International Product Assurance LABORATORIES
100 Clemson Research Blvd., Anderson, SC USA 29625
P: +1 855-IPA-LABS E: testing@IPALaboratories.com
www.IPALaboratories.com

November 12, 2024

Schluter Systems
Attn: Kali Pharand
194 Pleasant Ridge Rd.
Plattsburgh, NY 12901
USA

Dear Kali Pharand,

The sample you identified as "Mortar" was tested per CA 01350 VOC Emissions & SCAQMD Rule 1168 VOC Content per your request (IPAL Test Report: IPAL-0088-24). The testing was performed by Research Triangle Park (RTP) Laboratories in Raleigh, NC. All comments, findings, and interpretations within this report were made by RTP Laboratories.

Testing was conducted on the sample submitted for emissions of total volatile organic compounds (TVOC), aldehydes, formaldehyde, and specific individual volatile organic compounds (VOCs) over a 7-day exposure period. Any emissions were measured and the resultant emissions to the environment were determined for each of the potential pollutants.

The attached report includes the detailed test results.

Green Building Standard, Rating System, or Code	**Criteria**	**Results**
LEED V4.1	Credit: Low-Emitting Materials, Adhesives and Sealants At least 75% of all adhesives and sealants, by cost or surface area, meet the VOC emissions evaluation: • Product has been tested according to CDPH Standard Method v1.2 – 2017 and complies with the VOC limits in Table 4-1 of the method: Max Allowable Concentration of Target CREL VOCs No. 1 – 35 (including formaldehyde and acetaldehyde) • The range of total VOCs after 14 days was measured as specified in the CDPH Standard Method v1.2 and is reported (TVOC ranges: 0.5 mg/m^3 or	None Detected None Detected (≤0.5mg/m^3)

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	less, between 0.5 and 5 mg/m^3, or 5 mg/m^3 or more). And 100% meet the VOC content evaluation, SCAQMD Rule 1168: Ceramic, Glass, Porcelain, & Stone Tile Adhesive VOC Limit: 65 g/L	 1.6% VOCs 76.6% Solids 21.8% Water VOCs (g/L) = $\left(\frac{100-76.6-21.8}{\left(\frac{100}{0.99}\right)-\left(\frac{21.8}{0.997}\right)}\right)1000 = 20.2$ g/L
IgCC (ASHRAE 189.1) 2021	Section 801.4.2.1 (8.4.2.1) All adhesives and sealants used inside of the weatherproofing system and applied on-site shall either be: Determined for VOC emissions according to CDPH Standard method and comply with the limit requirements: Table 4-1 Max Allowable Concentration of Target CREL VOCs No. 1 – 35 (including formaldehyde and acetaldehyde) Or Determined for VOC content and limited in accordance with SCAQMD Rule 1168: Ceramic, Glass, Porcelain, & Stone Tile Adhesive VOC Limit: 65 g/L	 None Detected 1.6% VOCs 76.6% Solids 21.8% Water VOCs (g/L) = $\left(\frac{100-76.6-21.8}{\left(\frac{100}{0.99}\right)-\left(\frac{21.8}{0.997}\right)}\right)1000 = 20.2$ g/L
CHPS (U.S.) 2020	EQ C6.1.1 Adhesives & Sealants All adhesives and sealants used on the project in quantities of 2.5 gal (10 liters) or more and totaling 90% or more of the total volumes of such products applied onsite in the project's interior shall meet the VOC content requirements in the applicable category of South Coast Air Quality Management District (SCAQMD) Rule 1168, Adhesive and Sealant Applications: Ceramic, Glass, Porcelain, & Stone Tile Adhesive VOC Limit: 65 g/L	 1.6% VOCs 76.6% Solids 21.8% Water VOCs (g/L) = $\left(\frac{100-76.6-21.8}{\left(\frac{100}{0.99}\right)-\left(\frac{21.8}{0.997}\right)}\right)1000 = 20.2$ g/L

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WELL v2	X06 VOC Restrictions Newly installed interior wet-applied paints, coatings, adhesives, and sealants meet the methods and thresholds established in SCAQMD Rule 1168: Ceramic, Glass, Porcelain, & Stone Tile Adhesive VOC Limit: 65 g/L	1.6% VOCs 76.6% Solids 21.8% Water VOCs (g/L) = $\left(\frac{100-76.6-21.8}{\left(\frac{100}{0.99}\right)-\left(\frac{21.8}{0.997}\right)}\right)1000 = 20.2$ g/L
BREEAM	Hea 02 Criterion 10 Interior adhesives and sealants, ≤ 0.06 mg/m^3 formaldehyde, ≤1.0 mg/m^3 TVOCs, per CDPH Standard Method	None Detected
Living Building Challenge 4.1	Imperative 12 Responsible Materials Volatile organic compound (VOC) content of any wet-applied products must not exceed thresholds established in South Coast Air Quality Management District (SCAQMD) Rule 1168 for Adhesives and Sealants: Ceramic, Glass, Porcelain, & Stone Tile Adhesive VOC Limit: 65 g/L	1.6% VOCs 76.6% Solids 21.8% Water VOCs (g/L) = $\left(\frac{100-76.6-21.8}{\left(\frac{100}{0.99}\right)-\left(\frac{21.8}{0.997}\right)}\right)1000 = 20.2$ g/L

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The following is an image of the sample submitted for testing.

