Technical Report: 16240200150

Page 1
FEBRUARY 01, 2024

Bureau Veritas Consumer Products Service Vietnam Limited (Hanoi Branch),

Office Building at Gia Lam Airport Service Area, Group 1, Dam Quang

Trung Street, Phuc Dong Ward, Long Bien District,

Hanoi City, Vietnam.
Tel: +84-24-36741372

AROMA BAY CANDLES CO LTD
TIEU TRA, HUNG DAO, DUONG KINH DISTRICT

ATTN: VIVIAN
CC: /

OVERALL RATING

X	PASS
	FAIL
Date Received:	JANUARY 20, 2024
Date of Report:	FEBRUARY 01, 2024
Date of Revision:	/
Full Package Test:	NO

Test Type:			
☐ Fabric	☐ Garment	☐ Trim	☐ Home Soft goods
☐ Accessories	☐ Footwear	☐ Jewelry	☑ Home Hard goods
☐ Leather, Suede, and Shearling			

Product Phase:			
☐ Development	☑ Bulk Production	☐ Licensee Request	☐ RLC Request
☐ Sub-Component	☐ Retest Retest, Previous Report No.		

Style Info			
Brand:	RALPH LAUREN	Season:	US OPEN
Style #:	615917694001	Board #'s:	/
Color Name (s):	WHITE	Material Weight/ Thickness:	/
Material Type:	CANDLES	Finishing (Treatment):	NO
Sample Description:	SUMMER GARDEN-SINGLE WICK	Merch. Org:	HOME

Vendor Name:	AROMA BAY CANDLES CO LTD	Vendor SAP#:	0200010648
Agent / Sourcing Office:	/	Country of Destination:	US REGION, EU REGION
PO #s:	4701783442, 4701783447, 4701783448, 4701783449, 4701783450, 4701783451, 4701783452, 4701783453, 4701783454, 4701783455, 4701783456, 4701783457, 4701783458, 4701783459	Material ID No. :	000000000
Raw Material Vendor:	/	Claimed Fiber content	/
Supp. Art. Name/#	/	GCC/CPC Required:	NO
Azo Dye Certificate	NO	Allergenic Disperse Dye Certificate	NO

Tests Selected	
Material & Product Stage:	CANDLE
Test Requested:	CANDLES V.040418 CONTAINER OR ACCESSORIES V. 040418 HF - GLASS NON-FOOD CONTACT V.090216 HF - METAL NON-FOOD CONTACT V.090216
Functional Claims:	NO
Previous Report No.:	N/A

Regulatory Test Performed	Pass	Fail	Data
Lead Cored Wick	X		
Lead (Pb) and Cadmium (Cd) in Externally Decorated Area	X		
Mercury (Hg) of Homogeneous Materials	X		
Lead in Accessible Components	X		
Performance Test Performed	**Pass**	**Fail**	**Data**
Assessment of Afterglow	X		
Aesthetic Attributes of Candles	X		
Behaviour by Self-Extinguishing at End of Burning Process	X		
Fire Safety for Candle Surface Temperature	X		
Flame Height	X		
Re-ignition after Extinguishing	X		
Secondary ignition	X		
Smoke after Extinguishing	X		
Stability	X		
Standard Specification for Fire Safety of Candles	X		
Standard Specification for Fire Safety of Candles			X
Annealing and Heat Strength of Glass Containers: Glass Containers Produced for use as Candle Containers	X		
End of Useful Life	X		
Thermal Shock: Glass Containers for use as Candle Containers	X		
Corrosion Resistance - Salt Spray Test	X		

EXECUTIVE SUMMARY:

The submitted sample is rated as **PASS** with satisfactory performance in the requested test(s). Please refer to enclosed worksheets for the test results.

Note(s):

- This report includes the test result(s) which was conducted & reviewed by Analytical department.

If there is any question regarding this report, please contact the following lab personnel:

Primary contact:

1. Nomi Nguyen, Tel: +84 2436741371 Ext: 192, Email: nomi.nguyen@bureauveritas.com
2. Hara Hoang, Tel: +84 2436741371 Ext: 192, Email: hara.hoang@bureauveritas.com

Backup contact

1. Jessy Cai, Tel: +84 2436741371 Ext: 182, Email: jessy.cai@bureauveritas.com
2. Louis Tran, Tel: +84 2837421604, Ext 339; Email: louis.tran@vn.bureauveritas.com

BUREAU VERITAS CPS VIETNAM LTD.

