



## **BERKELEY ANALYTICAL**

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## **VOC Emissions from Building Products**

Customer & Building Product Sample Information				
Report Certification				
Report number	1036-002-01A-Sep0123			
Report date	Sep 1, 2023			
Certified by (Name/Title)	Raja S. Tannous, Laboratory Director			
Signature	Japs, Ja			
Date	September 1, 2023			
Standards				
Test method	CDPH/EHLB/Standard Method V1.2 (Sect. 01350)			
Acceptance criteria	CDPH/EHLB/Standard Method V1.2			
Modeling scenario(s)	CDPH/EHLB/Standard Method V1.2 Standard Classroom & Office			
Product type	Floor Sealant			
Customer Information				
Manufacturer or organization	Laticrete International			
City/State/Country	Bethany, CT			
Contact name/Title	Mitch Hawkins, Director, Sustainability & Analytics			
Phone number	203.393.4619			
Product Sample Information*				
Manufacturer (if not customer)	Same as above			
Product name / Number	LATASIL / 6244-0120-2			
Product CSI category	Flooring (09 60 00) – 100% Silicone Joint Sealant			
Customer sample ID	not provided			
Manufacturing location	Benthany, CT			
Date sample manufactured	May 1, 2023			
Date sample collected	Aug 1, 2023			
Date sample shipped	Aug 1, 2023			
Date sample received by lab	Aug 7, 2023			
Condition of received sample	No observed problems			
Lab sample tracking number	1036-002-01A			
Conditioning start date & duration	Aug 11, 2023; 10 days			
Chamber test start date & duration	Aug 21, 2023; 4 days (96 hours)			
Total test start date & duration	Aug 11, 2023; 14 days (336 hours)			

\*Chain-of-custody (COC) form for product sample is attached to this report



#### Conformity Assessment – CDPH VOC Concentration Criteria

**VOC Emission Test Results** – The product sample was tested for emissions of VOCs following California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017. The chamber test results were modeled to one or more scenario(s) defined in CDPH Standard Method V1.2. The modeled indoor VOC concentrations then were compared to the acceptance criteria defined in CDPH Standard Method V1.2 to determine compliance of the product sample to the standard. The modeling scenario(s) are detailed in Table 3, and the predicted indoor VOC concentrations at 336 hours are given in Table 6 of this report. The allowable concentrations used as acceptance criteria are reproduced in Appendix B of this report. Table 1 summarizes the pass/fail results based on the predicted indoor air concentrations of individual VOCs of concern in the modeled scenario(s).

**Decision Rule** – The decision rule is defined in CDPH Standard Method V1.2. Compliance to the standard is determined based on the estimated indoor air concentrations of individual VOCs at 336 hours for the modeling scenario(s) without consideration of measurement uncertainty.

**TVOC Concentration Range** – USGBC's LEED v4 rating systems for buildings include a requirement for reporting of the predicted TVOC concentration in one of three range categories, i.e.,  $\leq 0.5 \text{ mg/m}^3$ ,  $>0.5 \text{ to } 4.9 \text{ mg/m}^3$ , and  $\geq 5.0 \text{ mg/m}^3$ . Table 1 includes the TVOC concentration range in the modeled scenario(s).

Table 1. Pass/Fail results based on the test method and identified modeling scenarios. Only detected individual
VOCs with defined acceptance criteria are listed. The TVOC concentration range also is shown

Chemical	CAS No (			oncentration /Fail)
		(µg/m³)	Classroom	Office
No formaldehyde or other target CREL VOCs were detected			Pass	Pass
TVOC <sup>a</sup>			≤ 0.5 mg/m <sup>3</sup>	≤ 0.5 mg/m <sup>3</sup>

<sup>a</sup> Reporting of TVOC range is for information only; TVOC is not a Pass/Fail criterion



## Test Method for Building Product Samples

**Test Specimen Preparation** – Using a caulk gun, we applied 6.76 g sample into a 7" long x 1/4" wide x 1/4" deep aluminum channel per customer recommended coverage. The calculated exposed area is based on the top surface of 17.7cm\*0.635cm. Photographs of the tested specimen are shown later in this report. The test results presented herein are specific to this item.

