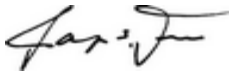
COMPLIANCE TESTED by berkeley analytical

VOC Emission Test Certificate

Product Name: CFS-S SIL SL - 929805T

Product Sample Information	
Company:	Hilti Inc.
Company Website:	www.hilti.com
Product Type:	Floor Sealants - Firestop Silicon Sealant
Date Produced:	4/23/2020

Certificate Information	
Certificate No:	200619-01
Certified By:	 Raja S. Tannous, Laboratory Director
Date:	June 19, 2020

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?	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	≤0.5mg/m³

Product Coverage[5]: 18,100 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, BD&C, ID&C
- The WELL Building Standard
- ANSI/GBI 01, Green Building Assessment Protocol

Narrative: Hilti Inc. selected a sample representative of its Firestop Silicon Sealant, CFS-S SIL SL - 929805T, product and submitted it on 5/18/2020 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, 1031-006-02A-Jun1820.

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.

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D 19.06.2020

RE: VOC Emission Testing; CDPH Standard Method V1.2; non-full spread application calculations

Below are the rational and the calculations for quantity of Hilti Firestop Silicone Sealant CFS-S SIL SL that would be used in the standard school classroom and the standard private office defined in CDPH Standard Method V1.2.

CLASSROOM and OFFICE

CFS-S SIL SL is a self-levelling sealing compound used for floor penetrations of pipes. In the worst-case scenario, we assume 4 pipe penetrations (2 heating pipes, one cold water pipe and one hot water pipe) in both the classroom and the office room. Here we assume an opening of 2 inch each, which is penetrated by a 1 inch pipe.

Accordingly, the area to be filled with sealant calculates the following:

Max. annular space: $ra^2\ \pi - ri^2\ \pi =$
$[(1\ inch)^2\ \pi - (0{,}5\ inch)^2\ \pi] =$
$[(2{,}54\ cm)^2\ \pi - (1{,}27\ cm)^2\ \pi] = (20{,}26 - 5{,}06)\ cm^3 = 15{,}2\ cm^2$

$15{,}2\ cm^2 * 4\ pipes = 60{,}8\ cm^2$

If you have any further questions, please let me know.

With best regards

i.A. Dr. Julia Bamberger
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