JESSY CAI
DEPUTY LAB MANAGER

SAMPLE DESCRIPTION ASSIGNED BY LABORATORY

Test Item(s)	Sample description/ Location	Material	Style(s)
I001	White core wick (inside candle)	Textile	-
I002	Transparent glass (Glass candle)	Glass	-
I003	Silvery metal (Brand name on glass candle)	Metal	-

TEST RESULT

Total Lead Cored Wick Content

Test Method : 16 CFR 1500.17(a)(13)

Maximum Allowable Limit :	Not allowed

-	Unit	Result
Test Item(s)	-	I001
Parameter	-	-
Total Lead (Pb)	mg/kg	ND
Conclusion	-	**PASS**

Note / Key :

ND = Not detected NA = Not applicable ">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
Detection Limit (mg/kg) : 10
Tested per client's request

TEST RESULT

Total Lead (Pb) and Cadmium (Cd) Content in Externally Decorated Area:

Test Method : With reference to EPA 3052

Maximum Allowable Limit :	**90 mg/kg**

-	**Unit**	**Result**
Test Item(s)	-	I002
Parameter	-	-
Total Lead (Pb)	mg/kg	ND
Total Cadmium (Cd)	mg/kg	ND
Conclusion	-	**PASS**

Note / Key :

ND = Not detected NA = Not applicable ">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
Detection Limit (mg/kg) : 10
Tested per client's request.

TEST RESULT

Total Mercury of Homogeneous Materials Content

Test Method : Wet Chemistry Method (SOR/2014-254)

Maximum Allowable Limit :	**1000 mg/kg**

-	**Unit**	**Result**	
Test Item(s)	-	I002	I003
Parameter	-	-	-
Total Mercury (Hg)	mg/kg	ND	ND
Conclusion	-	**PASS**	**PASS**

Note / Key :

ND = Not detected ">" = Greater than NR = Not requested
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
% = percent 10 000 mg/kg = 1 %
Detection Limit (mg/kg) : 10
Tested per client's request.

TEST RESULT

Lead in Accessible components:

Test Method **:** EPA 3050B and/ or 6010B

Maximum Allowable Limit :	**90 mg/kg**

-	**Unit**	**Result**
Test Item(s)	-	I003
Parameter	-	-
Total Lead (Pb)	mg/kg	ND
Conclusion	-	**PASS**

Note / Key :

ND = Not detected NA = Not applicable ">" = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
Detection Limit (mg/kg) : 10

TEST PROTOCOL REPORT

CANDLE COMPLIANCE PROTOCOLS: CANDLES V.040418

TEST NAME	TEST METHOD	GLOBAL DEFAULT STANDARD			NOTES
		CRITERIA		REQUIREMENT	
Assessment of Afterglow	EN 15493, Sec. 4.5(a) & 9.3	Afterglow extinguishes within time period	≤	20 seconds (Afterglow that exceeds 20 seconds = FAIL)	M/PASS
Aesthetic Attributes of Candles	EN 15493	Visual Inspection during candle burning performance tests: 1) If candle produces excessive smoky flame during use; 2) If any liquid wax release (leakage) occurs through sidewall of candle or container 3) If the wick falls into the wax, causing the candle to prematurely self-extinguish 4) If the candle sidewall collapses 5) Wax consumption 6) Soot buildup Grade 5: Negligible or no build-up Grade 4: Slight build-up Grade 3: Noticeable build-up Grade 2: Considerable build-up Grade 1: Severe build-up	≤ ≤ ≤	The following characteristics will be noted if observed: 1) Excessive smoky flame 2) Leakage 3) Premature Self-extinguish 4) Sidewall Collapse 70% 4	M/PASS
Behaviour by Self-Extinguishing at End of Burning Process	EN 15493, Sec. 4.4. (Modified)	Candle shall cease to support combustion, and candle flame shall go out on its own and cannot be relit.	=	Pass	M/PASS
Fire Safety for Candle Surface Temperature	Internal Method: UL-TS-106: edition 5.05	Top Temperature Metal Non-Metallic Middle Temperature Metal Non-Metallic	≤ ≤ ≤ ≤ ≤ ≤	 50˚C 60˚C 50˚C 60˚C	M/PASS

