

Test Report

No.: GZHL1706027905CW

Date: Jul 06, 2017

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BESTSUB TECHNOLOGIES CO LTD

RM 4411, GRANDVIEW EAST INTERNATIONAL PLAZA, NO 372, HUANSI DONG ROAD, YUEXIU DISTRICT, GUANGZHOU, GUANGDONG

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : 11OZ/15OZ WHITE JS COATED MUG
 Style / Item No. : B101AA,B201D
 Test Performed : Selected test(s) as requested by applicant
 Sample Receiving Date : Jun 29, 2017
 Test Performing Date : Jun 29, 2017 to Jul 06, 2017
 Test Result(s) : For further details, please refer to the following page(s)

Signed for and on behalf of
 Guangzhou Branch
 SGS-CSTC Ltd.



Arthur Mak
 Approved Signatory



SGS-CSTC Inspection & Testing Services Co., Ltd.
 Guangzhou Branch Testing Center Handlines

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Part I: BS EN 12875-4: 2006 Mechanical dishwashing resistance of utensils — Part 4: Rapid test for domestic ceramic articles

- 1. Scope:** This European Standard specifies a rapid method for testing the dishwashing resistance of ceramic articles intended for domestic use. It does not define the number of dishwashing cycles that any given product should withstand.

Test sample description :	Ceramic Mug
Number of Tested Sample(s):	4 pieces
Number of Controlled Sample(s):	1 piece

2. Test Procedure:

With reference to BS EN 12875-4: 2006 Test method

3. Test Result as follows:

3.1 After 16hours:

	Articles with or without decoration (Category of articles)	Test specimen number	Color	Gloss	Clouding	Resistant deposits and iridescent layers	Other aspects
Inspector 1	Ceramic	1#	0	0	0	0	0
		2#	0	0	0	0	0
		3#	0	0	0	0	0
		4#	0	0	0	0	0
Average			0	0	0	0	0
Inspector 2	Ceramic	1#	0	0	0	0	0
		2#	0	0	0	0	0
		3#	0	0	0	0	0
		4#	0	0	0	0	0
Average			0	0	0	0	0
Overall rating			0	0	0	0	0



3.2 After 32hours:

2.2 First Sample:

	Articles with or without decoration (Category of articles)	Test specimen number	Color	Gloss	Clouding	Resistant deposits and iridescent layers	Other aspects
Inspector 1	Ceramic	1#	0	0	0	0	0
		2#	0	0	0	0	0
		3#	0	0	0	0	0
		4#	0	0	0	0	0
Average			0	0	0	0	0
Inspector 2	Ceramic	1#	0	0	0	0	0
		2#	0	0	0	0	0
		3#	0	0	0	0	0
		4#	0	0	0	0	0
Average			0	0	0	0	0
Overall rating			0	0	0	0	0

Note:

Classification	Rating
0	No visible change
1	First discernible change
2	Clearly visible change



Part II: BS EN 15284: 2007 Materials and articles in contact with food stuffs – Test method for the resistance to microwave heating of ceramic, glass, glass-ceramic or plastics cookware

- 1. Scope:** This European Standard specifies a method for the determination of the resistance to microwave heating of cookware made of ceramic, glass, glass-ceramic or plastics. It is applicable to articles that are intended for multiple re-use in a microwave oven. It is not applicable to articles, particularly those made from plastics, which are intended to be discarded after one use.

Test sample description :	Ceramic Mug
Number of Tested Sample(s):	3 pieces
Number of Controlled Sample(s):	1 piece

2. Test Procedure:

With reference to BS EN 15284: 2007 test method.

3. Test Requirement:

- 3.1 Visually inspect the test specimen for damage according to the criteria in Table 1.

Table 1 --- inspection criteria

Material	Cracking	Crazing	Scaling	Color	Melting	Deformation	Suitability for re-use	Charring
Ceramic	+	^a	^b	^c				
Glass, glass-ceramic	+		+b	^c				
Plastics	+			^c	^d	+	^e	+

(+)= to be inspected

^a refers to the glaze

^b refers to on-glaze decoration

^c if several colors are present on one article to be inspected, the color with the greatest change shall be chosen

^d article shall not be too soft to handle

^e article shall be washable and stain resistant

NOTE 1 For the color criterion, an inspector and inspection site that meet the requirements of Clause 4 and 5.2 of EN 12875-2:2001 are required [2]

- 3.2 The maximum surface temperature of handles after the short period heating (6.6) shall not exceed the following limit values:

ceramic, glass-ceramic or glass: 56 °C;

plastics: 60 °C.

NOTE 1 These temperatures can be found by reference to a one minute contact time in EN ISO 13732-1 [1].

NOTE 2 As temperatures measured after the long period of heating vary significantly depending on the microwave oven used for testing, no temperature limit values apart from those for handles are given.



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4. Test Result:

Pass

- 1) Visually inspect the test specimen: No visible change.
- 2) The highest surface temperature: 32.4 °C (after the short period)
50.6 °C (after the long period)

Part III: Test Conducted: BS EN 1183-1997 Materials and articles in contact with foodstuffs-Test methods for thermal shock and thermal shock endurance

- Scope:**
- This European Standard specifies test methods for thermal shock and for thermal shock endurance for brittle materials, for example glass, glass-ceramics and ceramics intended for use in ovens or as tableware.
- Two test methods are described:
- Test method A is used for articles known to be sensitive to thermal shock.
 - Test method B is generally applicable
- The test method to be applied depends on the intended use of the article and/or its thermal shock resistance.

