
Test Report

Report No. : AGC05443241025-001

SAMPLE NAME : Mug w/ lid and sleeve
MODEL NAME : MO2528
APPLICANT : MID OCEAN BRANDS B.V.
STANDARD(S) : Please refer to the following page(s).
DATE OF ISSUE : Oct. 30, 2024

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Report No.: AGC05443241025-001

Applicant : MID OCEAN BRANDS B.V.
Address : 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong.
Test Site : 5,6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Report on the submitted sample(s) said to be:

Sample Name : Mug w/ lid and sleeve
Model : MO2528
Vendor code : 119344
Country of Origin : CHINA
Country of Destination : EUROPE
Sample receiving state : Normal
Sample Received Date : Oct. 22, 2024
Testing Period : Oct. 22, 2024 to Oct. 30, 2024
Test Requested : Selected test(s) as requested by client.

Approved by: 
Suhongliang, Leon
Technical Director

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Test Requested:
Conclusion

Microwave heating resistance test

Pass

Mechanical dishwashing safe test

Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63
- Lead(Pb) Content

Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23
-Cadmium(Cd) Content

Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52
- Phthalates Content

Pass

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50
- Polycyclic-aromatic Hydrocarbons (PAHs) Content

Pass

Regulation 1935/2004/EC, Council Directive 84/500/EEC and Commission Directive 2005/31/EC,
DIN 51032 for:
- Leachable Lead and Cadmium

Pass

DM-4B-COM-002-v01 for:
- Extractable Lead and Cadmium

Pass

German Food, Articles of Daily Use and Feed Code of September, 2005(LFGB), Section 30 & 31,
and BfR recommendation IX, Regulation 1935/2004/EC, Regulation (EU) No 10/2011 and its
amendment Regulation (EU) 2020/1245

- Overall migration

Pass

- Bisphenol A(BPA) content

Pass

- Specific migration of Bisphenol A(BPA)

Pass

- Specific migration of Heavy metals

Pass

-Specific migration of Primary aromatic amines

Pass

DM-4B-COM-003-v01 for:

-Volatile Organic Matter

Pass

- Peroxide value

Pass

- Specific Migration of Organotin (measured as Tin)

Pass

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Report Revise Record

Report Version	Issued Date	Valid Version	Notes
/	Oct. 30, 2024	Valid	Initial release

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The photo of the sample



The photo of AGC05443241025-001 is for use only with the original report.

Test Point Description

Test point	Test point description
1-1	Black plastic lid
1-2	White silicone sealing
1-4	Black inner mug
1-5	Black rim
1-2+1-3	White silicone sealing+ Black silicone sleeve

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Test Results:

Note: N.D.=Not Detected (less than method detection limit), MDL = Method Detection Limit, 1mg/kg=0.0001%
Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019/CNAS-GL015:2022.

Microwave heating resistance test

Test Result of microwave test		
Sample No.:MO2528 (black) Test method: Refer BS EN 15284 :007 Microwave power out: 800 W Short period: 90 s Long period: 585 s Number of tested sample: 2 pc(s) Number of control sample: 1 pc(s)		
Specimen(s)	Maximum handle temperature after short period of heating	Maximum surface temperature after long period of heating
1	\	80.4°C
2	\	78.5°C
For all tested ceramic articles: No visible change of color was found on the tested samples after test. No visible cracking, crazing, scaling was found on the tested samples after test.		

Mechanical dishwashing safe test

Test Result of mechanical dishwashing safe test:	
Requirements:For dishwasher safe test, if there is no noticeable change in appearance (e.g. color, size and shape) and function, it should be "PASS"	
Sample No.:MO2528 (black) Test method: Refer BS EN 12875 -1-2005 Washing temperature: 60°C Number of cycle: 10 cycles Number of tested sample: 2 pc(s). Number of control sample: 1 pc(s).	
For all tested ceramic or glass enamel articles: No visible change of color and gloss was found on the tested samples after wash. No visible deposit or iridescent layer was found on the tested samples after wash. No cracking was found on the tested samples after wash. No decoration was detached after wash.	