SAMPLE PHOTO

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11/12/2024

Katelyn Simpson
Director of Laboratory Service

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7201 ACC Blvd., Suite 104
Raleigh, NC 27617

919 510-0228 Telephone
919 510-0141 Fax *Web Site: www.rtp-labs.com*

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March 11, 2024

International Product Assurance Laboratories
100 Clemson Research Boulevard
Anderson, SC 29625

Attn: Ashley Moore

PROJECT: VOCs Testing –Report of VOC Chamber Tests.
Purchase Order: 4628
RTP Labs ID: 24-006-01 Mortar

Enclosed with this letter is the report for the sample received on February 12, 2024 in good condition. The manufacturing date is listed on the COC form. The sample was tested for VOCs emissions according to ASTM D5116 Small Chamber Test and California Specification 01350 Test Methods. In addition, the sample was also tested for VOCs by EPA Methods 24 and TO-15 GC/MS for VOCs identification. The sample were prepared according to the sample preparation descriptions as described in CA 01350 and EPA Method 24. The chamber testing was started on February 15, 2024 with a 10-day conditioning period, followed by a 96-hour test as described in CA 01350.

The test results are summarized in the attached document. The testing method reporting limits are 0.001 mg/m^3 using the California Standard Classroom Model.

EPA Method 24 VOCs analysis was performed and the results are included in the table below.

EPA Method 24 VOCs

Sample ID	Sample Description	VOCs %	Solids %
24-006-01	SetA50W Mortar Mixed with H_2O 3:1 ratio	1.6 %	76.6 %

If you have any questions, please give me a call at (919) 510-0228.

Sincerely,

Alston Sykes, Principal Chemist
Attachments: attachments and photos

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Raleigh, NC 27617

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EPA Method TO-15 GC/MS VOLATILE ORGANICS ANALYSIS

Data File: c:\varianws\wsdatafiles\voc-02-20-24_entech\24-006-01.SMS **Acquisition Date:** 2/23/2024 15:26

Comment: Tile Council 0088-24; Mortar:H2O 3:1; 0.5g headspace; 25mL; DF=10.

CAS NO.	COMPOUND	CONCENTRATION	UNITS	MDL and Reporting Limit
75-71-8	Dichlorodifluoromethane (Freon 12)	Below MDL	ppbv	1
76-14-2	1,2-Chloro-1,1,2,2-Tetrafluoroethane	Not Found	ppbv	1
74-87-3	Chloromethane	Below MDL	ppbv	1
75-01-4	Vinyl chloride	Not Found	ppbv	1
106-99-0	1,3-Butadiene	Not Found	ppbv	1
74-83-9	Bromomethane	Below MDL	ppbv	1
75-00-3	Chloroethane	Not Found	ppbv	1
75-69-4	Trichloromonofluoromethane	Not Found	ppbv	1
75-35-4	1,1-dichloroethene	Not Found	ppbv	1
76-13-1	1,1,2-trichloro-1,2,2-trifluoroethane	Below MDL	ppbv	1
75-15-0	Carbon disulfide	Below MDL	ppbv	1
67-63-0	Isopropyl alcohol	16.83	ppbv	1
75-09-2	Methylene chloride	2.54	ppbv	1
67-64-1	Acetone	551.80	ppbv	1
156-60-5	t-1,2-dichloroethene	Not Found	ppbv	1
11-05-3	Hexane	13.82	ppbv	1
1634-04-4	Methyl-t-butyl ether (MTBE)	Not Found	ppbv	1
75-34-3	1,1-Dichloroethane	Not Found	ppbv	1
108-05-4	Vinyl acetate	24.41	ppbv	1
156-59-2	cis-1,2-dichloroethene	Not Found	ppbv	1
110-82-7	Cyclohexane	Not Found	ppbv	1
67-66-3	Chloroform	Not Found	ppbv	1
141-78-6	Ethyl Acetate	15.58	ppbv	1
109-99-9	Tetrahydrofuran	2.37	ppbv	1
71-55-6	1,1,1-trichloroethane	Below MDL	ppbv	1
56-23-5	Carbon Tetrachloride	Not Found	ppbv	1
78-93-3	2-Butanone	5.33	ppbv	1
142-82-5	Heptane	1.79	ppbv	1
71-43-2	Benzene	Not Found	ppbv	1
107-06-2	1,2-dichloroethane	Not Found	ppbv	1
79-01-6	Trichloroethylene	Below MDL	ppbv	1
78-87-5	1,2-dichloropropane	Not Found	ppbv	1
75-27-4	Bromodichloromethane	Not Found	ppbv	1
123-91-1	1,4-dioxane	Not Found	ppbv	1
10061-01-5	cis-1,3-dichloropropene	Not Found	ppbv	1
108-88-3	Toluene	1.93	ppbv	1
108-10-1	4-Methyl-2-pentanone (MIBK)	Below MDL	ppbv	1
1006-02-6	t-1,3-dichloropropene	Not Found	ppbv	1
127-18-4	Tetrachloroethylene	Below MDL	ppbv	1
79-00-5	1,1,2-trichloroethane	Not Found	ppbv	1
124-48-1	Dibromochloromethane	Not Found	ppbv	1
106-93-4	1,2-dibromoethane	Not Found	ppbv	1
591-78-6	2-Hexanone	2.40	ppbv	1
100-41-4	Ethylbenzene	Below MDL	ppbv	1
108-90-7	Chlorobenzene	Not Found	ppbv	1
1330-20-7	m/p-Xylene	2.04	ppbv	1
95-47-6	o-Xylene	Below MDL	ppbv	1
100-42-5	Styrene	Below MDL	ppbv	1
75-25-2	Tribromomethane	Not Found	ppbv	1
79-34-5	1,1,2,2-tetrachloroethane	Below MDL	ppbv	1
622-96-8	1-ethyl-4-methylbenzene	Not Found	ppbv	1
108-67-8	1,3,5-trimethylbenzene	Not Found	ppbv	1
95-63-6	1,2,4-trimethylbenzene	Below MDL	ppbv	1
541-73-1	1,3-dichlorobenzene	Not Found	ppbv	1
106-46-7	1,4-dichlorobenzene	Not Found	ppbv	1
100-44-7	Benzyl chloride	Not Found	ppbv	1
95-50-1	1,2-dichlorobenzene	Not Found	ppbv	1
87-68-3	1,1,2,3,4,4-hexachloro-1,3-butadiene	Not Found	ppbv	1
120-82-1	1,2,4-trichlorobenzene	Not Found	ppbv	1