Test Protocol Summary\* – This VOC emission test was performed following California Department of Public Health CDPH/EHLB/Standard Method Version 1.2, 2017. This version of the standard is identical to CDPH/EHLB/Standard Method V1.1, 2010 except that the benzene allowable concentration is lower. Note: this standard derives from California architectural Specification 01350 and frequently is referred to as "Section 01350." The chamber test prescribed in the standard follows the guidance of ASTM Standard Guide D5116. Chemical sampling and analyses were performed following U.S. EPA Compendium Method TO-17 and ASTM Standard Method D5197. The product specimen was prepared from the supplied product sample and was placed directly into the conditioning environment and maintained at controlled conditions of air flow rate, temperature and relative humidity for ten days. At the end of this period, the specimen was transferred directly to a small-scale chamber. The chamber conditions for the 96-h test period are summarized in Table 2. Air samples were collected from the chamber at 24 h, 48 h and 96 h elapsed time. Samples for the analysis of individual VOCs and TVOC were collected on multisorbent tubes containing Tenax-TA backed by a carbonaceous sorbent. Samples for the analysis of low molecular weight aldehydes were collected on treated DNPH cartridges. VOC samples were analyzed by thermal desorption GC/MS. TVOC was calculated using toluene as the calibration reference. Individual VOCs (iVOCs) were quantified using multi-point (4 or more points) with calibration curves prepared with pure standards, unless otherwise noted. iVOCs without pure standards were quantified based on their total-ion-current responses using toluene as the calibration reference. Formaldehyde and acetaldehyde were analyzed by HPLC and quantified using multi-point (4 or more points) calibration curves. The analytical instruments and their operating parameters are described in Appendix A.

**Exception(s)** and **Deviation(s)** – 1) For ASTM D5197 analysis of carbonyl compounds, DNPH cartridges are extracted into 2-mL volumetric vials instead of 5-mL volumetric flasks. This deviation has no impact on the results.

**Measurement Uncertainty (MU)** – Combined relative standard deviations (RSDs) have been estimated by propagation of error for the measurement of area-specific emission rates of 35 iVOCs plus formaldehyde and acetaldehyde in small- and mid-scale chambers. These RSDs are within a range of 3.3 – 27% with median and average values of 13% and 14%, respectively. Expanded MU equals 2 x RSD.

**Disclaimer** – The sample was collected by the customer or by a third party. The results are specific to this test item as received from the customer.

**Availability of Data** – All data, including but not limited to raw instrument files, calibration files, and quality control checks used to generate the test results will be made available to the customer upon request subject to Berkeley Analytical's Services Agreement.

<sup>\*</sup>All standards identified in this section are included in Berkeley Analytical's scope of ISO/IEC17025 accreditation, Testing Laboratory TL-383, International Accreditation Service, www.iasonline.org



## Test Method for Building Product Samples, Continued

#### Table 2. Chamber conditions for test period

Parameter	Symbol	Units	Value
Tested specimen exposed area	As	m²	0.001
Chamber volume	Vc	m <sup>3</sup>	0.067
Loading ratio	L	m²/m³	0.017
Avg. Inlet gas flow rate & Range	Qc	m³/h	0.067 (0.064-0.070)
Avg Temperature & Range		°C	23.3 (22-24)
Avg Relative humidity & Range		%	50 (45-55)
Duration		h	96

#### Modeling Parameters for Building Products

**Modeling Parameters** – CDPH/EHLB/Standard Method Version 1.2 describes the modeling procedures and parameters for estimating the impact of VOC emissions from a building product on indoor air concentrations in a standard classroom and a standard office space. The dimensions and ventilation of the spaces and the exposed surface areas of major materials are prescribed. The modeling scenario(s) and parameters applicable to this test are listed in Table 3.