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Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 63

- Lead(Pb) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Test Item(s)	Unit	Limit	MDL	Test Result(s)	
				1-1	1-2+1-3
Lead(Pb)	mg/kg	500	10	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-2+1-3

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 23

-Cadmium(Cd) Content

Test Methods and Equipment: IEC 62321-5:2013; ICP-OES

Test Item(s)	Unit	Limit	MDL	Test Result(s)	
				1-1	1-2+1-3
Cadmium(Cd)	mg/kg	100	10	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-2+1-3

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 51&52

- Phthalates Content

Test Methods and Equipment: IEC 62321-8:2017; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s)	
				1-1	1-2+1-3
Diisobutyl phthalate (DIBP) CAS:84-69-5	%	0.1	0.005	N.D.	N.D.
Dibutyl phthalate (DBP) CAS:84-74-2	%	0.1	0.005	N.D.	N.D.
Butylbenzyl phthalate (BBP) CAS:85-68-7	%	0.1	0.005	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate (DEHP) CAS:117-81-7	%	0.1	0.005	N.D.	N.D.
Di-n-octyl phthalate (DNOP) CAS:117-84-0	%	/	0.005	N.D.	N.D.
Di-isononyl phthalate (DINP) CAS:28553-12-0, 68515-48-0	%	/	0.005	N.D.	N.D.

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Test Item(s)	Unit	Limit	MDL	Test Result(s)	
				1-1	1-2+1-3
Di-isodecyl phthalate(DIDP) CAS:26761-40-0, 68515-49-1	%	/	0.005	N.D.	N.D.
Sum of DIBP +DBP+BBP+DEHP	%	0.1	/	N.D.	N.D.
Sum of DNOP+DINP+DIDP	%	0.1	/	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-2+1-3

Limit requirements of Phthalates

Toys and childcare articles	Each of DEHP, DBP, BBP, DIBP is less than 0.1% or the sum of DEHP+DBP+BBP+DIBP is less than 0.1%
Toys and childcare articles which can be placed in the mouth by children	The sum of DINP+DIDP+DNOP is less than 0.1%

Annex XVII of the REACH Regulation (EC) No 1907/2006, entry 50

- Polycyclic-aromatic Hydrocarbons (PAHs) Content

Test Methods and Equipment: Afps GS 2019:01 PAK; GC-MS

Test Item(s)	Unit	Limit	MDL	Test Result(s)	
				1-1	1-2+1-3
Benzo[a]pyrene(BaP)	mg/kg	1	0.1	N.D.	N.D.
Benzo[e]pyrene(BeP)	mg/kg	1	0.1	N.D.	N.D.
Benzo[a]anthracene(BaA)	mg/kg	1	0.1	N.D.	N.D.
Benzo[b]fluoranthene(BbF)	mg/kg	1	0.1	N.D.	N.D.
Benzo[j]fluoranthene(BjFA)	mg/kg	1	0.1	N.D.	N.D.
Benzo[k]fluoranthene(BkF)	mg/kg	1	0.1	N.D.	N.D.
Chrysene(CHR)	mg/kg	1	0.1	N.D.	N.D.
Dibenzo[a,h]anthracene(DBA)	mg/kg	1	0.1	N.D.	N.D.
Conclusion				Conformity	Conformity

Remark:

1. As specified by client, the submitted samples were mixed to test, the test points: 1-2+1-3

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Limit requirements of Polycyclic-aromatic Hydrocarbons (PAHs) (Unit: mg/kg)

Items	CAS No.	Extender oils or used for the production of tyres or parts of tyres	Any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity	Toys, including activity toys, and childcare articles, any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity
Benzo[a]pyrene(BaP)	50-32-8	≤ 1	≤ 1	≤ 0.5
Benzo[e]pyrene(BeP)	192-97-2	/	≤ 1	≤ 0.5
Benzo[a]anthracene(BaA)	56-55-3	/	≤ 1	≤ 0.5
Benzo[b]fluoranthene(BbF)	205-99-2	/	≤ 1	≤ 0.5
Benzo[j]fluoranthene(BjFA)	205-82-3	/	≤ 1	≤ 0.5
Benzo[k]fluoranthene(BkF)	207-08-9	/	≤ 1	≤ 0.5
Chrysene(CHR)	218-01-9	/	≤ 1	≤ 0.5
Dibenzo[a,h]anthracene(DBA)	53-70-3	/	≤ 1	≤ 0.5
Sum of BaP+ BeP+ BaA+ BbF+ BjFA+ BkF+ CHR+ DBA	/	≤ 10	/	/

Regulation 1935/2004/EC, Council Directive 84/500/EEC and Commission Directive 2005/31/EC, DIN 51032 for:
- Leachable Lead and Cadmium