TEST NAME	TEST METHOD	GLOBAL DEFAULT STANDARD			NOTES
		CRITERIA		REQUIREMENT	
Flame Height	EN 15493, Sec. 4.3 & 9.4 (Modified); ASTM F2417 (Modified)	Flame height (for tea lights) Flame height (for all candles, EXCEPT tea lights)	< <	30 mm (1.18 inches) 50 mm (2 inches) (MODIFICATION: flame height for all candle types reduced from 75 mm (3 inches)).	M/PASS Sample 1: 7/8 in Sample 2: 17 mm Sample 3: 17 mm Sample 4: 16 mm
Flame Impingement Test	Internal Method	Sidewall of interior surface of the candleholder/vessel is oriented at about 45 deg., and is burnt by a candle flame for 5 minutes	"FOR DATA PURPOSES ONLY"	There shall not be ignition, cracks or breaks that result in sharp point/sharp edge, or that allow the flame to reach outside of the candleholder/vessel.	NT
Flammability of raw material fragrance or liquid	16 CFR 1500.43a/16 CFR 1500.3(c)(6)	Flashpoint	>	150F	NA
Lead Cored Wick	16 CFR 1500.17(a)(13)	BANNED	-	NOT ALLOWED	M/PASS
Lead in Surface Coating	CPSD-AN-00001-MTHD	Total Lead	≤	90 ppm (0.009% by weight)	NA
Re-ignition after Extinguishing	EN 15493, Sec. 4.5(c) & 9.3	After extinguishing, the wick shall not spontaneously relight.	=	Pass	M/PASS
Secondary ignition	EN 15493, Sec. 4.2 & 9.3. (Modified); ASTM F2417	No secondary ignition shall occur when candle is burned as specified, including flashover.	=	Pass (MODIFICATION: removal of "requirement for more than 10 seconds from product requirement"; addition of flashover)	M/PASS
Smoke after Extinguishing	EN 15493, Sec. 4.5(b) & 9.3	Smoke shall not last longer than 20 seconds after extinguishing.	=	Pass	M/PASS
Stability	EN 15493, Sec. 4.1 & 9.2; ASTM F2417	Free-standing candle shall not tip over when tested on a slope of 10 degrees.	=	Pass	M/PASS

TEST NAME	TEST METHOD	GLOBAL DEFAULT STANDARD			NOTES
		CRITERIA		REQUIREMENT	
Standard Specification for Fire Safety of Candles	ASTM F2417 (Modified)	Burn Test parameters: - candles burned in 4-hour burn cycles until end of useful life (***FOR GEL CANDLES, use 8-hour burn cycle)***; - wicks will NOT be trimmed prior to burn test; - laboratory temperature between 68F to 86F with minimum draft; - candles spaced at least 20cm apart;	-	Flame heights observed at periodic intervals and recorded at end of each burn cycle.	M/PASS Sample 1: 7/8 in
Standard Specification for Fire Safety of Candles	ASTM F2417 (Modified)	Burn Test parameters: - one candle (1) specimen for each fragrance/style shall be burned using an 8-hour burn cycle until end of useful life; - wicks will NOT be trimmed prior to burn test~~;~~ - laboratory temperature between 68F to 86F with minimum draft; - candles spaced at least 20cm apart;	"FOR DATA PURPOSES ONLY"	Results noted "FOR DATA PURPOSES ONLY." Flame heights observed at periodic intervals and recorded at end of each burn cycle. (MODIFICATION: Burn cycle changed from 4-hours to 8-hours and wicks will not be trimmed despite manufacturer instructions.)	DATA Sample 5: 1 in
Protocol Notes:					
1. ***Flame Impingement Test*** to be conducted only UPON REQUEST. Results to be recorded and marked "FOR DATA PURPOSES ONLY."					