Number of Tested Sample(s):	Ceramic Mug
Number of Controlled Sample(s):	10 pieces

Test Procedure:

Repeat the testing procedure with the remaining test samples according to method A or method B as appropriate, with increasing temperature difference values, t_1-t_2 , until all samples have failed. Commence testing with a temperature difference value, t_1-t_2 of not less than 40°C and increase temperature t_1 , by 10°C for $t_1-t_2 \leq 100^\circ\text{C}$ and by 20°C for $t_1-t_2 > 100^\circ\text{C}$.

Test Result:

t_1 °C	t_2 °C	$t_1 - t_2$ °C	No. of failures	Cumulative failures in %
160	20	140	4	40
180	20	160	6	100
		Total	10	
		ΔT_{50}		= 160
		Standard deviation s		= 10.33



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Sample Photo:

Sample as received



II. SGS Ref No.: CANHG1712424101

Result Summary :

Test Requested

US California Proposition 65 (Superior Court of the State of California – County of San Francisco Case No. 938430) – Leachable Lead and Cadmium Content (internal surface)

US FDA CPG Sec. 545.400 (CPG 7117.06) and CPG Sec. 545.450 (CPG 7117.07) Pottery(Ceramics) - Leachable Lead and Cadmium Content (Internal surface)

Conclusion

PASS

PASS

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description	Material (claimed by the client)
SN1	CAN17-124241.001	Ceramic mug	Cearmic

US California Proposition 65 (Superior Court of the State of California – County of San Francisco Case No. 938430) – Leachable Lead and Cadmium Content (internal surface)

Test Method : With reference to AOAC 18th Ed. (2005) Section 973.32. Analysis was performed by ICP-OES.



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Sample 001 Internal Surface (Cup and Mug)

	<u>Extract Volume</u> (mL)	<u>Depth</u> (mm)
1	350	86
2	350	86
3	350	86
4	350	86
5	350	86
6	350	86
7	350	86
8	350	86
9	350	86
10	350	86
11	350	86
12	350	86
	<u>Leachable Lead</u> (µg/mL)	<u>Leachable Cad-</u> <u>mium(µg/mL)</u>
1	<0.05	<0.01
2	<0.05	<0.01
3	<0.05	<0.01
4	<0.05	<0.01
5	<0.05	<0.01
6	<0.05	<0.01
7	<0.05	<0.01
8	<0.05	<0.01
9	<0.05	<0.01
10	<0.05	<0.01
11	<0.05	<0.01
12	<0.05	<0.01
Average	<0.05	<0.01
Limit	0.100	0.189

Notes :

Flatware: Ceramic articles which have an internal depth, as measured from the lowest point to the horizontal plane passing through the upper rim, that does not exceed 25 mm.

Hollowware: Ceramic articles having an internal depth, as measured from the lowest point to the horizontal plane passing through the upper rim, greater than 25 mm.

Small hollowware: A capacity of less than 1.1 liter.

Large hollowware: A capacity of 1.1 liter or more.

Cups and mugs: Small ceramic hollowware vessels commonly used for consumption of beverages.

Pitchers: Large ceramic hollowware vessels (sometimes known as jugs) commonly used for the storage and dispensing of fruit and vegetable juices or other acidic beverages at or below room temperature which are normally manufactured without a lid but with a handle and lip spout.



The reference limit applied in testing is based on particular California Proposition 65 settlements that are most similar to the tested product in the opinion of the lab. The testing in this report does not reflect a user's actual exposure to the tested chemical.

A manufacturer or retailer that is not named in the referenced settlement is not bound by that settlement, and may choose to comply with California Proposition 65 by clearly informing the consumer of potential exposure.

US FDA CPG Sec. 545.400 (CPG 7117.06) and CPG Sec. 545.450 (CPG 7117.07) Pottery(Ceramics) - Leachable Lead and Cadmium Content (Internal surface)

Test Method : With reference to AOAC 18th Ed. (2005) Section 973.32. Analysis was performed by ICP-OES.

Sample 001 Cup and mug

	<u>Extract Volume</u> (mL)	<u>Depth</u> (mm)
1	350	86
2	350	86
3	350	86
4	350	86
5	350	86
6	350	86

	<u>Leachable Lead</u> (µg/mL)	<u>Leachable Cad-</u> <u>mium(µg/mL)</u>
1	<0.05	<0.01
2	<0.05	<0.01
3	<0.05	<0.01
4	<0.05	<0.01
5	<0.05	<0.01
6	<0.05	<0.01
Limit	0.5	0.5

Notes :

Flatware: Ceramic articles which have an internal depth, as measured from the lowest point to the horizontal plane passing through the upper rim, that does not exceed 25 mm.

Hollowware: Ceramic articles having an internal depth, as measured from the lowest point to the horizontal plane passing through the upper rim, greater than 25 mm.

Small hollowware: A capacity of less than 1.1 liter.

Large hollowware: A capacity of 1.1 liter or more.

Cups and mugs: Small ceramic hollowware vessels commonly used for consumption of beverages.

Pitchers: Large ceramic hollowware vessels (sometimes known as jugs) commonly used for the storage and dispensing of fruit and vegetable juices or other acidic beverages at or below room temperature which are normally manufactured without a lid but with a handle and lip spout.



Sample photo:



CAN17-124241.001

End of Report



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