POLYCONCEPT TEST REPORT

LAB LOCATION:	**SHANG HAI**	**REPORT NUMBER:**	**EFW524052008-CG-01**
DATE IN:	**May 11, 2024**	**DATE OUT:**	**May 21, 2024**

Applicant:	Polyconcept GBS		
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Copy To:	--		

OVERALL RATING

PASS	**X**
FAIL	**--**
PRELIM FAIL	**--**

Sample Information

EFW524052008-CG-01

Sample Description:	Arctic Zone® Titan Thermal HP® Mug 20oz w/ FSC GB
PO Number:	2067108 / 2067109 / 2068864
Article Number:	1600-67NY/WH/BK
Number of Sample Submitted:	6pcs each color
Factory Number:	10942
Vendor Number:	10531
Customer:	Leeds
Country of Origin:	China
Country of Destination:	US/CAN
Retest – Previous Report No:	/
Remark:	

For and on behalf of
Eurofins MTS Consumer
Product Testing (Shanghai) Co., Ltd.

Chen Lin, Rain
Manager, Hardlines Division

Test Result Summary	
Test Requested	**Result**
16 CFR 1303 Total Lead in Surface Coatings	PASS
California Proposition 65 Total Lead Content in Surface Coatings and Substrates	PASS
Canadian Consumer Products Containing Lead Regulation (SOR/2018-83) - Total Lead in Substrate	PASS
Phthalate Content (10P)	PASS
Total Bisphenol A Content	PASS
Material in Contact with Food Articles [Polyester Resins, Crosslinked] – U.S. FDA 21 CFR 177.2420	PASS
Material in Contact with Food Articles [Closures with Sealing Gaskets for Food Containers] – U.S. FDA 21 CFR 177.1210	PASS
Material in Contact with Food Articles [Olefin Polymers - Polypropylene Homopolymer] – U.S. FDA 21 CFR 177.1520	PASS
FDA GRAS Specifications, Total Chromium in Stainless Steel Food Containers	PASS
19 CFR 134.11 Country of Origin Markings	PASS
Leachable Lead & Cadmium from Glassware and Ceramics – Lip & Rim	PASS

COMPONENT BREAKDOWN LIST:

Test Item	Component Description
A	Arctic Zone® Titan Thermal HP® Mug 20oz w/ FSC GB
A1	Black coating(on outer)(1600-67BK)
A2	White coating(on outer)(1600-67WH)
A3	Navy coating(on outer)(1600-67NY)
A4	Black plastic(slider)(1600-67NY/WH/BK)
A5	White silicone(lid)(1600-67NY/WH/BK)
A6	Transparent plastic(lid)(1600-67NY/WH/BK)
A7	Silver metal(inner/outer/plate on the slider)
A8	Silver metal(handle without coating)
A9	Arctic Zone® Titan Thermal HP® Mug 20oz w/ FSC GB(1600-67BK)
A10	Arctic Zone® Titan Thermal HP® Mug 20oz w/ FSC GB(1600-67WH)
A11	Arctic Zone® Titan Thermal HP® Mug 20oz w/ FSC GB(1600-67NY)

TEST RESULT:

Total Lead Content in Paint or Similar Surface Coating – U.S. CPSC 16 CFR 1303

Test Item	Accessibility (Remark 1)	Classification	Total Lead (Pb) (ppm)		Conclusion
			Result	Limit	
A1+A2+A3	Accessible as received	Paint or similar surface coating	<10	90	PASS

Method:
1) Lead in paint and other similar surface coatings:
The test is conducted according to the US CPSC Standard Operating Procedure for Determining Lead (Pb) in Paint and Other Similar Surface Coatings, February 25, 2011 (CPSC-CH-E1003-09.1)

Note: ppm = part per million = mg/kg (milligram per kilogram)
"<" = less than

TEST RESULT:

