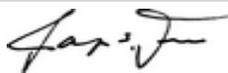




COMPLIANCE TESTED by berkeley analytical

VOC Emission Test Certificate

Product Name: Titebond Fast Set Polyurethane Construction Adhesive - 3217

Product Sample Information		Certificate Information	
Company:	Franklin International	Certificate No:	250206-07
Company Website:	www.franklininternational.com	Certified By:	 Raja S. Tannous, Laboratory Director
Product Type:	Wall Panel Adhesive	Date:	February 6, 2025
Date Produced:	1/9/2025		

Reference Standard: California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017 (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	≥ 5.0 mg/m ³
Private Office	≤½ Chronic REL	YES	≤9.0 µg/m ³	YES	≥ 5.0 mg/m ³

Product Coverage⁵: 1962 g/m²

1. Exposure scenarios & product quantities for classroom & office are defined in Tables 4-2 – 4-5 (CDPH Std. Mtd. V1.2-2017)
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 V1.2 (partial list)

- USGBC LEED Version 4/4.1, BD&C, ID&C, Residential BD&C Multifamily
- The WELL Building Standard, WELL v2, Feature X06
- ANSI/GBI 01-2019 Green Globes Assessment Protocol
- ANSI/ASHRAE/USGBC/IES Standard 189.1

Narrative: Franklin International selected a sample representative of its Titebond Fast Set Polyurethane Construction Adhesive - 3217 product and submitted it on 1/15/2025 for testing. Berkeley Analytical measured and evaluated the emissions of VOCs from this sample following CDPH/EHLB/Standard Method V1.2-2017. The results of the test are presented in Berkeley Analytical report, 338-071-01A-Feb0625.

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.

Franklin International

January 13, 2025

RE: Statement of product quantities to be used to model and determine compliance of test results with VOC emission guidelines in CDPH Standard Method V1.2 (see Section 4.3.6)

Franklin International
2020 Bruck Street, Columbus, Ohio 43207
Ben Ward, Sr. Product Safety and Compliance Specialist

Product Name: Titebond Fast Set Polyurethane Construction Adhesive
Commercial Part Number: 3217
Manufacturer Sample ID: A250109087

To Whom It May Concern:

This is a multipurpose adhesive, so worst case scenario is used as a drywall adhesive for applying drywalls to the walls of the room. Standard drywall sheet panels that are 8 feet long by 4 feet wide.

Classroom - Room size is 40 feet long x 24 feet wide x 8.5 feet high.

A 40-foot-long wall with 8.5-foot-high ceilings requires 10.625 sheets x2 for each long side of the room, so 21.25 panels. Similarly, a 24-foot-long room would require 6.375 sheets x 2 for each short side of the room, so 12.75 sheets. **Total sheets applied is 34.**

The adhesive is applied by extruding a 1/2-inch bead across the 4 foot (48 inches) wide sheet every 2 inches down the length of the 8-foot sheet, so **48 beads per sheet**. The volume of a single bead (based on cylindrical form, $V=\pi r^2 h$) $V=3.14 \times (0.25)^2 \times 48 = 9.42$ cubic inches or 154.36 cubic centimeters (cc). $154.36 \text{ cc} \times 48 \text{ beads} = 7409.28 \text{ cc}$ of adhesive per sheet.

$34 \text{ sheets} \times 7409.28 \text{ cc} = 251,915.52 \text{ cc}$. 1 cc is 1 ml, so $251,915.52 \text{ ml} = 251.91 \text{ L}$. That converts approximately to 66.54 gallons of adhesive. The adhesive density is 11.01 lbs./gallon (1.32 sg), therefore the weight of the adhesive used in the classroom is **732.6 lbs.**

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Office – Room size is 12 feet long x 10 feet wide x 9 feet high

A 12-foot-long wall requires 3.1875 sheets x 2 for each long side of the room or 6.375 sheets. Similarly, a 10-foot wall requires 2.8125 sheets x 2 for each short side of the room, or 5.625 sheets. **Total sheets applied is 12.**

Using the information supplied in the classroom scenario, 12 sheets x 7409.28 cc/sheet = 88911.36 cc or 88.91 L. That converts to approximately 23.48 gallons of adhesive used. 23.48 gallons x 11.01 lbs./gallon = **258.51 lbs.** of adhesive used in the office.

Sincerely,



Ben Ward
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