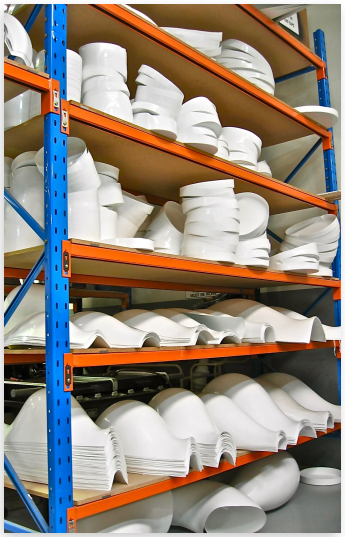
Contact Info: Office: +61 3 9720 9595
Website: insulock.com.au
email: sales@insulock.com.au

Low VOC compliance for Offices and Schools

TECHNICAL BULLETIN



The State of California Environmental Protection Agency (Cal/EPA) developed a standard specification for monitoring and reporting VOC emissions for construction materials. This standard is CA-1350 and provides the foundations for manufacturers to provide self-declared claims for low emitting materials for offices and schools when tested by independent third party agencies. The claims are used to earn credits in LEED®, CHPS, Green Globes and other building rating systems.

This standard has become the preeminent US protocol for evaluating and managing VOC emissions. This test method uses an emission chamber to measure VOC emissions over a two week period. Various algorithms are used to predict emissions for offices and schools. The resulting air concentrations are then rated against 35 Chronic Reference Exposure Levels (CRELs) published by the California Office of Environmental Health Hazard Assessment. Compliance requires that emissions do not exceed 1/2 the allowable concentration limits.

Proto LoSmoke® PVC has been compliance tested by an independent third party laboratory and meets all Low VOC emission requirements for offices and schools. Test results for Proto PVC Fittings and Jacketing showed that no formaldehyde or other CREL VOCs were detected and no individual VOCs detected above their quantitation levels. Proto fitting and jacketing systems meet the low VOC requirements for LEED credits or points. A copy of the certificate of compliance is shown on the back.

COMPLIANCE TESTED by berkeley analytical

VOC Emission Test Certificate

Product Name: Proto PVC Fitting Covers - LoSmoke®

Product Sample Information	
Manufacturer:	Proto Corporation
Manf. Website:	Protocorporation.com
CSI Category & No.:	Plumbing (22 00 00)
Date Produced:	5/4/2016

Certificate Information	
Certificate No:	160504-10
Certified By:	Raja S. Tannous, Laboratory Director
Date:	May 04, 2016

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?	Range
School Classroom	≤½ Chronic REL	YES	≤9.0 µg/m³	YES	≤ 0.5 mg/m³
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m³	YES	≤ 0.5 mg/m³

Product Coverage[5]: Not applicable

1. Exposure scenarios & product quantities for classroom & office are defined in Tables 4-2 – 4-5 (CDPH Std. Mtd. V1.1-2010). Per manufacturer's claim & Letter
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)

- 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
- ANSI/GBI 01-2010, Green Building Assessment Protocol

Narrative: Proto Corporation selected a sample representative of its Proto PVC Fitting Covers -LoSmoke® product and submitted it on 4/5/2016 for testing. 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, 832-001-01A-May04016.

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.

FC17B.1

The physical and chemical properties of the products listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as technical service and are subject to change without notice. Please contact customer service at 800.875.7768 to assure current information.

June/16 (new)