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TENTATIVELY IDENTIFIED COMPOUNDS

EPA Method TO-15 GC/MS VOLATILE ORGANICS ANALYSIS

Data File: c:\varianws\wsdatafiles\voc-02-20-24_entech\24-006-01.SMS **Acquisition Date:** 2/23/2024 15:26

Comment: Tile Council 0088-24; Mortar:H2O 3:1; 0.5g headspace; 25mL; DF=10.

CAS NO.	COMPOUND NAME	Retention Time	Estimated Concentration,	Units
922-89-4	Acetamide, N,N'-ethylenebis(N-nitro-	4.45	**9.51**	ppbv
107-01-7	2-Butene	4.70	**9.77**	ppbv
65287-63-0	3-Chloro-8-methoxy-N,N-dimethyl-11H-indo	5.06	**39.64**	ppbv
151-18-8	3-Aminopropionitrile	5.42	**43.32**	ppbv
513-36-0	Propane, 1-chloro-2-methyl-	6.06	**11.35**	ppbv
108-03-2	Propane, 1-nitro-	6.73	**8.01**	ppbv
15022-08-9	Diallyl carbonate	7.55	**12.58**	ppbv
1066-42-8	Silanediol, dimethyl-	9.06	**16.53**	ppbv
74-98-6	Propane	12.00	**9.60**	ppbv
1436-34-6	Oxirane, butyl-	12.28	**7.41**	ppbv
3396-11-0	Acetic acid, cesium salt	12.87	**90.52**	ppbv
624-41-9	1-Butanol, 2-methyl-, acetate	13.28	**9.66**	ppbv
544-10-5	Hexane, 1-chloro-	13.69	**30.97**	ppbv
99-82-1	1-Methyl-4-(1-methylethyl)-cyclohexane	14.87	**10.61**	ppbv
36566-80-0	3-Hexyne, 2-methyl-	15.70	**14.62**	ppbv
3232-39-1	Diacetyl sulphide	15.79	**26.40**	ppbv
50746-53-7	Cyclopentane, 1-methyl-2-(2-propenyl)-,	15.84	**24.63**	ppbv
2206-23-7	3-Penten-1-yne	15.96	**17.63**	ppbv
None	(1,2,2-trimethyl-3-cyclopenten-1-yl)acet	16.32	**15.54**	ppbv
36566-80-0	3-Hexyne, 2-methyl-	16.52	**7.49**	ppbv
6464-40-0	(SS)- or (RR)-4-methyl-2,3-pentanediol	16.74	**45.32**	ppbv
498-51-1	2-Heptanone, 6-methyl-5-methylene-	17.25	**26.60**	ppbv
7423-69-0	1-Hexene, 3,5-dimethyl-	17.33	**28.54**	ppbv
None	4-Methyl-2,4-bis(4'-trimethylsilyloxyphe	17.69	**8.86**	ppbv
51174-44-8	4-Penten-1-ol, 3-methyl-	17.98	**17.56**	ppbv
None	Acetic acid, 3-[1,3]dioxolan-2-ylpropyl	18.04	**29.61**	ppbv
33240-56-1	Hexane, 1-chloro-5-methyl-	18.18	**19.81**	ppbv
2890-67-7	Cyclohexanemethyl propanoate	18.80	**42.79**	ppbv
186205-18-5	Di(1,2,5-oxadiazolo)[3,4-b:3,4-E]pyrazin	19.46	**35.06**	ppbv
None	1,3-Dioxolane, 2-(3-bromo-5,5,5-trichlor	19.89	**16.38**	ppbv
10147-37-2	Isopropylsulfonyl chloride	20.01	**17.33**	ppbv
75039-84-8	trans-2-Undecen-1-ol	20.63	**40.64**	ppbv
29812-79-1	Hydroxylamine, O-decyl-	20.78	**12.42**	ppbv
None	1,3-Dioxolane, 2-(3-bromo-5,5,5-trichlor	22.79	**8.91**	ppbv

(IS) is BFB Internal Standard and (SS) are Surrogate Standards that are added to each sample.