California Proposition 65 Total Lead Content in Surface Coatings and Substrates

Test Item	Classification	Total Lead (Pb) (mg/kg)		Conclusion
		Result	Maximum Permissible Limit	
A1+A2+A3	Paint or similar surface coating	<10	90	PASS
A4+A5+A6	Substrate	<10	100	PASS
A7+A8	Substrate	<10	100	PASS

Method:
1) Lead in paint and other similar surface coatings:
The test is conducted according to the US CPSC Standard Operating Procedure for Determining Lead (Pb) in Paint and Other Similar Surface Coatings, February 25, 2011 (CPSC-CH-E1003-09.1)
2) Lead in metals:
The test is conducted according to the US CPSC Standard Operating Procedure for Determining Total Lead (Pb) in Children's Metal Products (Including Children's Metal Jewelry), November 15, 2012 (CPSC-CH-E1001-08.3)
3) Lead in other non-metal materials including plastics, glass and leather material:
The test is conducted according to the US CPSC Standard Operating Procedure for Determining Total Lead (Pb) in Non-Metal Children's Products, November 15, 2012 (CPSC-CH-E1002-08.3)

Note: ppm = part per million = mg/kg (milligram per kilogram)
"<" = less than

Canadian Consumer Products Containing Lead Regulation (SOR/2018-83) - Total Lead in Substrate

Test Item	Total Lead (Pb) (mg/kg)		Conclusion
	Result	Limit	
A7+A8	<10	90	PASS

Method: Sample was digested with nitric acid and analyzed by Atomic Absorption Spectrophotometer / Inductively Coupled Plasma Mass Spectrometer.

Note: mg/kg = milligram per kilogram
"<" = less than

TEST RESULT:

Phthalate Content (10P)

Test Item	Phthalates Content (%)		Conclusion
	Result	Client's requirement	
A1+A2+A3	<0.005 (individual)	<0.1 (individual)	PASS
A4+A5+A6	<0.005 (individual)	<0.1 (individual)	PASS

List of Phthalates:

Chemical Name	CAS No.	Chemical Name	CAS No.
Dibutyl phthalate (DBP)	84-74-2	Butyl benzyl phthalate (BBP)	85-68-7
Di-2-ethylhexyl phthalate (DEHP) / Dioctyl phthalate (DOP)	117-81-7	Di-iso-butyl phthalate (DIBP)	84-69-5
Di-iso-nonyl phthalate (DINP)	28553-12-0/ 68515-48-0	Di-iso-decyl phthalate (DIDP)	26761-40-0/ 68515-49-1
Di-n-octyl phthalate (DNOP)	117-84-0	Di-n-hexyl phthalate (DNHP/ DHEXP)	84-75-3
Dicyclohexyl phthalate (DCHP)	84-61-7	Dipentyl phthalate (DPP / DPENP)	131-18-0

Method: The test is conducted according to the US CPSC Standard Operation Procedure for Determination of Phthalates, April 1, 2010 (CPSC-CH-C1001-09.3)

Note: % = percentage
"<" = less than
">" = more than

Total Bisphenol A Content

Test Item	Bisphenol A [CAS No. 80-05-7] (mg/kg)		Conclusion
	Result	Client's Requirement	
A4	ND	ND	PASS
A5	ND	ND	PASS
A6	ND	ND	PASS

ND = Not detected (Laboratory Reporting Limit = 1mg/kg)

Method: Sample was extracted with organic solvent and then analyzed by Liquid Chromatograph Mass Spectrometer.

Note: mg/kg = milligram per kilogram

TEST RESULT:

Material in Contact with Food Articles [Polyester Resins, Crosslinked] – U.S. FDA 21 CFR 177.2420

Condition of use: D) Hot filled or pasteurized below 150°F

Extracting condition: Water (150°F, 2hr.), Heptane (100°F, 30min.), 8% Alcohol (150°F, 2hr.), 50% Alcohol (150°F, 2hr.)

