Test Report

No. CANEC2222832045 Date: 07 Nov 2022 Page 1 of 18

Client Name : SUZHOU WALTER ELECTRONIC CO., LTD / WALTER ELECTRONIC TECHNOLOGY LIMITED / HONG KONG WALTER ELECTRONIC TECHNOLOGY LIMITED, TAIWAN BRANCH

Client Address : NO.99, XINLI ROAD, FENHU HI-TECH INDUSTRIAL DEVELOPMENT ZONE, WUJIANG DISTRICT, SUZHOU, JIANGSU, CHINA

Sample Name : Brick Fuse

Client Ref. Info. : Used for 6125SF、6125T、6125F、6125SH、2410H、2410F、2410LF、2410LT、1032SF、1032ST、1032HB、1245CF、1025AT

The above sample(s) and information were provided by the client.

SGS Job No. : CP22-057891 - SZ

Date of Sample Received : 26 Oct 2022

Testing Period : 26 Oct 2022 - 03 Nov 2022

Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS
Elementary Analysis	See Results
Halogen	See Results
Elementary Analysis	See Results
Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives	See Results

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

scan to see the report

8BB20F54

Allie Chen

Allie Chen
Approved Signatory

198 Kezhu Road,Scientech Park Guangzhou Economic & Technology Development District,Guangzhou,China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
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NO.	NO.	Sample Name	Test Part Description	Raw Material Report No.	Remark
ID003	1	Fuse wire	Silver-gray metal wire	CAN22-22832005	Test results & photo(s) of sample ID003 is from test report CAN22-22832005
ID006	2	Silica Sand	Gray powder	CAN22-22832011	Test results & photo(s) of sample ID006 is from test report CAN22-22832011
ID012	3	Ink	Black ink	CAN22-22832023	Test results & photo(s) of sample ID012 is from test report CAN22-22832023
ID015	4	Ceramic tube	Beige ceramic tube	CAN22-22832031	Test results & photo(s) of sample ID015 is from test report CAN22-22832031
ID016	5	Ceramic tube	White ceramic tube	CAN22-22832033	Test results & photo(s) of sample ID016 is from test report CAN22-22832033
ID017	6	Cap	Gold metal	CAN22-22832035	Test results & photo(s) of sample ID017 is from test report CAN22-22832035
ID018	7	Cap	Silvery metal	CAN22-22832037	Test results & photo(s) of sample ID018 is from test report CAN22-22832037
ID019	8	Soldering tin	Silver-gray metal wire with powder	CAN22-22832039	Test results & photo(s) of sample ID019 is from test report CAN22-22832039
ID020	9	Glass fibre thread	White thread	CAN22-22832041	Test results & photo(s) of sample ID020 is from test report CAN22-22832041

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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN22-228320.015	Beige ceramic tube
SN2	CAN22-228320.016	White ceramic tube
SN3	CAN22-228320.017	Gold metal
SN4	CAN22-228320.018	Silvery metal
SN5	CAN22-228320.019	Silver-gray metal wire with powder
SN6	CAN22-228320.020	White thread

Remarks :

(1) 1 mg/kg = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	*015*	*016*	*019*
Cadmium (Cd)	100	mg/kg	2	ND	ND	ND
Lead (Pb)	1000	mg/kg	2	30	ND	864396▲
Mercury (Hg)	1000	mg/kg	2	ND	ND	ND
Hexavalent Chromium (CrVI)	1000	mg/kg	8	ND	ND	ND
Sum of PBBs	1000	mg/kg	-	ND	ND	ND
Monobromobiphenyl	-	mg/kg	5	ND	ND	ND
Dibromobiphenyl	-	mg/kg	5	ND	ND	ND
Tribromobiphenyl	-	mg/kg	5	ND	ND	ND
Tetrabromobiphenyl	-	mg/kg	5	ND	ND	ND
Pentabromobiphenyl	-	mg/kg	5	ND	ND	ND
Hexabromobiphenyl	-	mg/kg	5	ND	ND	ND
Heptabromobiphenyl	-	mg/kg	5	ND	ND	ND
Octabromobiphenyl	-	mg/kg	5	ND	ND	ND
Nonabromobiphenyl	-	mg/kg	5	ND	ND	ND

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Test Item(s)	Limit	Unit	MDL	015	016	019
Decabromobiphenyl	-	mg/kg	5	ND	ND	ND
Sum of PBDEs	1000	mg/kg	-	ND	ND	ND
Monobromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Dibromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Tribromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Octabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Decabromodiphenyl ether	-	mg/kg	5	ND	ND	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND	ND	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND	ND	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND	ND	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND	ND	ND