Table 3. Parameters used for estimating VOC air concentrations at 336 hours for the modeling scenarios

Parameter	Symbol	Units	Value		
Falameter	Symbol	Onits	Classroom	Office	
Product exposed area	A <sub>PB</sub>	m <sup>2</sup>	0.56	0.09	
Building volume	VB	m <sup>3</sup>	231	30.6	
Floor/Ceiling Area	A <sub>B</sub>	m <sup>2</sup>	89.2	11.15	
Ceiling height	H <sub>B</sub>	m	2.59	2.74	
Outdoor air (OA) flow rate	QB	m³/h	191	20.7	
Area-specific air flow rate	qA	m³/m²-h	343	244	





## VOC Emission Test Results

**Chamber Background Concentrations** – Background concentrations measured at time zero are reported in Table 4. The background concentrations of TVOC, formaldehyde, acetaldehyde, and reported iVOCs are listed.

Chemical/Chemical Group	CAS No	Chamber Conc (μg/m <sup>3</sup> )
Acetaldehyde	75-07-0	LQ
Formaldehyde	50-00-0	LQ
TVOC		LQ

**Table 4**. Chamber background VOC concentrations at time zero

**Emitted VOCs** – Individual VOCs (iVOCs) detected in the test and present above the lower limits of quantitation in chamber air are reported in Table 5. All iVOCs with CRELs and/or on other lists of toxicants of concern are listed first. Next, all frequently occurring iVOCs with pure standard calibrations are listed. Additionally, the 10 most abundant iVOCs quantified using toluene as the reference standard are listed; identifications of these compounds are considered tentative. Reporting of fewer than 10 iVOCs indicates that fewer than 10 chemicals met these criteria.

Table 5	Listed and	l abundant iVC	Cs detected	l above lower	· limits of	quantitation in	96-h air sample
Table J.	Listed and				111111111111111111111111111111111111111	quantitation	Jo n un sumple

Chemical	CAS No	Surrogate?*	CREL (µg/m³)	CARB TAC Category	Prop 65 List?
2-Butanone (methyl ethyl ketone)	78-93-3			T-IIa	
Hexamethylcyclotrisiloxane	541-05-9				
Octamethylcyclotetrasiloxane	556-67-2				
Dodecamethylcyclohexasiloxane	540-97-6				
2-Butanone, oxime	96-29-7	Yes			
Cyclopentasiloxane, decamethyl-	541-02-6	Yes			
Cycloheptasiloxane, tetradecamethyl-	107-50-6	Yes			

\*"Yes" response indicates iVOC quantified using toluene as the calibration reference; all other iVOCs quantified using pure standards



#### VOC Emission Test Results, Continued

**VOC Emission Factors and Estimated Indoor Air Concentrations** – The 96-h chamber sample was analyzed for iVOCs including formaldehyde and acetaldehyde. The emission factors for iVOCs presented in Table 6 were calculated from the chamber parameters, the exposed area of the test specimen and the measured 96-h chamber concentrations corrected for any chamber background concentrations. The emission factors were used to predict the indoor air concentrations of iVOCs for the modeling scenario(s) applicable to this test as shown in Table 3. See Equations for calculation methods.

Chemical	Chamber Concentration	Emission Factor	Estimated Indoor Air Concentration (µg/m <sup>3</sup> )		
	(µg/m³)	(µg/m²-h)	Classroom	Office	
2-Butanone (methyl ethyl ketone)	2.3	139	0.41	0.57	
Hexamethylcyclotrisiloxane	6.2	372	1.08	1.53	
2-Butanone, oxime	13.4	799	2.33	3.28	
Octamethylcyclotetrasiloxane	9.2	552	1.61	2.27	
Cyclopentasiloxane, decamethyl-	54.7	3270	9.54	13.4	
Dodecamethylcyclohexasiloxane	96.1	5750	16.8	23.6	
Cycloheptasiloxane, tetradecamethyl-	12.0	720	2.10	2.96	

Table 6.	Measured chamber concentrations at 96 h, calculated emission factors, and estimated indoor air
	concentrations of individual VOCs for the modeling scenarios



#### VOC Emission Test Results, Continued

**Quality Measurements** – Chamber samples collected at 24, 48 and 96 hours were analyzed for total VOCs (TVOC). Because the TVOC response per unit mass of a chemical is highly dependent upon the specific mixture of iVOCs, the measurement of TVOC is semi-quantitative. TVOC primarily is used as a quality measure to determine if the VOC emissions from a product are relatively constant or generally declining over the test period. Some programs may require the reporting of predicted indoor air TVOC concentrations or concentration ranges in mg/m<sup>3</sup>. TVOC emission factors and predicted TVOC concentrations are shown in Table 7. Aldehyde samples collected at 24, 48 and 96 hours were analyzed for formaldehyde as another quality measure. Formaldehyde emission factors are shown in Table 8. Product claims related to formaldehyde content may be based, in part, on formaldehyde emission factors.

