

TEST REPORT

Reference No. : SZ2023040913-2E

Date : May. 06, 2023

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Client : Mid Ocean Brands B.V.

Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

The following merchandise was (were) submitted and identified by the client as:

Name of Product : PP mug in 300ML

Test Model : MO6256

Model May Cover : /

Main Material: PP

Supplier: 100396

Buyer: Mid Ocean Brands B.V.

Sample Received : Apr. 21, 2023


Test Period : Apr. 21, 2023 - May. 06, 2023

Test Specification and Conclusion:

1. BS EN 12875-1:2005 Mechanical dishwashing resistance of utensils – PASS

Part 1: Reference test method for domestic articles

2. Microwavable testing - BS EN 15284:2007 PASS

Prepared By : 
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Lab Manager



SZ2023040913-2E

STQ Testing Services Co., Ltd.

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TEST REPORT

TEST RESULTS:

1. BS EN 12875-1:2005 Mechanical dishwashing resistance of utensils - Part 1: Reference test method for domestic articles (Whole Product)

Test Method: BS EN 12875-1:2005 Mechanical dishwashing resistance of utensils — Part 1: Reference test method for domestic articles

1. Visually inspect samples and record any cosmetic defects
2. Load the dishwasher with tested samples. The other sample will be used as the standard.
3. Fill the dishwasher soap holder with the powder detergent, colse and lock the dishwasher as recommended in the operating instructions.
4. Run the dishwasher for 10 cycles with 140°F(60°C) water at “normal setting” for housewares. Each cycle includes soaking, washing and drying
5. Remove and visually examine each sample

Test Requirement: The sample shall show no signs of discoloration or cracking after testing.

Sample size: 2 pieces

Test result: details show as following table:

Washing Cycle Sample No.	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th	9 th	10 th
1#-1	P	P	P	P	P	P	P	P	P	P
1#-2	P	P	P	P	P	P	P	P	P	P

***** To be continued *****

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TEST PHOTOS



Before Test



During Test



After Test

***** To be continued *****

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2. Microwavable testing

Test Method: With reference to 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

Number of Tested Samples: 2 Piece

Number of Control Sample: 1 Piece

Test Procedure:

1. Apply a stain to the surface of the test specimen and wash clear.
2. Visually check that the surface is not damaged. Note any small faults prior to testing.
3. Except for articles made from glass or glass-ceramic, immerse the test specimen in water at a temperature of $(20\pm 3)^{\circ}\text{C}$ for one hour and then wipe the surface dry with a cloth.
4. Pour (125 ± 2.5) ml of water into each water container and place at the back of the oven so as not to interfere with the turntable.
5. Place the test specimen at the center of the oven on the turntable and microwave for the time determined in 5.2 to apply the specified energy for the short period. If electrical arcing begins IMMEDIATELY SWITCH OFF THE OVEN. Terminate the test and state in the test report that at the onset of electrical arcing the test was terminated.
6. After the cycle is completed, open the oven door and, of applicable, using the surface temperature measuring apparatus, find and record the highest temperature of the handle. When additional data is required, follow this procedure to find the highest surface temperature. Ensure that this process takes no longer than 45s.
7. Immediately following 6, set the oven for the long period determined in 5.2 and restart.
8. After completion, when additional data is required, record the highest surface temperature(in no more than 45s). Remove the test specimen from the oven and allow it to cool on an insulated surface to prevent thermal shock.
9. Apply stain to the test specimen and wash clear(as in 1).
10. Visually inspect the test specimen for damage according to the criteria in Table 1. For the colour criterion, an inspector and inspection site that meet the requirements of Clause 4 and 5.2 of EN12875-2:2001 are required.
11. Repeat the test using the different article shapes in the set.