Test Methods and Equipment: EN 1388-1:1996; ICP-OES

Test point	Test Result		Conclusion
	Extractable Lead(Pb)/(mg/L)	Extractable Cadmium(Cd)/(mg/L)	
	4% Acetic acid,22°C,24h	4% Acetic acid,22°C,24h	
1-4	N.D.	N.D.	Conformity
Limit	4.0	0.3	/
MDL	0.1	0.01	/

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DM-4B-COM-002-v01 for:

- Extractable Lead and Cadmium

Test Methods and Equipment: EN 1388-1:1996; ICP-OES

Test point		Test Result		Conclusion
		Extractable Lead(Pb)/(mg)	Extractable Cadmium(Cd)/(mg)	
		4% Acetic acid,22°C,24h	4% Acetic acid,22°C,24h	
1-5	A	N.D.	N.D.	Conformity
	B	N.D.	N.D.	
	C	N.D.	N.D.	
	D	N.D.	N.D.	
Limit		2	0.2	/
MDL		0.01	0.001	/

Note: Results shown above are testing data of four groups.

- Overall Migration

Test point		Test result		Conclusion
		Overall migration/ (mg/dm ²)		
		3% Acetic acid, 70°C,2h	50% Ethanol, 70°C,2h	
1-1	1 st migration	N.D.	N.D.	Conformity
	2 nd migration	N.D.	N.D.	
	3 rd migration	N.D.	N.D.	
Limit		10	10	/
MDL		5	5	/

Test point	Test result		Conclusion
	Overall migration/ (mg/dm²)		
	3% Acetic acid, 70°C,2h	50% Ethanol, 70°C,2h	
1-2	N.D.	N.D.	Conformity
Limit	10	10	/
MDL	5	5	/

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- Bisphenol A(BPA) content

Test Item	Bisphenol A (BPA)
Limit(Client's Requirement) (mg/kg)	Absent
MDL(mg/kg)	0.1
Test Method/ Instrument	EPA 3540C:1996& EPA 8321B:2007/ LC-MS-MS

Test point	Test Result (mg/kg)	Conclusion
	Bisphenol A (BPA)	
1-2	N.D.	Conformity

Test Item	Bisphenol A (BPA)
Limit(mg/kg)	Absent
MDL (mg/kg)	0.1
Test Method/ Instrument	EPA 3540C:1996& EPA 8321B:2007/ LC-MS-MS

Test point	Test Result (mg/kg)	Conclusion
	Bisphenol A (BPA)	
1-1	N.D.	Conformity

- Specific migration of Bisphenol A(BPA)

Test point	Test Result	Conclusion
	Specific migration of Bisphenol A(BPA)/ (mg/kg)	
	3% Acetic acid,70°C,2h	
1-2	N.D.	Conformity
Limit (Client's Requirement)	0.05	/
MDL	0.02	/

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-Specific migration of Primary aromatic amines

Test Item(s)	MDL (mg/kg)	Limit (mg/kg)
4-Aminobiphenyl	0.002	N.D.
Benzidine	0.002	N.D.
4-Chloro-o-Toluidine	0.002	N.D.
2-Naphthylamine	0.002	N.D.
4-amino-2',3-dimethylazobenzene	0.002	N.D.
5-Nitro-o-toluidine	0.002	N.D.
4-Chloroaniline	0.002	N.D.
4-Methoxy-m-phenylenediamine	0.002	N.D.
4,4'-Diaminodiphenylmethane	0.002	N.D.
3,3'-Dichlorobenzidine	0.002	N.D.
3,3'-Dimethoxybenzidine	0.002	N.D.
3,3'-Dimethylbenzidine	0.002	N.D.
4,4'-Methylenedi-o-toluidine	0.002	N.D.
6-methoxy-m-toluidine	0.002	N.D.
4,4'-methylenebis[2-chloroaniline]	0.002	N.D.
4,4'-Oxydianiline	0.002	N.D.
4,4'-Thiodianiline	0.002	N.D.
2-Aminotoluene	0.002	N.D.
4-methyl-m-phenylenediamine	0.002	N.D.
2,4,5-Trimethylaniline	0.002	N.D.
2-Methoxyaniline	0.002	N.D.
4-Aminoazobenzene	0.002	N.D.
1,3 phenylenediamine	0.002	N.D.
Total of other primary aromatic amines	0.01	0.01