 Table 7. TVOC chamber concentrations at 24, 48, and 96 h with corresponding emission factors and predicted indoor air concentrations (mg/m<sup>3</sup>)

Elapsed Time	Chamber Concentration	Emission Factor	Estimated Indoor A (mg/r	
(h)	(µg/m³)	(µg/m²-h)	Classroom	Office
24	231	13818	0.040	0.057
48	198	11866	0.035	0.049
96	164	9840	0.029	0.040

Table 8. Formaldehyde chamber concentrations at 24, 48, and 96 h with corresponding emission factors

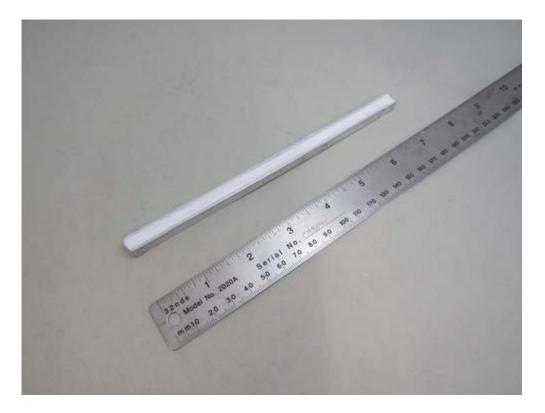
Elapsed Time (h)	Chamber Concentration (μg/m³)	Emission Factor (µg/m²-h)
24	LQ	LQ
48	LQ	LQ
96	LQ	LQ





## Photographs of Tested Product Specimen

**Photo Documentation** – The product sample specimen is photographed immediately following specimen preparation and prior to initiating the conditioning period. Typically, the top and bottom faces of the specimen are photographed. Bottom faces may show a stainless-steel plate or other substrate if prescribed by the standard.





## Definitions, Equations, and Comments

#### **Table 9**. Definitions of parameters

Parameter/Value	Definition
CARB TAC	Toxic Air Contaminant (TAC) on California Air Resources Board list, with toxic category indicated
CAS No.	Chemical Abstract Service registry number providing unique chemical ID
Chamber Conc.	Measured chamber VOC concentration at time point minus any analytical blank or background concentration for empty chamber measured prior to test. Lower limit of quantitation (LQ) or reporting limit for individual VOCs is 2 µg/m <sup>3</sup> unless otherwise noted
Indoor Air Conc.	Estimated indoor air concentration in standard modeled environment calculated from the emission factors from test results and the modeling parameters in Table 3 using the equations given below
CREL	Chronic non-cancer Reference Exposure Level established by Cal/EPA OEHHA (http://www.OEHHA.ca.gov/air/allrels.html)
Emission Factor	Mass of compound emitted per unit area per hour (calculation shown below). Reporting limits for emission factors are established by LQ or reporting limit for chamber concentration and specimen area tested
Formaldehyde & acetaldehyde	Volatile aldehydes quantified by HPLC following ASTM Standard Method D5197. LQs for formaldehyde and acetaldehyde are 1.1 µg/m <sup>3</sup> and 1.6 µg/m <sup>3</sup> , respectively
Individual VOCs	Quantified by thermal desorption GC/MS following EPA Method TO-17. Compounds quantified using multi-point calibrations prepared with pure chemicals unless otherwise indicated. VOCs with chronic RELs are listed first, followed by other TAC and Prop. 65 compounds. Additional abundant VOCs at or above reporting limit of 2 µg/m <sup>3</sup> are listed last
LQ	Indicates calculated value is below its lower limit of quantitation
Prop 65 list	"Yes" indicates the compound is a chemical known to cause cancer or reproductive toxicity according to California Safe Drinking Water Toxic Enforcement Act of 1986 (Proposition 65)
тиос	Total Volatile Organic Compounds eluting over retention time range bounded by n-pentane and n-heptadecane and quantified by GC/MS TIC method using toluene as calibration reference. LQ for TVOC is 20 µg/m <sup>3</sup>
"na"	Not applicable
"<"	Less than value established by LQ