3/6/2024 16:20 Page 1 of 1 CLP TIC 24-006-01.SMS

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0088-24

Chain of Custody Form

TCNA — The Council of North America, Inc.

For Testing of Product/Material per CA DHS Section 01350
Please fill out a separate chain of custody form for each product tested

Section A — General Information (Section A)

Manufacturer Name: Schluter Systems
Street Address: 194 Pleasant Ridge Road
City/State: Plattsburgh, NY
Zip/Postal Code: 12901
Country: United States
Contact Name: Kali Pharand
Contact Title: Product Standards and Sustainability Coordinator
Phone/Fax Numbers: 888-472-4588 x 4152
Email Address: sustainability@schluter.com

Section B — Sampling Information (Section B)

Product Name: MORTAR
Manufacturer Product ID #: SET A50W
Sample ID # (Same as TCNA Test Report #): MORTAR
Product Category: MORTAR
Product Subcategory:
Date Manufactured: 01/29/24
Plant Name and Location: PLATTSBURGH, NY
Date and Time Sample Collected from Plant: 01/31/24
Collection Location within Plant: THIN SET PLANT
Number of Sample Pieces Collected (Attach Photos): 1
Sample Collected by: SHAMIM MONDAL Signature: Shamim Mondal
Sample Packaged and Shipped to TCNA By: SHAMIM MONDAL Signature: Shamim Mondal
Shipping Date: 2/1/24
Carrier/Airbill Number: UPS

Section C — TCNA Receipt Information (Section C)

Arrival to: Tile Council of North America, Inc.
100 Clemson Research Boulevard
Anderson, SC 29625
Receipt Date: 2.8.2024
Received By: Ashley Moore Signature: AMoore
Logged into TCNA Database by: Ashley Moore
TCNA Test Report #: IPAL-0088-24
Shipment Forwarded To RTP Laboratories By: Ashley Moore Signature: AMoore
Shipment Date: 2.9.2024
Carrier/Airbill Number: UPS —

Section D — RTP Laboratories Receipt Information (Section D)

Arrival to: Research Triangle Park Laboratories, Inc.
7201 ACC Blvd., Suite 104
Raleigh, NC 27617
Receipt Date: 2-12-24
Received By: Alston Sykes Signature: A. Sykes
Condition of Shipping Package: Good
Condition of Sample: Good
Laboratory ID #: 24-006-01

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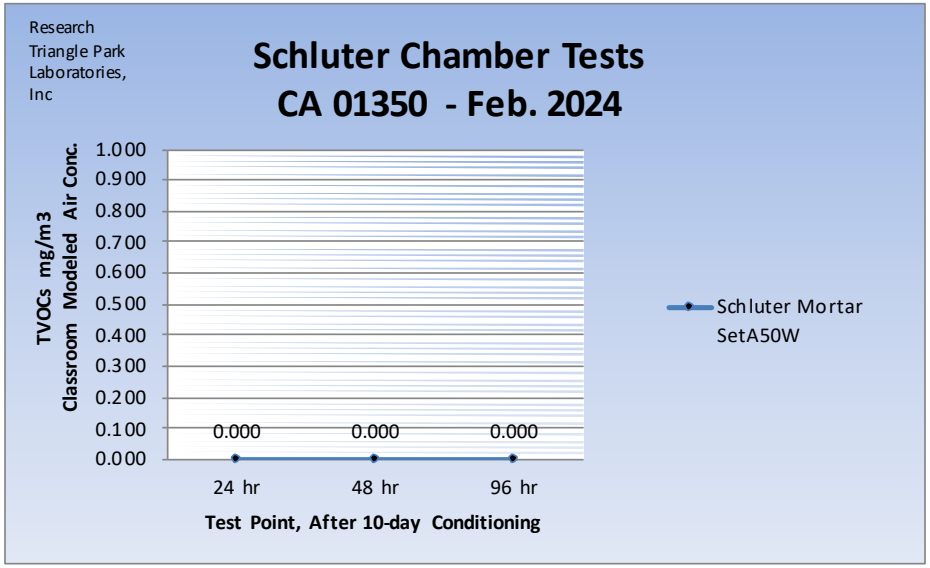
Photo of Sample Received Feb. 12, 2024:
24-006-01 (IPAL-0088-24) Mortar

Research Triangle Park Laboratories Inc, 7201 ACC Blvd., Raleigh, NC 27617

California 01350/ASTM D5116 Small Chamber Tests for Volatile Organic Compound Emissions From Products

Project ID: 24-006-01
Client: Tile Council of North America
Sample Receipt Date: Feb. 12, 2024
Test Start Dates: Feb. 15, 2024
Products:

	Modeled Standard Classroom Concentration, mg/m3			
	24 hr	48 hr	96 hr	LOQ
Schluter Mortar SetA50W	0.000	0.000	0.000	0.001



Standard Classroom Model Parameters:

Room Dimensions: 40 ft length x 24 ft wide x 8.5 ft ht
Room Volume: 231 m^3
Ventilation Rate: 0.90 air changes per hour
Net Floor Surface: 89.2 m^2

Chamber and Sample Conditions:

Chamber Volume: 50 Liters
Temperature: 20-25 C; Relative Humidity: 45-55 %
Air Exchange Rate: 1 per hour (0.833L/min = 50 liters)
Sample Surface Area: 0.0232 m^2
Sample Loading Factor: 0.5 m^2/m^3

Sample Receipt Date: **2/12/2024** **Test Start Date:** **2/15/2024** 10 day conditioning performed prior to 96 h testing.