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Test Item(s)	Test Result (mg/kg)		
	1-1		
	1 st migration	2 nd migration	3 rd migration
	3% Acetic acid 70°C, 2h		
4-Aminobiphenyl	N.D.	N.D.	N.D.
Benzidine	N.D.	N.D.	N.D.
4-Chloro-o-Toluidine	N.D.	N.D.	N.D.
2-Naphthylamine	N.D.	N.D.	N.D.
4-amino-2',3-dimethylazobenzene	N.D.	N.D.	N.D.
5-Nitro-o-toluidine	N.D.	N.D.	N.D.
4-Chloroaniline	N.D.	N.D.	N.D.
4-Methoxy-m-phenylenediamine	N.D.	N.D.	N.D.
4,4'-Diaminodiphenylmethane	N.D.	N.D.	N.D.
3,3'-Dichlorobenzidine	N.D.	N.D.	N.D.
3,3'-Dimethoxybenzidine	N.D.	N.D.	N.D.
3,3'-Dimethybenzidine	N.D.	N.D.	N.D.
4,4'-Methylenedi-o-toluidine	N.D.	N.D.	N.D.
6-methoxy-m-toluidine	N.D.	N.D.	N.D.
4,4'-methylenebis[2-chloroaniline]	N.D.	N.D.	N.D.
4,4'-Oxydianiline	N.D.	N.D.	N.D.
4,4'-Thiodianiline	N.D.	N.D.	N.D.
2-Aminotoluene	N.D.	N.D.	N.D.
4-methyl-m-phenylenediamine	N.D.	N.D.	N.D.
2,4,5-Trimethylaniline	N.D.	N.D.	N.D.
2-Methoxyaniline	N.D.	N.D.	N.D.
4-Aminoazobenzene	N.D.	N.D.	N.D.
1,3 phenylenediamine	N.D.	N.D.	N.D.
Total of other primary aromatic amines	N.D.	N.D.	N.D.
Conclusion	Conformity		

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-Specific migration of Heavy metals

Test Item(s)	Test condition/ Equipment	MDL (mg/kg)	Test Result(s) (mg/kg)			Limit (mg/kg)
			1-1			
			1 st migration	2 nd migration	3 rd migration	
Barium (Ba)	3% Acetic acid/ 70°C, 2h/ ICP-OES/ IC	0.1	N.D.	N.D.	N.D.	1
Cobalt (Co)		0.01	N.D.	N.D.	N.D.	0.05
Copper (Cu)		0.25	N.D.	N.D.	N.D.	5
Iron (Fe)		0.25	N.D.	N.D.	N.D.	48
Lithium (Li)		0.1	N.D.	N.D.	N.D.	0.6
Manganese (Mn)		0.1	N.D.	N.D.	N.D.	0.6
Zinc (Zn)		0.25	N.D.	N.D.	N.D.	5
Aluminum (Al)		0.1	N.D.	N.D.	N.D.	1
Europium (Eu)		0.01	N.D.	N.D.	N.D.	/
Gadolinium (Gd)		0.01	N.D.	N.D.	N.D.	/
Lanthanum (La)		0.01	N.D.	N.D.	N.D.	/
Terbium (Tb)		0.01	N.D.	N.D.	N.D.	/
Sum(Eu+Gd+La+Tb)		/	N.D.	N.D.	N.D.	0.05
Antimony (Sb)		0.01	N.D.	N.D.	N.D.	0.04
Arsenic (As)		0.01	N.D.	N.D.	N.D.	N.D.
Cadmium (Cd)		0.002	N.D.	N.D.	N.D.	N.D.
Chromium (Cr)		0.01	N.D.	N.D.	N.D.	N.D.
Lead (Pb)		0.01	N.D.	N.D.	N.D.	N.D.
Mercury (Hg)		0.01	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)		0.01	N.D.	N.D.	N.D.	0.02
Conclusion		/	Conformity			/
Ammonium (NH ₄ ⁺)		0.10	N.D.	N.D.	N.D.	/
Calcium (Ca)		0.01	N.D.	0.040	N.D.	/
Magnesium (Mg)		0.01	0.022	N.D.	N.D.	/
Potassium (K)		0.01	0.038	N.D.	N.D.	/
Sodium (Na)		0.01	0.046	N.D.	N.D.	/