**Equations Used in Calculations** – An emission factor (EF) in  $\mu$ g/m<sup>2</sup>-h for a chemical in a chamber test of a building product sample is calculated using Equation 1:

$$EF = (Q_c (C - C_o)) / A_s$$
 (1)

where  $Q_c$  is the chamber inlet air flow rate (m<sup>3</sup>/h), C is the VOC chamber concentration ( $\mu g/m^3$ ), C<sub>0</sub> is the corresponding chamber background VOC concentration ( $\mu g/m^3$ ), and A<sub>s</sub> is the tested specimen exposed area (m<sup>2</sup>).





### Definitions, Equations, and Comments, Continued

The indoor air concentration (C<sub>B</sub>) for the modeled space in  $\mu g/m^3$  is estimated using Equation 2 and the parameters defined in Table 3:

$$C_{B} = (EF \times A_{P_{B}}) / Q_{B}$$
(2)

where  $A_{P_B}$  is the exposed area of the product in the building (m<sup>2</sup>) and  $Q_B$  is the outside air flow rate (m<sup>3</sup>/h).

Comments: Non-full spread joint sealant, see attached manufacturer letter .

#### **END OF REPORT**



## BERKELEY ANALYTICAL 815 Harbour Way South, Suite 6 Richmond, CA 94804-3614

#### Appendix A Analytical Instruments & Operating Parameters

**Table A1**. Description of analytical instrument components

Component	Description
HPLC	1260 Infinity Quaternary LC, G1314F VW Detector, Agilent
Analytical column	Poroshell 120 EC-C18, Agilent
Column dimensions	2.1 mm x 100 mm
Thermal desorber	Unity / TD100, Markes International, Ltd.
Gas chromatograph	Model 7890A, Agilent
Analytical column	DB-624, J&W Scientific
Column dimensions	1 μm film, 0.18 mm ID, 20 m
Mass spectrometer	Model 5975C MSD, Agilent

Table A2. HPLC operating parameters for analysis of formaldehyde and acetaldehyde

Parameter	Value	
Solvent A	65/35% H <sub>2</sub> O/Acetonitrile	
Solvent B	100% Acetonitrile	
Flow rate	0.3 mL/min	
End time	11 min	
Detector wavelength	360 nm	

 Table A3.
 Thermal desorption GC/MS parameters used for analysis of iVOCs and TVOC

Parameter	Value
Thermal desorption	
Tube desorb temperature	300 °C
Trap temperature	-5 °C
Trap desorb temperature	300 °C
Trap desorb split ratio	10:1
Gas chromatograph	
Initial temperature	40 °C
Initial temperature time	6.0 min
Final temperature	300 °C
Final temperature time	2 min
Mass spectrometer	
Low scan mass, <i>m/z</i>	30 amu
High scan mass, <i>m/z</i>	450 amu
Scan rate	3.42 Hz



## BERKELEY ANALYTICAL

815 Harbour Way South, Suite 6 Richmond, CA 94804-3614

### Appendix B Target CREL VOCs and Their Maximum Allowable Concentrations Copied from CDPH/EHLB/Standard Method Version 1.2, 2017, Table 4-1