Project ID: **24-006-01**
Sample ID: **Schluter Mortar SetA50W (IPAL-0088-24)**
Client: **IPA Labs**
Sample mixed 3:1 with water, then applied to glass plate.

Standard Classroom Parameters

Room Dimensions, ft	40x24x8.5
Room Volume, m3	231
Ventilation Rate, ach	0.9
Net Surface Area, m2	89.2

ASTM D5116 Small Chamber Method

California Specification 01350
Paints and Wallcoverings Model: 94.6 m2
Flooring Products Model: 89.2 m2

	Emission Factors (ug/(m2*h))						Cm	Cm	Cm	
Compound Name	**02/16/24 24 hr Chamber Conc. ug/m3**	**24 hr EF**	**02/17/24 48 hr Chamber Conc. ug/m3**	**48 hr EF**	**02/29/24 96 hr Chamber Conc. ug/m3**	**96 hr EF**	**Classroom: 24 hr Modeled Air Conc. ug/m3**	**Classroom: 48 hr Modeled Air Conc. ug/m3**	**Classroom: 96 hr Modeled Air Conc. ug/m3**	**1/2 CREL 12/2008 (A)Acute (C)Chronic**
GC/MS Target, LOQ 2 ng/L (ug/m3)										
None Detected	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
GC/MS TICs, LOQ 5 ng/L (ug/m3)										
None Dectected	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
HPLC Aldehydes, LOQ 2 ng/L (ug/m3)										
Formaldehyde	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	4.5 C
Acetaldehyde	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	70 C
TVOCs LOQ 25 ng/L (ug/m3) Use 1 for < value	0.0	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**ug/m3**
							0.000	**0.000**	**0.000**	**mg/m3**

Reporting Limit, 0.001 mg/m3

Research Triangle Park Laboratories, Inc.
7201 ACC Blvd., Suite 104
Raleigh, NC 27617

919 510-0228 Telephone
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November 12, 2024

International Product Assurance Laboratories
100 Clemson Research Boulevard
Anderson, SC 29625

Attn: Ashley Moore

PROJECT: VOCs Testing –Report of VOC Chamber Tests. Updated with Office Model
Purchase Order: 4628
RTP Labs ID: 24-006-01 Mortar Revision 1 with corrected Method 24 results.

Enclosed with this letter is the report for the sample received on February 12, 2024 in good condition. The manufacturing date is listed on the COC form. The sample was tested for VOCs emissions according to ASTM D5116 Small Chamber Test and California Specification 01350 Test Methods. In addition, the sample was also tested for VOCs by EPA Methods 24 and TO-15 GC/MS for VOCs identification. The sample was prepared according to the sample preparation descriptions as described in CA 01350 and EPA Method 24. The chamber testing was started on February 15, 2024 with a 10-day conditioning period, followed by a 96-hour test as described in CA 01350.

The test results are summarized in the attached document. The testing method reporting limits are 0.001 mg/m^3 using the California Standard Office Model.

EPA Method 24 VOCs analysis was performed and the results are included in the table below.

EPA Method 24 VOCs

Sample ID	Sample Description	VOCs %	Solids %
24-006-01	SetA50W Mortar Mixed with H_2O 3:1 ratio	1.6 %	76.6 %

If you have any questions, please give me a call at (919) 510-0228.

Sincerely,

Alston Sykes, Principal Chemist
Attachments: attachments and photos

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EPA Method TO-15 GC/MS VOLATILE ORGANICS ANALYSIS

Data File: c:\varianws\wsdatafiles\voc-02-20-24_entech\24-006-01.SMS **Acquisition Date:** 2/23/2024 15:26

Comment: Tile Council 0088-24; Mortar:H2O 3:1; 0.5g headspace; 25mL; DF=10.