Parameter	Unit	Result	Limit
		A6	
Chloroform - Soluble Extractives			
Distilled Water	mg/in^2	<0.05	≤0.1
8 % Alcohol	mg/in^2	<0.05	≤0.1
50 % Alcohol	mg/in^2	<0.05	≤0.1
Nonvolatile Extractives			
n-Heptane	mg/in^2	<0.05	≤0.1
Conclusion		PASS	-

Method: U.S. FDA 21 CFR 177.2420

Note: mg/in^2 = milligrams per square inch of coated surface
"<" = less than
"≤"= less than or equal to

TEST RESULT:

Material in Contact with Food Articles [Closures with Sealing Gaskets for Food Containers] – U.S. FDA 21 CFR 177.1210

Condition of use: C) Hot filled or pasteurized above 150°F

Extracting condition: Water (Fill boiling, cool to 100°F), Heptane (120°F, 15min.), 8% Alcohol (Fill boiling, cool to 100°F)

Parameter	Unit	Result	Limit
		A5	
Chloroform - Soluble Extractives			
Distilled Water	ppm	<10	≤50
n-Heptane	ppm	<10	≤50
8 % Alcohol	ppm	<10	≤50
Conclusion		PASS	-

Method: U.S. FDA 21 CFR 177.1210

Remark: 1) Maximum extractives tolerances of different types of closure-sealing gasket composition:

Type of closure-sealing gasket composition	Maximum Extractives Tolerances (in ppm)		
	Chloroform fraction of water extractives	Chloroform fraction of heptane extractives	Chloroform fraction of alcohol extractives
1. Plasticized polymers, including unvulcanized or vulcanized or otherwise cured natural and synthetic rubber formed in place as overall discs or annular rings from a hot melt, solution, plastisol, organisol, mechanical dispersion, or latex	50	500	50
2. Performed overall discs or annular rings of plasticized polymers, including unvulcanized natural or synthetic rubber	50	250	50
3. Performed overall discs or annular rings of vulcanized plasticized polymers, including natural or synthetic rubber	50	50	50
4. Performed overall discs or annular rings of polymeric or resinous-coated paper, paperboard, plastic, or metal foil substrates	50	250	50
5. Closures with sealing gaskets or sealing compositions as described in 1 ,2 , 3and 4, and including paper, paperboard, and glassine used for dry foods only	Not applicable	Not applicable	Not applicable

Note: ppm = part per million
"<" = less than
"≤"= less than or equal to

TEST RESULT:

Material in Contact with Food Articles [Olefin Polymers - Polypropylene Homopolymer] – U.S. FDA 21 CFR 177.1520

Parameter	Unit	Result	Limit
		A4	
Density	g/cm^3	0.887	0.88 - 0.913
n-Hexane Extractives	% w/w	0.2	≤6.4
Xylene Extractives	% w/w	1.2	≤9.8
Melting Point	^{o}C	168	160 - 180
Conclusion		PASS	-

Method: U.S. FDA 21 CFR 177.1520

Note: g/cm^3 = gram per cubic centimetre
% w/w = percent weight by weight
"<" = less than
"≤"= less than or equal to

TEST RESULT:

FDA GRAS Specifications, Total Chromium in Stainless Steel Food Containers

Test Item	Total Chromium (Cr) (%)		Conclusion
	Result	Limit	
A7	18.58	≥16	PASS

Method: Acid digestion, analysis by ICP-OES

TEST RESULT:

Test Property	Method	Applicable Components	Limits	Notes	Result
19 CFR 134.11 Country of Origin Markings	Not Applicable	Per Review	Not Applicable	Products Manufactured outside of USA.	PASS

TEST RESULT:

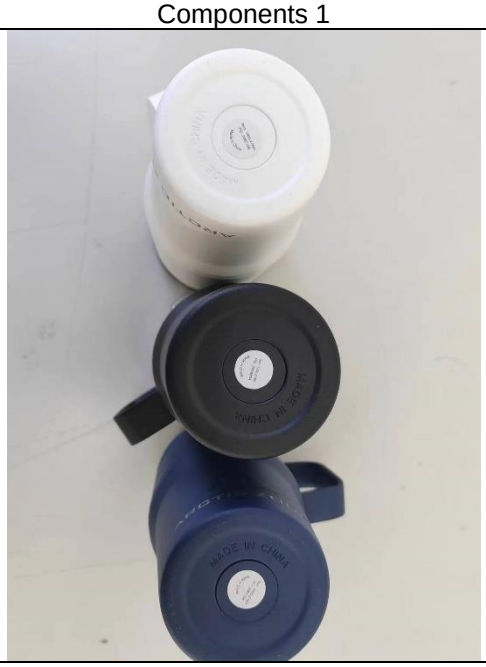
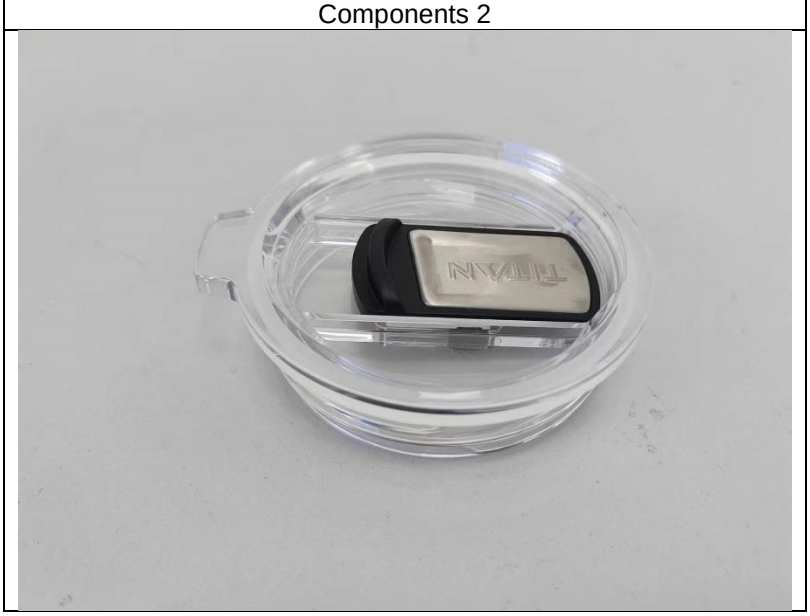
Leachable Lead & Cadmium from Glassware and Ceramics – Lip & Rim

Test Item	Unit	Internal Volume (ml)	Leaching Volume (ml)	Concentration relative to Internal Volume (mg/L)	
				Lead	Cadmium
A9	(1)	660	240	<0.05	<0.01
	(2)	660	240	<0.05	<0.01
	(3)	660	240	<0.05	<0.01
	(4)	660	240	<0.05	<0.01
	(5)	660	240	<0.05	<0.01
	(6)	660	240	<0.05	<0.01
Limit (Any 1 of 6 units)				4.0	0.4
Conclusion				PASS	
A10	(1)	660	240	<0.05	<0.01
	(2)	660	240	<0.05	<0.01
	(3)	660	240	<0.05	<0.01
	(4)	660	240	<0.05	<0.01
	(5)	660	240	<0.05	<0.01
	(6)	660	240	<0.05	<0.01
Limit (Any 1 of 6 units)				4.0	0.4
Conclusion				PASS	
A11	(1)	660	240	<0.05	<0.01
	(2)	660	240	<0.05	<0.01
	(3)	660	240	<0.05	<0.01
	(4)	660	240	<0.05	<0.01
	(5)	660	240	<0.05	<0.01
	(6)	660	240	<0.05	<0.01
Limit (Any 1 of 6 units)				4.0	0.4
Conclusion				PASS	

Method: ASTM C927-80 (2019e1). The lead and cadmium contents are determined by Inductively Coupled Argon Plasma Spectrometer / Atomic Absorption Spectrophotometer / Inductively Coupled Plasma Mass Spectrometer.

Note: mL = milliliter
mg/L = milligrams per liter
"<" = less than

Photo of Exhibit

Components 1

Components 2


**********End of Test Report**********

NOTE:

If there is question or concern regarding the above results, please contact us via email coco.yu@cpt.eurofinscn.com

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