No.	Compound Name	CAS No.	Allowable Conc. (µg/m <sup>3</sup> )
1	Acetaldehyde	75-07-0	70
2	Benzene	71-43-2	1.5
3	Carbon disulfide	75-15-0	400
4	Carbon tetrachloride	56-23-5	20
5	Chlorobenzene	108-90-7	500
6	Chloroform	67-66-3	150
7	Dichlorobenzene (1,4-)	106-46-7	400
8	Dichloroethylene (1,1)	75-35-4	35
9	Dimethylformamide (N,N-)	68-12-2	40
10	Dioxane (1,4-)	123-91-1	1,500
11	Epichlorohydrin	106-89-8	1.5
12	Ethylbenzene	100-41-4	1,000
13	Ethylene glycol	107-21-1	200
14	Ethylene glycol monoethyl ether	110-80-5	35
15	Ethylene glycol monoethyl ether acetate	111-15-9	150
16	Ethylene glycol monomethyl ether	109-86-4	30
17	Ethylene glycol monomethyl ether acetate	110-49-6	45
18	Formaldehyde	50-00-0	9*
19	Hexane (n-)	110-54-3	3,500
20	Isophorone	78-59-1	1,000
21	Isopropanol	67-63-0	3,500
22	Methyl chloroform	71-55-6	500
23	Methylene chloride	75-09-2	200
24	Methyl t-butyl ether	1634-04-4	4,000
25	Naphthalene	91-20-3	4.5
26	Phenol	108-95-2	100
27	Propylene glycol monomethyl ether	107-98-2	3,500
28	Styrene	100-42-5	450
29	Tetrachloroethylene	127-18-4	17.5
30	Toluene	108-88-3	150
31	Trichloroethylene	79-01-6	300
32	Vinyl acetate	108-05-4	100
33-35	Xylenes, technical mixture	108-38-3,	350
	(m-, o-, and p- xylene combined)	95-47-6,	
		106-42-3	

\*All maximum allowable concentrations are one half the corresponding CREL adopted by Cal/EPA OEHHA with the exception of formaldehyde for which the full CREL of 9  $\mu$ g/m<sup>3</sup> is allowed.



#### CERTIFIED ISO 9001:2015

August 1, 2023

Berkeley Analytical 815 Harbour Way South, Suite 6 Richmond, CA 94804-3614

#### RE: VOC Emission Testing: CDPH Standard Method v1.2; Non-Full Spread Adhesive/Sealant Application Calculations

Dear Mr. Hodgson,

Below is the rationale for quantity of LATICRETE<sup>®</sup> LATASIL<sup>™</sup> that would be used in the standard school classroom and the standard private office defined in CDPH Standard Method V1.2.

#### CLASSROOM

Using a 40' x 24' x 8.5' standard school classroom with a tiled floor and a 4' high tiled wainscot as the basis for this scenario, we have the following information. Using the Tile Council of North America EJ-171 as our guideline for movement joint placement assuming tile that is 3/8" thick and a grout joint width of ¼". A movement joint will be placed at the change of plane at all walls and one joint placed in the middle of the tile installation, in both directions. This means that there will be 3 joints which are 40' long and 3 joints which are 24' long.

The wainscot is 4' high, and, since the length of the wainscot at the floor is already calculated in the above, we will only use the LATICRETE LATASIL at the changes of plane and at the top of the wainscot (assuming chair rail is installed).

The total volume of LATICRETE LATASIL in the classroom scenario would be 0.0194 m<sup>2</sup> (324 in<sup>3</sup> of material), which equates to about 17 tubes of LATASIL.

#### OFFICE

Using a 12' x 10' x 9' standard private office with a tiled floor as the basis for this scenario, we have the following information. Using the Tile Council of North America EJ-171 as our guideline for movement joint placement and assuming tile that is 3/8" thick and a grout joint of ¼". A movement joint will be placed at the change of plane at all walls and tiled cove base. This means that there will be joints only where the tile meets the cove base at two walls which are 12' long 2 walls which are 10' long.

The total volume of LATICRETE LATASIL in the classroom scenario would be 0.0071 m<sup>2</sup> (50 in<sup>3</sup> of material), which equates to about 2.6 tubes of LATASIL.

The Tile Council of North America guidelines state, for interior movement joints that they be placed a maximum of 25' in each direction. A worst case scenario, following these guidelines would mean that a movement be placed in the center of the tiled floor in each direction, and in the center of each of the wainscot walls in the classroom. The office scenario is so small that movement joints would not be installed in the field of the tile floor, so they would only be located where the floor tile meets the cove base.