CAS NO.	COMPOUND	CONCENTRATION	UNITS	MDL and Reporting Limit
75-71-8	Dichlorodifluoromethane (Freon 12)	Below MDL	ppbv	1
76-14-2	1,2-Chloro-1,1,2,2-Tetrafluoroethane	Not Found	ppbv	1
74-87-3	Chloromethane	Below MDL	ppbv	1
75-01-4	Vinyl chloride	Not Found	ppbv	1
106-99-0	1,3-Butadiene	Not Found	ppbv	1
74-83-9	Bromomethane	Below MDL	ppbv	1
75-00-3	Chloroethane	Not Found	ppbv	1
75-69-4	Trichloromonofluoromethane	Not Found	ppbv	1
75-35-4	1,1-dichloroethene	Not Found	ppbv	1
76-13-1	1,1,2-trichloro-1,2,2-trifluoroethane	Below MDL	ppbv	1
75-15-0	Carbon disulfide	Below MDL	ppbv	1
67-63-0	Isopropyl alcohol	16.83	ppbv	1
75-09-2	Methylene chloride	2.54	ppbv	1
67-64-1	Acetone	551.80	ppbv	1
156-60-5	t-1,2-dichloroethene	Not Found	ppbv	1
11-05-3	Hexane	13.82	ppbv	1
1634-04-4	Methyl-t-butyl ether (MTBE)	Not Found	ppbv	1
75-34-3	1,1-Dichloroethane	Not Found	ppbv	1
108-05-4	Vinyl acetate	24.41	ppbv	1
156-59-2	cis-1,2-dichloroethene	Not Found	ppbv	1
110-82-7	Cyclohexane	Not Found	ppbv	1
67-66-3	Chloroform	Not Found	ppbv	1
141-78-6	Ethyl Acetate	15.58	ppbv	1
109-99-9	Tetrahydrofuran	2.37	ppbv	1
71-55-6	1,1,1-trichloroethane	Below MDL	ppbv	1
56-23-5	Carbon Tetrachloride	Not Found	ppbv	1
78-93-3	2-Butanone	5.33	ppbv	1
142-82-5	Heptane	1.79	ppbv	1
71-43-2	Benzene	Not Found	ppbv	1
107-06-2	1,2-dichloroethane	Not Found	ppbv	1
79-01-6	Trichloroethylene	Below MDL	ppbv	1
78-87-5	1,2-dichloropropane	Not Found	ppbv	1
75-27-4	Bromodichloromethane	Not Found	ppbv	1
123-91-1	1,4-dioxane	Not Found	ppbv	1
10061-01-5	cis-1,3-dichloropropene	Not Found	ppbv	1
108-88-3	Toluene	1.93	ppbv	1
108-10-1	4-Methyl-2-pentanone (MIBK)	Below MDL	ppbv	1
1006-02-6	t-1,3-dichloropropene	Not Found	ppbv	1
127-18-4	Tetrachloroethylene	Below MDL	ppbv	1
79-00-5	1,1,2-trichloroethane	Not Found	ppbv	1
124-48-1	Dibromochloromethane	Not Found	ppbv	1
106-93-4	1,2-dibromoethane	Not Found	ppbv	1
591-78-6	2-Hexanone	2.40	ppbv	1
100-41-4	Ethylbenzene	Below MDL	ppbv	1
108-90-7	Chlorobenzene	Not Found	ppbv	1
1330-20-7	m/p-Xylene	2.04	ppbv	1
95-47-6	o-Xylene	Below MDL	ppbv	1
100-42-5	Styrene	Below MDL	ppbv	1
75-25-2	Tribromomethane	Not Found	ppbv	1
79-34-5	1,1,2,2-tetrachloroethane	Below MDL	ppbv	1
622-96-8	1-ethyl-4-methylbenzene	Not Found	ppbv	1
108-67-8	1,3,5-trimethylbenzene	Not Found	ppbv	1
95-63-6	1,2,4-trimethylbenzene	Below MDL	ppbv	1
541-73-1	1,3-dichlorobenzene	Not Found	ppbv	1
106-46-7	1,4-dichlorobenzene	Not Found	ppbv	1
100-44-7	Benzyl chloride	Not Found	ppbv	1
95-50-1	1,2-dichlorobenzene	Not Found	ppbv	1
87-68-3	1,1,2,3,4,4-hexachloro-1,3-butadiene	Not Found	ppbv	1
120-82-1	1,2,4-trichlorobenzene	Not Found	ppbv	1

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TENTATIVELY IDENTIFIED COMPOUNDS

EPA Method TO-15 GC/MS VOLATILE ORGANICS ANALYSIS

Data File: c:\varianws\wsdatafiles\voc-02-20-24_entech\24-006-01.SMS **Acquisition Date:** 2/23/2024 15:26

Comment: Tile Council 0088-24; Mortar:H2O 3:1; 0.5g headspace; 25mL; DF=10.

