



## Test Report

No. 2126664/SD

Date : Mar 14 2011

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KEEPCUP PTY LTD  
156 WESTGARTH STREET, FITZROY  
VIC 3065 AUSTRALIA

The following samples were submitted and identified on behalf of the client as :  
RE-USABLE CUP, POLYPROPYLENE BASE AND LID, TPU PLUG AND SILICONE BAND

SGS Job No. : 3765542  
Quantity Submitted : 20 PCS.  
Manufacturer : KEEPCUP PTY LTD  
Country of Origin : CUP / LID / PLUG AUSTRALIA, SILICONE BAND CHINA  
Sample Receiving Date : MAR 01, 2011; MAR 10, 2011  
Test Performing Date : MAR 01 TO 14, 2011  
Test Requested : Please refer to the result summary.  
Test Method & Results : Please refer to next page(s).  
Result Summary :

Test Requested	Conclusion
<b>1. European Commission Directive 2002/72/EC and its amendments and hence Australian Standard AS 2070-1999 Plastics materials for food contact use, Clause 4.1.1 (b). (Selected parts as specified by Client)</b>	--
a) Plastic – Overall migration	PASS
b) Plastic – Specific Migration of Primary Aromatic Amine	PASS
<b>2. European Commission Directive 93/11/EEC and Council of Europe Resolution AP (2004) 4 and hence Article 3 of European Regulation No. 1935/2004. (Selected parts as specified by Client)</b>	--
a) Rubber – Nitrosamine and Nitrosatable substances content	PASS
b) Rubber – Overall migration	PASS
c) Rubber – Specific migration of Aromatic Amine	PASS
<b>3. State of Connecticut Public Act No. 09-103 – Total Bisphenol A (BPA) content (As Per Clients Request)</b>	PASS
<b>4. For compliance with BS EN 15284:2007 – Materials and articles in contact with foodstuffs – Test method for the resistance to microwave heating of ceramic, glass, glass-ceramic or plastic cookware</b>	PASS
<b>5. Dishwasher Resistance Test (In-house Method)</b>	PASS
<b>6. Temperature Measurement Test (In House Method)</b>	--

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Signed for and on behalf of  
SGS Hong Kong Ltd.

Au Kam Chi, Gigi  
Assistant Section Manager

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Test Results :

### 1. European Commission Directive 2002/72/EC and its amendments and hence Australian Standard AS 2070-1999 Plastics materials for food contact use, Clause 4.1.1 (b).

#### a) Plastic – Overall migration

Method : With reference to EN 1186-1:2002 for selection of conditions and test methods;  
 EN 1186-3:2002 aqueous food simulants by total immersion method;  
 EN 1186-9:2002 aqueous food simulants by article filling method;  
 EN 1186-2:2002 olive oil by total immersion method;  
 EN 1186-8:2002 olive oil by article filling method;

Simulant Used	Test Condition	Result (mg/dm <sup>2</sup> )	Detection Limit (mg/dm <sup>2</sup> )	Maximum Permissible Limit (mg/dm <sup>2</sup> )
		1		
3% Acetic Acid (W/V) Aqueous Solution	2 hours at 70 °C	ND	3.0	10
50% Ethanol (V/V) Aqueous Solution	2 hours at 70 °C	ND	3.0	10
Rectified Olive Oil	2 hours at 70 °C	ND	3.0	10
<b>Comment</b>	--	PASS	--	--

#### Sample Description :

1. Red Plastic (Cup)

Note : 1. mg/dm<sup>2</sup> = milligram per square decimeter  
 2. °C = degree Celsius  
 3. ND = Not Detected

Simulant Used	Test Condition	Result (mg/kg)	Detection Limit (mg/kg)	Maximum Permissible Limit (mg/kg)
		1		
3% Acetic Acid (W/V) Aqueous Solution	2 hours at 70 °C	ND	5.0	60
50% Ethanol (V/V) Aqueous Solution	2 hours at 70 °C	ND	5.0	60
Rectified Olive Oil	2 hours at 70 °C	18.6	5.0	60
<b>Comment</b>	--	PASS	--	--

#### Sample Description :

1. Black Plastic (Cap)

Note : 1. mg/kg = milligram per kilogram of foodstuff in contact with  
 2. °C = degree Celsius  
 3. ND = Not Detected

To be cont'd...

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Test Results (Cont'd):

### 1. European Commission Directive 2002/72/EC and its amendments and hence Australian Standard AS 2070-1999 Plastics materials for food contact use, Clause 4.1.1 (b). (Cont'd)

#### b) Specific Migration of Primary Aromatic Amine

Method : Sample preparation in 3% acetic acid at 70 °C for 2 hours with reference to EN 13130-1:2004; followed by analysis with reference to DIN 55610:1986.

