



December 9, 2014

Dollken-Weimer GmbH
Mr. Wolfgang Breuning
Stangenallee 3, D-99428 Weimar,
GERMANY

Subject: Project 90624, Profile Study Test Results

Dear Wolfgang:

Thank you for choosing UL Environment and its ISO 17025 accredited testing laboratories for your analytical needs. Please find attached your profile study test report. The results for the "HSL10 (1014001_002_001), 760919" sample tested are compared to the criteria below:

	Environment	TVOC	Formaldehyde	Total Aldehydes	CREL/TLV Issues
GREENGUARD	Office	✓	✓	✓	---
GREENGUARD Gold	Office	✓	✓	✓	---
	Classroom	✓	✓	✓	---

✓ - meets criteria; ✓* - meets within 25%; X - over by more than 25% of criteria

For more technical information about the GREENGUARD Certification programs, please visit, www.UL.com/GG.

Sincerely,

Allyson M. McFry
Chemistry Laboratory Director

Attachment: Report No. 90624-07



GREENGUARD CERTIFICATION PROGRAM
 PROFILE STUDY TEST REPORT

ANALYTE	24 HR EMISSION FACTOR ($\mu\text{g}/\text{m}^2\cdot\text{hr}$)	168 HR PREDICTED CONCENTRATION		
		GREENGUARD	GOLD	
			OFFICE	CLASSROOM
TVOC	BQL	< 0.001 mg/m^3	< 0.001 mg/m^3	< 0.001 mg/m^3
Formaldehyde	BQL	< 0.001 ppm	< 0.001 ppm	< 0.001 ppm
Total Aldehydes	BQL	< 0.001 ppm	< 0.001 ppm	< 0.001 ppm

Customer: Dollken-Weimer GmbH

Sample Identification: UL Environment's 90624-P0070AA

Product Description: SURFACING MATERIALS; HSL10 (1014001_002_001), 760919
 (one-sided area = 0.0306 m^2)

Product Loading: 0.35 m^2/m^3

Test Period: 12/01/2014 - 12/02/2014

Test Conditions: 1.00 \pm 0.05 ACH
 50% RH \pm 5% RH
 23° C \pm 1° C

Test Description: The product was received by UL Environment on 12/01/14 as packaged and shipped by the customer. The package was visually inspected and stored in a controlled environment immediately following sample check-in. Just prior to loading, the product was unpackaged and prepared for the required loading to expose the top surface only. The sample was placed inside the environmental chamber, and tested according to the specified protocol.

Environmental chamber test following ASTM D 5116 in a 0.09 \pm 0.007 m^3 chamber.

Analyses based on EPA Compendium Method TO-17 and ASTM D 6196 for VOCs by thermal desorption followed by gas chromatography/mass spectrometry (TD/GC/MS), and EPA Method TO-11A and ASTM D 5197 for selected aldehydes by high performance liquid chromatography (HPLC).

BQL denotes below quantifiable level of 0.04 μg based on a standard 18 L air collection volume for TVOC and individual VOCs and 0.1 μg based on a standard 45 L air collection volume for formaldehyde and total aldehydes.

The GREENGUARD and GREENGUARD GOLD office model is based on a standard baseboard usage of 1.27 m^2 in a 30.6 m^3 room and 0.68 ACH. The GREENGUARD GOLD classroom model is based on a standard baseboard usage of 9.68 m^2 in a 231 m^3 classroom with 0.82 ACH. Predicted concentrations use the assumed decay parameters ($k_T = 0.003$; $k_F = 0.002$; $k_A = 0.002$). These room models are based on CDPH/EHLB/Standard Method V1.1.

This test data is provided for general informational purposes only. The data indicate the level of emissions from the designated product and how they compare to the emission criteria of the GREENGUARD and GREENGUARD Gold standards. This data does not imply that the product has been qualified to meet the requirements of the GREENGUARD Certification program nor does it imply that the product is or is not certified by the GREENGUARD Certification program.

**EMISSION FACTORS OF TARGET LIST ALDEHYDES
AT 24 ELAPSED EXPOSURE HOURS**

**PREPARED FOR: DOLLKEN-WEIMER GMBH
PRODUCT 90624-P0070AA; HSL10 (1014001_002_001), 760919**

CAS NUMBER	COMPOUND IDENTIFIED	EMISSION FACTOR ($\mu\text{g}/\text{m}^2\cdot\text{hr}$)
4170-30-3	2-Butenal	BQL
75-07-0	Acetaldehyde	BQL
100-52-7	Benzaldehyde	BQL
5779-94-2	Benzaldehyde, 2,5-dimethyl	BQL
529-20-4	Benzaldehyde, 2-methyl	BQL
620-23-5 /104-87-0	Benzaldehyde, 3- and/or 4-methyl	BQL
123-72-8	Butanal	BQL
590-86-3	Butanal, 3-methyl	BQL
50-00-0	Formaldehyde	BQL
66-25-1	Hexanal	BQL
110-62-3	Pentanal	BQL
123-38-6	Propanal	BQL

BQL = Below quantifiable level of 0.1 μg based on a standard 45 L air collection volume.