CAS NO.	COMPOUND NAME	Retention Time	Estimated Concentration,	Units
922-89-4	Acetamide, N,N'-ethylenebis(N-nitro-	4.45	**9.51**	ppbv
107-01-7	2-Butene	4.70	**9.77**	ppbv
65287-63-0	3-Chloro-8-methoxy-N,N-dimethyl-11H-indo	5.06	**39.64**	ppbv
151-18-8	3-Aminopropionitrile	5.42	**43.32**	ppbv
513-36-0	Propane, 1-chloro-2-methyl-	6.06	**11.35**	ppbv
108-03-2	Propane, 1-nitro-	6.73	**8.01**	ppbv
15022-08-9	Diallyl carbonate	7.55	**12.58**	ppbv
1066-42-8	Silanediol, dimethyl-	9.06	**16.53**	ppbv
74-98-6	Propane	12.00	**9.60**	ppbv
1436-34-6	Oxirane, butyl-	12.28	**7.41**	ppbv
3396-11-0	Acetic acid, cesium salt	12.87	**90.52**	ppbv
624-41-9	1-Butanol, 2-methyl-, acetate	13.28	**9.66**	ppbv
544-10-5	Hexane, 1-chloro-	13.69	**30.97**	ppbv
99-82-1	1-Methyl-4-(1-methylethyl)-cyclohexane	14.87	**10.61**	ppbv
36566-80-0	3-Hexyne, 2-methyl-	15.70	**14.62**	ppbv
3232-39-1	Diacetyl sulphide	15.79	**26.40**	ppbv
50746-53-7	Cyclopentane, 1-methyl-2-(2-propenyl)-,	15.84	**24.63**	ppbv
2206-23-7	3-Penten-1-yne	15.96	**17.63**	ppbv
None	(1,2,2-trimethyl-3-cyclopenten-1-yl)acet	16.32	**15.54**	ppbv
36566-80-0	3-Hexyne, 2-methyl-	16.52	**7.49**	ppbv
6464-40-0	(SS)- or (RR)-4-methyl-2,3-pentanediol	16.74	**45.32**	ppbv
498-51-1	2-Heptanone, 6-methyl-5-methylene-	17.25	**26.60**	ppbv
7423-69-0	1-Hexene, 3,5-dimethyl-	17.33	**28.54**	ppbv
None	4-Methyl-2,4-bis(4'-trimethylsilyloxyphe	17.69	**8.86**	ppbv
51174-44-8	4-Penten-1-ol, 3-methyl-	17.98	**17.56**	ppbv
None	Acetic acid, 3-[1,3]dioxolan-2-ylpropyl	18.04	**29.61**	ppbv
33240-56-1	Hexane, 1-chloro-5-methyl-	18.18	**19.81**	ppbv
2890-67-7	Cyclohexanemethyl propanoate	18.80	**42.79**	ppbv
186205-18-5	Di(1,2,5-oxadiazolo)[3,4-b:3,4-E]pyrazin	19.46	**35.06**	ppbv
None	1,3-Dioxolane, 2-(3-bromo-5,5,5-trichlor	19.89	**16.38**	ppbv
10147-37-2	Isopropylsulfonyl chloride	20.01	**17.33**	ppbv
75039-84-8	trans-2-Undecen-1-ol	20.63	**40.64**	ppbv
29812-79-1	Hydroxylamine, O-decyl-	20.78	**12.42**	ppbv
None	1,3-Dioxolane, 2-(3-bromo-5,5,5-trichlor	22.79	**8.91**	ppbv

(IS) is BFB Internal Standard and (SS) are Surrogate Standards that are added to each sample.

3/6/2024 16:20 Page 1 of 1 CLP TIC 24-006-01.SMS

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0088-24

Chain of Custody Form

TCNA — The Council of North America, Inc.

For Testing of Product/Material per CA DHS Section 01350
Please fill out a separate chain of custody form for each product tested

Section A — General Information (Section A)

Manufacturer Name: Schluter Systems
Street Address: 194 Pleasant Ridge Road
City/State: Plattsburgh, NY
Zip/Postal Code: 12901
Country: United States
Contact Name: Kali Pharand
Contact Title: Product Standards and Sustainability Coordinator
Phone/Fax Numbers: 888-472-4588 x 4152
Email Address: sustainability@schluter.com

Section B — Sampling Information (Section B)

Product Name: MORTAR
Manufacturer Product ID #: SET A50W
Sample ID # (Same as TCNA Test Report #): MORTAR
Product Category: MORTAR
Product Subcategory:
Date Manufactured: 01/29/24
Plant Name and Location: PLATTSBURGH, NY
Date and Time Sample Collected from Plant: 01/31/24
Collection Location within Plant: THIN SET PLANT
Number of Sample Pieces Collected (Attach Photos): 1
Sample Collected by: SHAMIM MONDAL — Signature: Shamim Mondal
Sample Packaged and Shipped to TCNA By: SHAMIM MONDAL — Signature: Shamim Mondal
Shipping Date: 2/1/24
Carrier/Airbill Number: UPS

Section C — TCNA Receipt Information (Section C)

Arrival to: Tile Council of North America, Inc.
100 Clemson Research Boulevard
Anderson, SC 29625
Receipt Date: 2.8.2024
Received By: Ashley Moore — Signature: AMoore
Logged into TCNA Database by: Ashley Moore
TCNA Test Report #: IPAL-0088-24
Shipment Forwarded To RTP Laboratories By: Ashley Moore — Signature: AMoore
Shipment Date: 2.9.2024
Carrier/Airbill Number: UPS

Section D — RTP Laboratories Receipt Information (Section D)

Arrival to: Research Triangle Park Laboratories, Inc.
7201 ACC Blvd., Suite 104
Raleigh, NC 27617
Receipt Date: 2-12-24
Received By: Alston Sykes — Signature: A. Sykes
Condition of Shipping Package: Good
Condition of Sample: Good
Laboratory ID #: 24-006-01

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Photo of Sample Received Feb. 12, 2024:
24-006-01 (IPAL-0088-24) Mortar