Sincerely,

Mith A

Mitch Hawkins Director, Customer Experience – Sustainability & Analytics LATICRETE International, Inc.

Letter #: wmh1186-080123 LATASILEmissionsTesting1

# berkeley (M) analytical

Ship to: 815 Harbour Way South, Unit 6, Richmond, CA 94804 (Ph) 510-236-2325, (Fx) 510-236-2335 info@berkeleyanalytical.com

#### **Customer Information \***

Company: LATICRETE International

Street Address: 91 Amity Rd.

City/State/Zip(postal code): Bethany, CT 06524

Country: USA

Contact Name/Title (for reporting): Mitch Hawkins Director, Sustainability & Analytics

Contact Phone/Fax Numbers: 203.927.1060

Contact Email Address: wmhawkins@laticrete.com

Financially Responsible Co. (if different):

#### Manufacturer Information (if different from customer)

Company:	Silco
----------	-------

City/State/Country: Mentor, OH USA

Contact Name/Title: John Boland

Phone Number/Email Address: 440.975.8886

Sa	mple Details	
Product Commercial Name*: LATASIL		心的口言的问题
Product Commercial Part No. (if not part of r	name)*: 6244-0120-2	Indicate if you a
Manufacturer Sample Tracking ID:		Laboratory certifica test results and ass
Date Manufactured*: 5/2023		representativeness
Product Category & Use*: Tile/stone ins	stallation/Sealant	
Sample Construction Material*: 100% s	ilicone	
Plant Name & Location*: LATICRETE B	ethany, Bethany, CT	<b>法</b> 保持 建金
Collection Location within Plant: Bethan	y Warehouse, Aisle F45, Bin 19 Level B	Contact/Email A
Date & Time Collected* : August 1, 202	3	Organization: L
Number of Sample Pieces*: 1	Photo(s) of Collection Location: Attach	Contact/E-mail
Sample Collected by*: Jonathan Pache	со	Organization: L
Phone/Fax Numbers*: 203.393.4619		
E-mail Address*: wmhawkins@laticrete	e.com	的特别的自己的
Ship	pping Details*	Condition of Sh
Packed & Shipped By: Jonathan Pacheco		Condition of Sa
Shipping Date: August 1, 2023		Lab Tracking N

Shipping	Date:	August	1, 2

Carrier/Airbill Number:

#### Chain of Custody for Building Product/ Material VOC Emission Test

A Separate COC must be completed for EACH product/material sample

A link to Berkeley Analytical's Services Agreement is included in this workbook. By submitting samples,

customer acknowledges and accepts these terms & conditions unless a prior written contract is in effect.

Berkeley Analytical Quotation Number: Purchase Order (enter company & number):

Test to be performed *	CDPH Std. Method V1.2	
Modeling scenario	Office & Classroom	
Test schedule (screening tests only)		
Target chemicals & chemical groups (screening)		
CARB ATCM test, schedule		
Test results application(s)	Other self claim,	
For Berkeley Analytical Use:		
Report ID	RPT66	
Billing Reference		

## Customer Request for Laboratory Certificate of Compliance

are ordering a Laboratory Certificate of Compliance:

cates are available for the compliance test(s) listed on the BldgProdWorksheet. Berkeley Analytical's laboratory ssociated certificates are specific to the tested item. Claims made by the customer regarding the broader ss of the test results and certificate are the sole responsibility of the customer.

Customer Authorizes Laboratory to Submit Copies of Test Report to:

Address: Mitch Hawkins wmhawkins@laticrete.com

LATICRETE

il Address: Ryan Blair rjblair@laticrete.com

LATICRETE

	For Berkeley Analytical Use Only	
Condition of Shipping Package:	0,K	
Condition of Sample:	R	
Lab Tracking Number:	e-002-01A	

Asterisk (\*) See Notes Tab

Sample Handling				
Relinquished By*	Received By*	Signature*	Date*	Company*
	I ANNAL MOUL		8/23	BPA
© Copyright, Berkeley Analytical Associates, LLC, 2022	Alm whited	1 O MAR		FQ01