TEST PROTOCOL REPORT					
CANDLE COMPLIANCE PROTOCOLS: CONTAINER OR ACCESSORIES V. 040418					
TEST NAME	**TEST METHOD**	**GLOBAL DEFAULT STANDARD**			**NOTES**
		CRITERIA		**REQUIREMENT**	
Annealing and Heat Strength of Glass Containers: Glass Containers Produced for use as Candle Containers	ASTM F2179, Sec 4.1, 5.1.1, 5.4.2.1 & 5.4.3.	Scratch test without fractures or show a real temper of <4 using a polariscope.	-	Report the number of fractures, if any.	M/PASS
End of Useful Life	ASTM F2417	Container shall not crack or break	=	Pass	M/PASS
Fire Safety for Candle Accessories (Candle Rings, Candle Burners, Potpourri Burners, Holders)	ASTM F2601-12, Sec. 4.1., 4.2., 4.3. and 4.4.	Maximum Average Burn Time Recorded Maximum Individual Burn Time Flame Spread Observed Flame Height Cracking/Breakage of Burner Secondary Ignition	≤ ≤ = ≤ = =	30 seconds 60 seconds NO 3 inches (76mm) NO NO	NA
Flammability of Solids	16 CFR 1500.44 (Modified)	Burn rate	≤	0.1 inches/seconds	NA
Surface Temperature Test for Candle Holder or Tart Burner during Burning	UL-TS-106 Edition 5.0; ASTM F2417-04, Sec. 5.2 (Modified)	Maximum measured surface temperature Metal Surfaces Non-Metallic Surfaces	≤ ≤	122F (50C) 140F (60C) NOTE: If temperature exceeds requirements, location and temperature must be stated on test report.	NA
Thermal Shock: Glass Containers for use as Candle Containers	ASTM F2179, Sec. 4.2	Withstand a 90˚F thermal shock differential between the hot and cold water baths. (Typical bath temperatures are 160F for hot water bath and 70F for cool water bath). (70˚F - 160˚F)	-	Product shall withstand one thermal shock cycle without any visible cracking or fractures.	M/PASS
			-		

Protocol Notes:

1. See ***HOME NON-FOOD CONTACT Protocols*** for additional testing requirements based on container material type and any paint/surface coating.

TDCR- TECHNICAL DEVELOPMENT CENTER RESOURCE						
TEST PROTOCOL REPORT						
HF - GLASS NON-FOOD CONTACT V.090216						
CATEGORY	**TEST NAME**	**TEST METHOD**	**HOME/GLOBAL DEFAULT STANDARD**			**NOTES**
Home	Lead (Pb) and Cadmium (Cd) in Externally Decorated Area	EPA 3052	Total Lead (Pb) Content Total Cadmium (Cd) Content	<= <=	90 ppm 90 ppm	M/PASS
Home	Total Mercury of Homogeneous Materials	Wet Chemistry Method (SOR/2014-254)	Mercury (Hg)	<=	1000 ppm	M/PASS
Protocol Notes:						
1. If the glass is soldered, add the **Lead in Solder** test *(EPA 3052)*						

TDCR- TECHNICAL DEVELOPMENT CENTER RESOURCE						
TEST PROTOCOL REPORT						
HF - METAL NON-FOOD CONTACT V.090216						
CATEGORY	**TEST NAME**	**TEST METHOD**	**HOME/GLOBAL DEFAULT STANDARD**			**NOTES**
Home	Corrosion Resistance - Salt Spray Test	ISO 9227	No noticeable corrosion, oxidation, or visual change observed	=	Pass	M/PASS
Home	Total Mercury of Homogeneous Materials	Wet Chemistry Method (SOR/2014-254)	Mercury (Hg)	<=	1000 ppm	M/PASS
Home	Lead in Accessible Components	EPA 3050B and/or 6010B	Lead (Pb)	<=	90 pmm	M/PASS
Protocol Notes:						
1. If metal is in direct and prolonged skin contact, add the **Nickel (Ni) Release** test (EC No. 1907/2006 Annex XVII and its amendments item no.27/ EN 1811 / EN 12472).						