Research Triangle Park Laboratories Inc, 7201 ACC Blvd., Raleigh, NC 27617

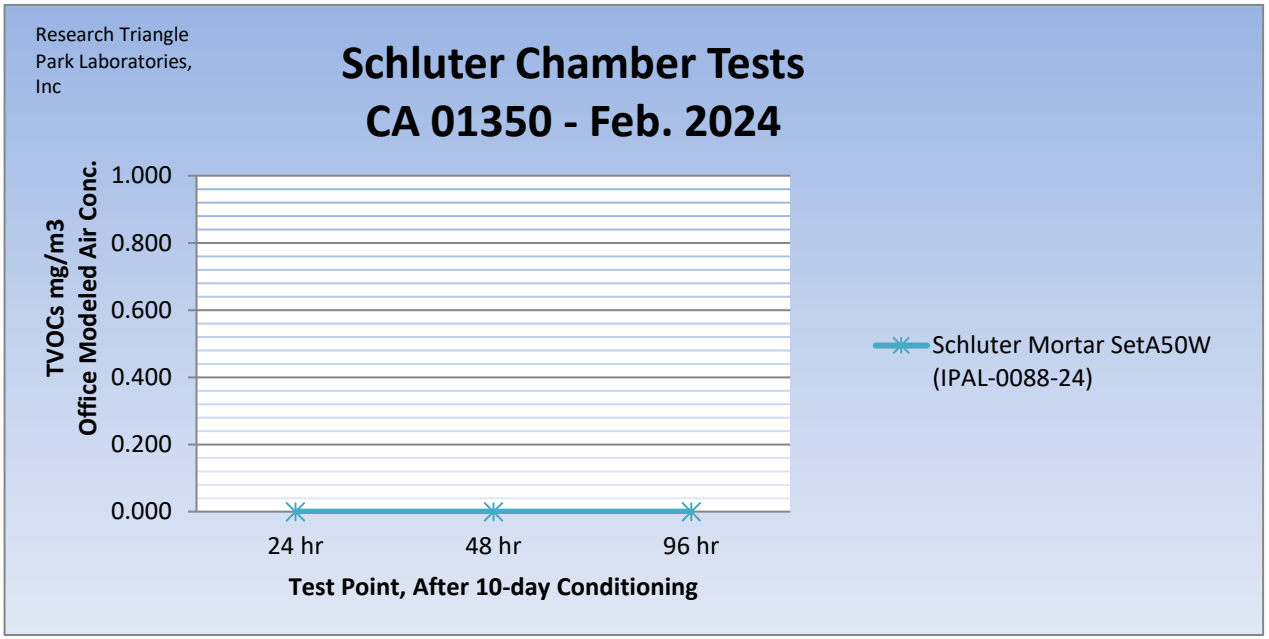
California 01350/ASTM D5116 Small Chamber Tests for Volatile Organic Compound Emissions From Products

Project ID: 24-006-01
Client: Tile Council of North America
Sample Receipt Date: Feb. 12, 2024
Test Start Dates: Feb. 15, 2024
Products:

Schluter Mortar SetA50W (IPAL-0088-24)

Modeled Standard Office Concentration, mg/m3

24 hr	48 hr	96 hr	LOQ
0.000	0.000	0.000	0.001



Standard Office Model Parameters:

Room Dimensions: 12 ft length x 10 ft wide x 9.0 ft ht

Room Volume: 30.6 m^3

Ventilation Rate: 0.68 air changes per hour

Net Floor Surface: 11.15 m^2

Chamber and Sample Conditions:

Chamber Volume: 50 Liters

Temperature: 20-25 C; Relative Humidity: 45-55 %

Air Exchange Rate: 1 per hour (0.833L/min = 50 liters)

Sample Surface Area: 0.0232 m^2

Sample Loading Factor: 0.5 m^2/m^3

Sample Receipt Date: **2/12/2024** **Test Start Date:** **2/15/2024** 10 day conditioning performed prior to 96 h testing.

Project ID: **24-006-01**

Sample ID: **Schluter Mortar SetA50W (IPAL-0088-24)**

Client: **IPA Labs**

Sample mixed 3:1 with water, then applied to glass plate.

Standard Office Parameters

Room Dimensions, ft	12x10x9.0
Room Volume, m3	**30.6**
Ventilation Rate, ach	**0.68**
Net Surface Area, m2	**11.15**

ASTM D5116 Small Chamber Method

California Specification 01350

Office Paints and Wallcoverings Model: 33.4 m2

Office Flooring Products Model: 11.15 m2

	Emission Factors (ug/(m2*h))						**Cm**	**Cm**	Cm	
Compound Name	**02/16/24 24 hr Chamber Conc. ug/m3**	**24 hr EF**	**02/17/24 48 hr Chamber Conc. ug/m3**	**48 hr EF**	**02/29/24 96 hr Chamber Conc. ug/m3**	**96 hr EF**	**Office: 24 hr Modeled Air Conc. ug/m3**	**Office: 48 hr Modeled Air Conc. ug/m3**	**Office: 96 hr Modeled Air Conc. ug/m3**	**1/2 CREL 12/2008 (A)Acute (C)Chronic**
GC/MS Target, LOQ 2 ng/L (ug/m3)										
None Detected	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
GC/MS TICs, LOQ 5 ng/L (ug/m3)										
None Dectected	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
	0	0.0	0	0.0	0	0.0	0.0	0.0	0.0	
HPLC Aldehydes, LOQ 2 ng/L (ug/m3)										
Formaldehyde	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	4.5 C
Acetaldehyde	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	70 C
TVOCs LOQ 25 ng/L (ug/m3) Use 1 for < value	0.0	**0.0**	0.0	**0.0**	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**ug/m3**
							0.000	**0.000**	**0.000**	**mg/m3**

Reporting Limit, 0.001 mg/m3