Test Item	Result (mg/kg)	Detection Limit (mg/kg)	Maximum Permissible Limit (mg/kg)
	1 – 2		
Specific migration of Aromatic Amine	ND	0.01	0.01
<b>Comment</b>	PASS	--	--

#### Sample Description :

1. Red Plastic (Cup)
2. Black Plastic (Cap)

Note : 1. mg/kg = milligram per kilogram of foodstuff in contact with  
 2. °C = degree Celsius  
 3. ND = Not Detected

### 2) European Commission Directive 93/11/EEC and Council of Europe Resolution AP (2004) 4

#### a) Rubber – Nitrosamines and Nitrosatable substances content

Method : Sample preparation with reference to EN 12868:1999, followed by analysis using GC-NPD.

Test Item	Result (mg/kg)	Detection Limit (mg/kg)	Permissible Limit (mg/kg)
	1		
Nitrosamines	ND	0.01	0.01
Nitrosatable substances	ND	0.1	0.1
<b>Comment</b>	PASS	--	--

#### Sample Description :

1. Grey Plastic (Plug)

Note : 1. Nitrosamines tested: N-nitrosodimethylamine (NDMA), N-nitrosodiethylamine (NDEA), N-nitrosodipropylamine (NDPA), N-nitrosodibutylamine (NDBA), N-nitrosopiperidine (NPIP), N-nitrosopyrrolidine (NPYR), N-nitrosomorpholine (NMOR), N-nitrosodibenzylamine (NDBzA), N-nitroso-N-methyl-N-phenylamine (NMPPhA), N-nitroso-N-ethyl-N-phenylamine (NEPhA) and N-nitrosodiisobutylamine (NDiBA).  
 2. mg/kg = milligram per kilogram  
 3. ND = Not Detected

To be cont'd...

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Test Results (Cont'd):

### 2) European Commission Directive 93/11/EEC and Council of Europe Resolution AP (2004) 4 (Cont'd)

#### b) Rubber – Overall migration

Method : With reference to EN 1186-1:2002 for selection of conditions and test methods;  
EN 1186-3:2002 aqueous food simulants by total immersion method;  
EN 1186-2:2002 olive oil by total immersion method;

Simulant Used	Test Condition	Result (mg/kg)	Detection Limit (mg/kg)	Permissible Limit (mg/kg)
		1		
3% Acetic Acid (W/V) Aqueous Solution	2 hours at 40 °C	ND	5.0	60
50% Ethanol (V/V) Aqueous Solution	2 hours at 40 °C	5.8	5.0	60
Rectified Olive Oil	2 hours at 40 °C	6.8	5.0	60
<b>Comment</b>	--	PASS	--	--

Sample Description :

1. Grey Plastic (Plug)

Note : 1. mg/kg = milligram per kilogram of foodstuff in contact with  
2. °C = degree Celsius  
3. ND = Not Detected

#### c) Rubber – Specific migration of Aromatic Amine

Method : Sample preparation in 3% acetic acid at 70 °C for 2 hours; followed by analysis with reference to DIN 55610:1986.

Test Item	Result (mg/kg)	Detection Limit (mg/kg)	Permissible Limit
	1		
Specific migration of Aromatic Amine	ND	0.01	Not Detected
<b>Comment</b>	PASS	--	--

Sample Description :

1. Grey Plastic (Plug)

Note : 1. mg/kg = milligram per kilogram of foodstuff in contact with  
2. °C = degree Celsius  
3. ND = Not Detected

To be cont'd...

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Test Results (Cont'd):

### 3. State of Connecticut Public Act No. 09-103 – Total Bisphenol A (BPA) content

Method : Solvent extraction followed by analysis with High Performance Liquid Chromatography – Mass Selective Detector (HPLC-MSD).

Test Item	Result (mg/kg)	Detection Limit (mg/kg)	Requirement
	1 – 6		
Bisphenol A (BPA)	ND	1	Prohibited
<b>Comment</b>	PASS	--	--

#### Sample Description:

1. Dark Red Plastic Band
2. Green Plastic Band
3. Yellow Plastic Band
4. Black Plastic Band
5. Grey Plastic Cup
6. Grey Plastic Plug

Note : 1. mg/kg = milligram per kilogram  
2. ND = Not Detected

To be cont'd...

