

## TEST RESULTS FOR GREENGUARD CERTIFICATION FOR CHILDREN & SCHOOLS<sup>SM</sup>

**Customer:** Dwyer Kitchens

**AQS Project – Product:** 90015-A0070AA

**Product Description:** Kitchen Casework - Steel Cabinet & Thermofoil Door

**GREENGUARD Certification Testing Category:**

- Cabinetry - 01

### COMPLIANCE WITH GREENGUARD CHILDREN & SCHOOLS STANDARD

GREENGUARD Acceptable IAQ Criteria		Product Measurement*	Product Compliance for IAQ
<b>TVOC</b>	≤ 0.22 mg/m <sup>3</sup>	< 0.005 mg/m <sup>3</sup>	Yes
<b>Formaldehyde</b>	≤ 0.0135 ppm/13.5 ppb	< 0.005 ppm/ < 5 ppb	Yes
<b>Total Aldehydes</b>	≤ 0.043 ppm/43 ppb	< 0.005 ppm/ < 5 ppb	Yes
<b>Individual VOCs</b>	≤ 1/100 TLV and ≤ ½ chronic REL	See Below	Yes
<b>Total Phthalates</b>	≤ 0.01 mg/m <sup>3</sup>	< 0.01 mg/m <sup>3</sup>	Yes
<b>Total Particles (≤ 10 µm)</b>	≤ 0.02 mg/m <sup>3</sup>	N/A	---

\* Based on standard cabinetry usage (105 units) in a 231 m<sup>3</sup> room with 0.9 ACH.

N/A = not applicable

### CHEMICALS FOUND WITH EXISTING TLV AND CHRONIC REL

CAS Number	Chemical	1/100 TLV <sup>a</sup> (µg/m <sup>3</sup> )	1/2 CA Chronic REL <sup>b</sup> (µg/m <sup>3</sup> )	Product Measurement (µg/m <sup>3</sup> )	Product Compliance for IAQ
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<sup>a</sup> American Conference of Governmental Industrial Hygienists. Threshold Limit Values for Chemical Substances and Physical Agents. Cincinnati, OH: ACGIH, 2007.

<sup>b</sup> [http://www.oehha.ca.gov/air/chronic\\_rels/AllChrels.html](http://www.oehha.ca.gov/air/chronic_rels/AllChrels.html) - Chronic Reference Exposure Levels (CRELs) Adopted by the State of California Office of Environmental Health Hazard Assessment (OEHHA), February 2005 (Acetaldehyde allowed full CREL.)

The complete data and details on the testing and analytical methodologies are available in AQS Report No. 90015-08.

## ENVIRONMENTAL CHAMBER TEST REPORT FOR PHTHALATES

ELAPSED EXPOSURE HOUR	TOTAL PHTHALATES EMISSION FACTOR ( $\mu\text{g}/\text{unit} \cdot \text{hr}$ )
168.0	BQL

**Customer:** Dwyer Kitchens

**AQS Sample Identification:** AQS 90015-A0070AA

**Product Description:** FURNITURE; CABINetry - 01; Kitchen Casework - Steel Cabinet & Thermofoil Door

**Product Loading:** 1 Unit / 5.96 m<sup>3</sup>

**Test Period:** 06/25/2008 - 07/02/2008

**Test Conditions:** 1.00  $\pm$  0.05 ACH  
50.0% RH  $\pm$  5.0% RH  
23.0° C  $\pm$  2.0° C

**Test Description:**

The product was received by AQS on 06/24/08 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, prepared for the required loading, placed inside the environmental chamber, and tested according to the specified protocol.

Environmental chamber test following ASTM D 5116 in a 0.09  $\pm$  0.005 m<sup>3</sup> or 1.0  $\pm$  0.05 m<sup>3</sup> chamber or ASTM D 6670 in a 5.7  $\pm$  0.3 m<sup>3</sup> or 25.7 m<sup>3</sup> chamber.

Analysis based on OSHA Method 104 for phthalates.

BQL denotes below quantifiable level of 10  $\mu\text{g}$  based on a standard 240 L air collection volume.

**EMISSION FACTORS OF SELECTED PHTHALATES  
AT 168.0 ELAPSED EXPOSURE HOURS**

**PREPARED FOR: DWYER KITCHENS  
PRODUCT: 90015-A0070AA; FURNITURE; CABINETRY - 01; KITCHEN  
CASEWORK - STEEL CABINET & THERMOFOIL DOOR**

<b>CAS NUMBER</b>	<b>COMPOUND IDENTIFIED</b>	<b>EMISSION FACTOR (<math>\mu\text{g}/\text{unit}\cdot\text{hr}</math>)</b>
117-81-7	Diethylhexyl phthalate	BQL
85-68-7	Butyl benzyl phthalate	BQL
117-84-0	Di-n-octyl phthalate	BQL
84-74-2	Dibutyl phthalate	BQL
84-66-2	Diethyl phthalate	BQL
131-11-3	Dimethyl phthalate	BQL

BQL = Chemical below quantifiable level of 10  $\mu\text{g}$  based on a standard 240 L air collection volume.