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- Volatile Organic Matter

Unit: %

Test item(s)	Test Condition	MDL	Result(s)	Limit
			1-2	
Volatile Organic Matter	200°C, 4h	0.1	0.41	0.5
Conclusion		/	Conformity	/

- Peroxide value

Unit: %

Test Item	MDL	Result(s)	Limit
		1-2	
Peroxide value	0.2	N.D.	Absent
Conclusion	/	Conformity	/

- Specific Migration of Organotin (measured as Tin)

Test point	Test Result	Conclusion
	Specific Migration of Organotin (measured as Tin)/ (mg/kg)	
	3% Acetic acid, 70°C,2h	
1-2	N.D.	Conformity
Limit	0.1	/
MDL	0.01	/

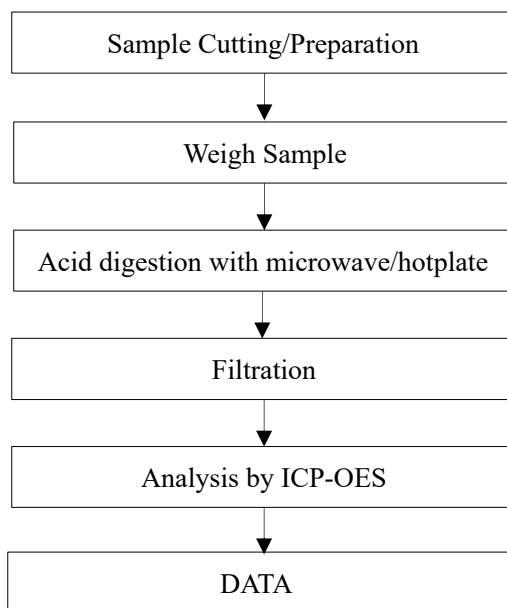
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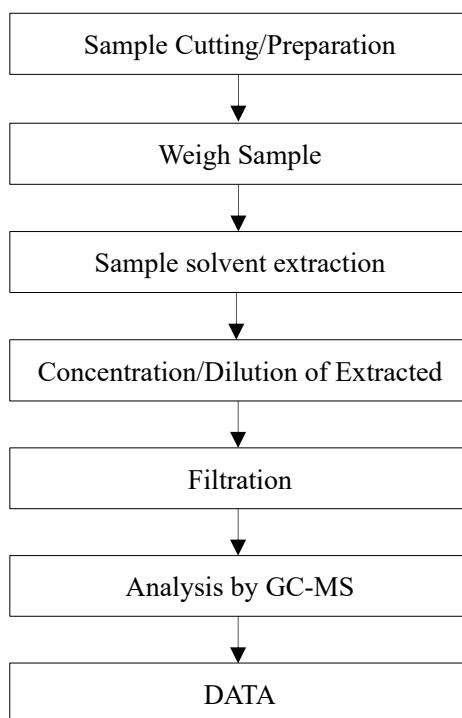
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Test Flow Chart of Heavy Metal Content



Test Flow Chart of Phthalates



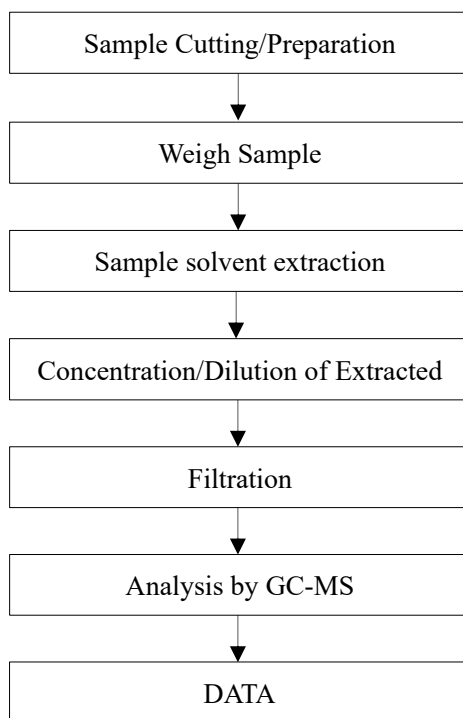
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Test Flow Chart of Polycyclic-aromatic Hydrocarbons (PAHs)



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Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd. (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. 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 the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company 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.
3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

*** End of Report ***

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the “Dedicated Testing/Inspection Stamp” is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.