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### 4. Microwave Resistance Test (BS EN 15284:2007)

- Scope : The determination of the resistance to microwave heating of cookware made of ceramic, glass, glass-ceramic or plastics.
- No. of Specimen : 3 pcs. of Black cups for testing. Remains as control sample.
- Test Method : According to BS EN 15284:2007
- Requirements : The item should display no signs of cracking, colour, melting, deformation, suitability for re-use or charring. (Plastic)
- The maximum surface temperature of handles after the short period heating shall not exceed 60 °C (Plastic).
- Test Result : PASS. No noticeable change was found on the samples after test.  
Details as below

#### After the Short Heating Period

<u>Measured Location</u>	<u>Maximum Surface Temperature (°C)</u>			<u>Requirement</u>
	<u>Sample A</u>	<u>Sample B</u>	<u>Sample C</u>	
Side Surface (Ceramic)	30.8 °C	31.2 °C	30.6 °C	Maximum 60 °C
Side Surface (Ceramic)	28.2 °C	30.6 °C	29.8 °C	/
Side Surface (Ceramic)	30.4 °C	30.4 °C	30.8 °C	/
Bottom Surface (Ceramic)	31.6 °C	31.8 °C	32.2 °C	/

#### After the Long Heating Period

<u>Measured Location</u>	<u>Maximum Surface Temperature (°C)</u>		
	<u>Sample A</u>	<u>Sample B</u>	<u>Sample C</u>
Side Surface (Ceramic)	79.4 °C	80.2 °C	78.8 °C
Side Surface (Ceramic)	79.2 °C	80.0 °C	78.6 °C
Side Surface (Ceramic)	78.8 °C	78.6 °C	77.8 °C
Bottom Surface (Ceramic)	87.8 °C	86.4 °C	85.2 °C

To be cont'd...

## 5. Dishwasher Resistance Test (In-house Method)

Scope : This test describes a procedure for the evaluation of products that claim to be dishwasher safe or have customer expectation of being dishwasher safe.

No. of Specimen : 1 pc. per each. Remains as control sample.

No. of Cycles : 10 cycles

Testing Procedures : 1) Visually inspect sample and record any cosmetic defects.  
2) Washing the specimen 10 cycles continuously and dries it.  
3) After specimen is dry for 30 minutes, examine / inspect from a distance of 30cm and record any observations or differences from the retained sample.

Cycle Time : Normal Wash – 90 Minutes.

Cycle Water Temperature : Main Wash – 140 Degree F. (60 Degree C.)  
Rinse – 130 Degree F. (54 Degree C.)

Detergent Brand : Cascade (Made in USA) in pH of 9 value.

Acceptance Level : No discoloration, deformation, staining of water (water mark), or substantial deterioration of item's appearance and or function.

Test Result : Details as below

<u>Specimen</u>	<u>Result</u>	<u>Observation</u>
Cup (Middle Size)	PASS	No noticeable change after 10 dishwasher cycles.
Lid (Middle Size)	PASS	No noticeable change after 10 dishwasher cycles.

## 6. Temperature Measurement Test (In House Method)

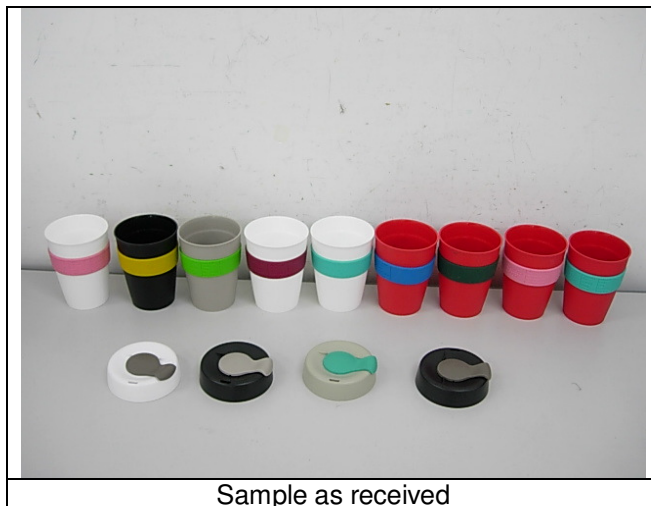
No. of Specimen : 1 pc.

Testing Procedures : 1) Fill 95°C (±5°C) coffee entirely in the mug  
2) Cover the Lid  
3) Measure the coffee temperature after 20mins by thermal couple

Test Result : 71.2°C

To be cont'd...

### Photo Appendix



Sample as received

\*\*\* End of Report \*\*\*

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