***** To be continued *****

TEST REPORT

Test Requirement:

1. No any damage occurs according to the criteria in 10, the inspection criteria in the following table

Table 1 — Inspection criteria

Material	Cracking	Crazing	Scaling	Colour	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 colours are present on one article to be inspected, the colour with the greatest change shall be chosen
^d article shall not be too soft to handle
^e article shall be washable and stain resistant

2. The maximum surface temperature of handles after the short period heating shall not exceed the following limit values:

Ceramic, Glass-ceramic of Glass: 56°C

Plastic: 60°C

3. The microwave power output calculation:

$$P=4.187 \times \Delta T (M_w + 0.55M_c) / t$$

P is the microwave power output in watts;

ΔT is the difference between the initial and final water temperature

M_w is the mass of water in grams;

M_c is the mass of the container in grams

t is the time in seconds;

Now:

$$\Delta T=10 \text{ }^\circ\text{C}; M_w= 1000\text{g}; M_c=285\text{g}; t=75 \text{ s}$$

$$P=4.187 \times 10 \times (1001+0.55 \times 285) / 75=650\text{W}$$

$$\text{Short time}=72000/646=110\text{s} \quad \text{long time}=468000/646=720\text{s}$$

***** To be continued *****

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Result:

1. Observation parameter(s)

Observation parameter(s)	Observation
	Plastic
Cracking	No
Color	No
Melting	No
Derormation	No
Suitability for re-use	No
Charring	No

2. Surface temperature

Sample No.	Maximum surface temperature after short period heating (°C)
	Plastic
1#-1	37.5

Sample No.	Maximum surface temperature after long period heating (°C)
	Plastic
1#-1	73.2

Sample No.	Maximum surface temperature after short period heating (°C)
	Plastic
1#-2	38.8

Sample No.	Maximum surface temperature after long period heating (°C)
	Plastic
1#-2	71.8

***** To be continued *****

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TEST PHOTOS



Before Test



During Test



During Test



After Test

***** To be continued *****

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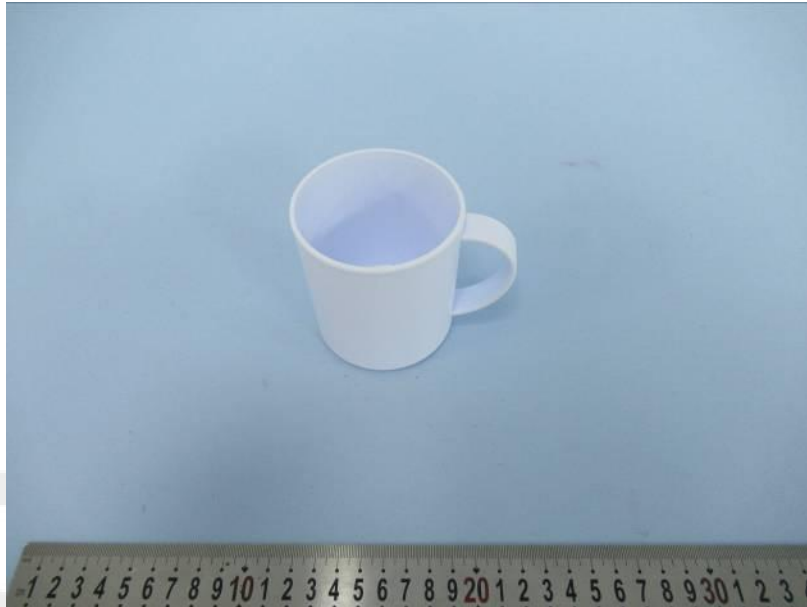
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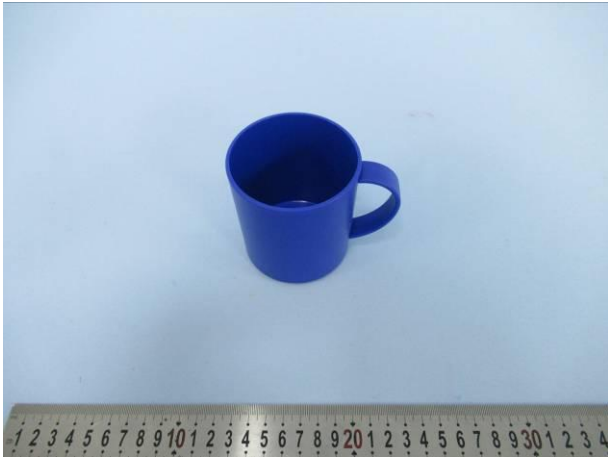
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Test Part Description:

1# PP mug in 300ML

SAMPLE PHOTO******* To be continued *******

REFERENCE PHOTOS



******* END OF REPORT *******

GENERAL CONDITIONS OF SERVICES

STQ Testing Services Co.,Ltd. (hereinafter "STQ"), The testing or examining under the request of the customer should obey terms as follow, according to regulation of "Contract Law of the People's Republic of China" on processing and undertaking contract, our company have legal right of termination without any reason and have the right to accept or refuse testing or examining request:

1. STQ only acts for the person or body originating the instructions (the "Clients"). No other party is entitled to give instructions, particularly on the scope of testing or delivery of report or certificate, unless authorized by the Clients.
 2. The delivery and return fee of the samples which need to do testing at STQ should be paid by the client. STQ will not bear the responsibility for the testing error that is caused by transporting, packaging and labelling.
 3. Sample recycling: when the testing or examining is finished, the customer should recycle the sample. Within 30 days after issuing of testing report, if the customer could not recycle the sample or send notification of sample recycling in written (for example, if the sample belongs to consumables, toxic drugs, dangerous goods and other items that are not suitable for long-term storage, such as semi-finished products and fragile samples such as liquids and powders, the retention period will be shortened to 7 days). After the retention period, STQ has the right to dispose of the sample arbitrarily without paying compensation or compensation to the customer and take no responsibility for the consequences that damages the customer's trade secrets and intellectual property rights due to the loss of the sample.
 4. The Clients shall always comply with the following before or during STQ providing its services:
 - a) provide sample(s) and relevant data, at the same time, guarantee the consistence of the sample(s)' name they declared with the sample(s) or the goods provided. Otherwise, STQ will not bear any relevant responsibilities;
 - b) giving timely instructions and adequate information to enable STQ to perform the services effectively;
 - c) supply, when requested by STQ, any equipment and personnel for the performance of the services;
 - d) take all necessary steps to eliminate or remedy any obstruction in the performance of the services;
 - e) inform STQ in advance of any hazards or dangers, actual or potential, associated with any order of samples or testing;
 - f) provide all necessary access for STQ's representative to enable the required services to be performed effectively;
 - g) ensure all essential steps are taken for safety of working conditions, sites and installations during the performance of services;
 - h) fully discharge all its liabilities under any contract like sales contract with a third party, whether or not a report or certificate has been issued by STQ, failing which STQ shall be under no obligation to the Clients.
 5. Subject to STQ's accepting the Client's instructions, STQ will issue reports or certificates which reflect statements of opinion made with due care within the scope of instructions but STQ is not obliged to report upon any facts outside the instructions, if there were any dissidence about the report or certificate, the Client should provide the written declaration to STQ within 15 days after the date receiving the report or certificate, otherwise, STQ will not hear the case after the date limit.
 6. STQ is irrevocably authorized by the Clients to deliver at its discretion the report or the certificate to any third party when instructed by the Clients or where it implicitly follows from circumstances, trade custom, usage or practice as determined by STQ.
 7. A test report will be issued in confidence to the Clients and it will be strictly treated as such by STQ. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of STQ. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by STQ, to his customer, supplier or other persons directly concerned. STQ will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the report unless required by the relevant governmental authorities, laws or court orders.
 8. Applicants wishing to use STQ's reports in court proceedings or arbitration shall inform STQ to that effect prior to submitting the sample for testing.
 9. The report will refer only to the sample tested and will not apply to the bulk, unless the sampling has been carried out by STQ and is stated as such in the Report. Also, the report is only for reference.
 10. Any documents containing engagements between the Clients and third parties like contracts of sale, letters of credit, bills of lading, etc. are regarded as information for STQ only and do not affect the scope of the services or the obligations accepted by STQ.
 11. If the Clients do not specify the methods/standards to be applied, STQ will choose the appropriate ones and further information regarding the methods can be obtained by direct contact with STQ, for the in-house method, STQ will only provide the summary.
 12. No liability shall be incurred by and no claim shall be made against STQ or its servants, agents, employees or independent contractors in respect of any loss or damage to any such materials, equipment and property occurring whilst at STQ or any work places in which the testing is carried out, or in the course of transit to or from STQ or the said work places, whether or not resulting from any acts, neglect or default on the part of any such servants, agents, employees or independent contractors of STQ.
 13. STQ will not be liable, or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its reports or in any communication whatsoever about its said tests or investigations.
 14. Except for term 11 and term 12, if the test sample is damaged due to the negligence of STQ, the total compensation for loss and damage to the sample or loss to the customer shall not exceed twice of the test service fee.
