. Product was previously named Marmoleum® Real Sheet Linoleum.

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) the product sample was tested according to the referenced standard; 2) the measured VOC emissions were evaluated for the defined exposure scenario(s); and 3) the results meet the acceptance criteria of the referenced standard(s). Potential applications of the test and this certificate are suggested. 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.