



Air Quality Sciences

June 15, 2012

Mr. Markus Raves
Surteco Canada Ltd.
230 Orenda Rd
Brampton, Ontario L6T1E9
CANADA

Subject: AQS Project 90304, Profile Study Test Results

Dear Mr. Raves:

Thank you for choosing Air Quality Sciences, Inc. (AQS), an ISO 17025 accredited testing laboratory, for your analytical needs. Attached to this letter are profile study test results, including predicted room concentrations.

Sample Description	Predicted Levels Compared to GREENGUARD Criteria		
	TVOC	Formaldehyde	Total Aldehydes
SGO Flexlife Top	✓	✓	✓

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

Sample Description	Predicted Levels Compared to GREENGUARD Children & Schools Criteria			
	TVOC	Formaldehyde	Total Aldehydes	CREL/TLV Issues
SGO Flexlife Top	✓	✓	✓	---

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

Please note included is a comparison of this product's GREENGUARD Children & Schools formaldehyde level to the CA CREL of 7.3 ppb (9 µg/m³), the CA Specification 01350 guidance value, effective January 1, 2012. By January 1, 2013, all GREENGUARD Children & Schools products will be required to meet this lower formaldehyde limit.

AQS appreciates your business and we look forward to your products becoming GREENGUARD certified. Soon you will be contacted by your GREENGUARD Program Account Manager, Eugene Smith (678) 444-4068.

Please keep in mind that all information obtained as part of the profile study testing is confidential as per the signed Testing Agreement.

Sincerely,

Allyson M. McFry
Chemistry Laboratory Director

Attachment: AQS Report No. 90304-26



GREENGUARD CERTIFICATION PROGRAMSM
PROFILE STUDY TEST REPORT

Table with 4 columns: ANALYTE, 24 HR EMISSION FACTOR (µg/m²·hr), 168 HR PREDICTED CONCENTRATION (GREENGUARD, CHILDREN & SCHOOLS). Rows include TVOC, Formaldehyde, and Total Aldehydes.

Customer: Surteco Canada Ltd.
AQS Sample Identification: AQS 90304-P0310AA
Product Description: SURFACING MATERIALS; SGO Flexlife Top (one-sided area = 0.0132 m²)
Product Loading: 0.15 m²/m³
Test Period: 06/07/12 - 06/08/12
Test Conditions: 1.00 ± 0.05 ACH, 50% RH ± 5% RH, 23° C ± 1° C

Test Description: The product was received by AQS on 06/06/12 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 side 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 ± 0.007 m³ or 1.0 ± 0.05 m³ chamber or ASTM D 6670 in a 5.7 ± 0.3 m³ 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.
For the GREENGUARD standard, the predicted concentrations are based on a standard baseboard usage (2.7 m³) in a room with ASHRAE 62.1-2010 ventilation conditions (32 m³ in volume and 0.72 ACH) and assumed decay parameters (kT = 0.003; kF = 0.002; kA = 0.002). For the GREENGUARD Children & Schools standard, the predicted concentrations are based on a standard baseboard usage (9.68 m³) in a 231 m³ classroom with 0.82 ACH.
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 IAQ and GREENGUARD Children & Schools 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 IDENTIFIED INDIVIDUAL VOLATILE ORGANIC
COMPOUNDS AT 24 ELAPSED EXPOSURE HOURS**

**PREPARED FOR: SURTECO CANADA LTD.
PRODUCT 90304-P0310AA; SGO FLEXLIFE TOP**

CAS NUMBER	COMPOUND IDENTIFIED	EMISSION FACTOR ($\mu\text{g}/\text{m}^2\cdot\text{hr}$)
629-50-5	Tridecane	42.4
112-40-3	Dodecane	28.0
1120-21-4	Undecane	17.6

Quantifiable level is 0.04 μg based on a standard 18 L air collection volume.

*Indicates NIST/EPA/NIH best library match only based on retention time and mass spectral characteristics.

†Denotes quantified using multipoint authentic standard curve. Other VOCs quantified relative to toluene.

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Test data and interpretation applicable to
GREENGUARD Certification Program only

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

**PREPARED FOR: SURTECO CANADA LTD.
PRODUCT 90304-P0310AA; SGO FLEXLIFE TOP**

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	13.0
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	13.0
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.

CALIFORNIA SPECIFICATION 01350 FORMALDEHYDE COMPARISON

California Specification 01350 Acceptance IAQ Criteria (2012, V 1.1 Requirement)	168 Hour Predicted Concentration	Product Compliance for Formaldehyde IAQ
Formaldehyde ≤ 7.3 ppb ($\leq 9 \mu\text{g}/\text{m}^3$ or ≤ 0.0073 ppm)	< 1 ppb (< 0.001 ppm)	Yes

All products certified to the GREENGUARD Children & Schools Certification Program as of January 2012 are assessed to the new CA CREL formaldehyde criteria and reported. The GREENGUARD Certification certificates will note if the products meet the new lower CREL. All manufacturers have until January 1, 2013 to meet this new level to remain certified under the GREENGUARD Children & Schools Certification Program.

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 criteria of California's Department of Public Health formaldehyde Chronic REL, according to the emission testing method for California Specification 01350 or "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1. This data does not imply that the product has been qualified to meet the requirements of any certification program.