 15. In the event of STQ prevented by any cause outside STQ's control from performing any service for which an order has been given or an agreement made, the Clients shall pay to STQ:
 - a) the amount of all abortive expenditure actually made or incurred;
 - b) a proportion of the agreed fee or commission equal to the proportion (if any) of the service actually carried out by STQ, and STQ shall be relieved of all responsibility whatsoever for the partial or total non-performance of the required service.
 16. STQ shall be discharged from all liabilities for all claims for loss, damage or expense unless suit is brought within one calendar
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- year after the date of the performance by STQ of the service relating to the claim or in the event of any alleged non-performance within one year of the date when such service should have been completed.
17. The Clients acknowledge that STQ does not, either by entering into a contract or by performing service, assume or undertake to discharge any duty of the Clients to any other persons. STQ is neither an insurer nor a guarantor and disclaims all liability in such capacity.
 18. The Clients shall hold harmless and indemnify STQ and its officers, employees, agents or independent contractors against all claims made by any third party for loss, damage or expense of whatsoever nature including reasonable legal expenses relating to the performance or non-performance of any services to the extent that the aggregate of any such claims relating to any one service exceed the limits mentioned in Clause 13.
 19. Any unauthorized alteration, forgery or falsification of the content or appearance of the report/certificate is unlawful and offenders may be prosecuted to the fullest extent of the law; in the event of improper use of the report, STQ reserves the right to withdraw it, and to adopt any other measures which may be appropriate.
 20. Samples are deposited with and accepted by STQ on the basis that either they are insured by the Clients or the Clients assumes entire responsibility for loss through fire, theft, burglary or for damages arising in the course of analysis or handling, without recourse whatsoever to STQ or its servants, agent, employees or independent contractors.
 21. If the requirements of the Clients require the analysis of samples by the Clients' or any third party's laboratory, STQ will only convey the result of the analysis without responsibility for its accuracy. If STQ is only able to witness an analysis by the Clients' or any third Party's laboratory STQ will only confirm that the correct sample has been analyzed without responsibility for the accuracy of any analysis or results.
 22. In the event of any unforeseen additional time or costs being incurred in the course of carrying out any of its services, STQ shall be entitled to charge the Clients additional fees to reflect the additional time and costs incurred.
 23. All rights (including but not limited to copyright) in any reports, certificates or other materials produced by STQ in the course of providing its services shall remain vested in STQ.
 24. Unless otherwise agreed in written, payment should be arranged within 10 days after the invoice date or the debit note date. If the payment is overdue, the overdue penalty shall be calculated at 1‰ per day of the unpaid part till the actual payment date. All expenses, costs and losses incurred by STQ as a result of collecting or claiming the fees owed shall be borne by the customer, including but not limited to attorney fees, litigation fees, preservation fees, preservation guarantee fees, travel expenses, etc.
 25. Test results may be transmitted by electronic means at the Client's request. However, it should be noted that electronic transmission cannot guarantee the information contained will not be lost, delayed or intercepted by third party. STQ is not liable for any disclosure, error or omission in the content of such messages as a result of electronic transmission.
 26. If necessary, STQ may subcontract part of or all tests to competent subcontractors. If no objection is raised at the time of the Clients submitting the application, STQ shall assume the Client's approval.
 27. This report/certificate does not relieve sellers/suppliers from their contractual responsibility with regards to the quality/quantity of this delivery nor does it prejudice the Client's right to claim towards sellers/suppliers for compensation for any apparent and/or hidden defects not detected during STQ's random inspection or testing or audit.
 28. The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.
 29. STQ reserves the right to include Special Conditions in addition to the foregoing General Conditions if warranted by the particular circumstances of the required test or investigation [this clause is only effective when the other party has been informed].
 30. The foregoing General Conditions shall in all respects be governed, construed, interpreted and operated in accordance with the relevant Chinese laws and regulations. Unless otherwise agreed, the arbitration shall take place in P. R. C
 31. These General Condition have been drafted in Chinese and may be translated into other languages. In the event of any discrepancy, the Chinese version shall prevail.
 32. In general sample will be stored for 30 days. But for liquid, powder, etc semi-product & fragile product, it will be stored for 15 days after the report is issued.

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