Test Item(s)	Limit	Unit	MDL	020
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	11
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1000	mg/kg	8	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND

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Test Item(s)	Limit	Unit	MDL	020
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
(2) IEC 62321 series is equivalent to EN 62321 series
(3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	017	018
Cadmium (Cd)	100	mg/kg	2	ND	ND
Lead (Pb)	1000	mg/kg	2	22	7
Mercury (Hg)	1000	mg/kg	2	ND	ND
Hexavalent Chromium (Cr(VI))▾	-	µg/cm²	0.10	ND	ND
Sum of PBBs	1000	mg/kg	-	ND	ND
Monobromobiphenyl	-	mg/kg	5	ND	ND
Dibromobiphenyl	-	mg/kg	5	ND	ND
Tribromobiphenyl	-	mg/kg	5	ND	ND
Tetrabromobiphenyl	-	mg/kg	5	ND	ND
Pentabromobiphenyl	-	mg/kg	5	ND	ND
Hexabromobiphenyl	-	mg/kg	5	ND	ND
Heptabromobiphenyl	-	mg/kg	5	ND	ND
Octabromobiphenyl	-	mg/kg	5	ND	ND
Nonabromobiphenyl	-	mg/kg	5	ND	ND

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t (86-20) 82155555 www.sgsgroup.com.cn
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Test Item(s)	Limit	Unit	MDL	017	018
Decabromobiphenyl	-	mg/kg	5	ND	ND
Sum of PBDEs	1000	mg/kg	-	ND	ND
Monobromodiphenyl ether	-	mg/kg	5	ND	ND
Dibromodiphenyl ether	-	mg/kg	5	ND	ND
Tribromodiphenyl ether	-	mg/kg	5	ND	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND	ND
Octabromodiphenyl ether	-	mg/kg	5	ND	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND	ND
Decabromodiphenyl ether	-	mg/kg	5	ND	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND	ND

Notes :

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series

(3) ▾= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 μg/cm². The sample coating is considered to contain CrVI

b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 μg/cm²). The coating is considered a non-CrVI based coating

c. The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-009-01, with reference to EPA 3050B:1996), analysis was performed by ICP-OES.

Test Item(s)	Unit	MDL	017	018
Beryllium (Be)	mg/kg	5	ND	ND

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Halogen

Test Method : With reference to EN 14582:2016, analysis was performed by IC.

Test Item(s)	Unit	MDL	015	016	017
Fluorine (F)	mg/kg	50	ND	ND	ND
Chlorine (Cl)	mg/kg	50	ND	ND	ND
Bromine (Br)	mg/kg	50	ND	ND	ND
Iodine (I)	mg/kg	50	ND	ND	ND

Test Item(s)	Unit	MDL	018	019	020
Fluorine (F)	mg/kg	50	ND	ND	1332
Chlorine (Cl)	mg/kg	50	ND	ND	ND
Bromine (Br)	mg/kg	50	ND	101	ND
Iodine (I)	mg/kg	50	ND	ND	ND

Elementary Analysis

Test Method : SGS In-house method (GZTC CHEM-TOP-004-01, with reference to EPA 3052:1996), analysis was performed by ICP-OES.

Test Item(s)	Unit	MDL	019
Beryllium (Be)	mg/kg	5	ND

Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS NO.	Unit	MDL	020
Perfluorooctanoic acid (PFOA) and its salts+	335-67-1	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) ^	1763-23-1	mg/kg	0.010	ND
Perfluorooctane Sulfonamide (PFOSA)	754-91-6	mg/kg	0.010	ND
N-methylperfluoro-1-octanesulfonamide(MeFOSA)	31506-32-8	mg/kg	0.010	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	mg/kg	0.010	ND
2-(N-methylperfluoro-1-octanesulfonamido) -ethanol(MeFOSE)	24448-09-7	mg/kg	0.010	ND

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Test Item(s)	CAS NO.	Unit	MDL	020
2-(N-ethylperfluoro-1-octanesulfonamido) -ethanol(EtFOSE)	1691-99-2	mg/kg	0.010	ND
Perfluorooctane sulfonates (PFOS) and its derivatives	-	mg/kg	-	ND

Notes :

(1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
(2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH_4 (CAS No.: 29081-56-9), PFOS-$NH(OH)_2$ (CAS No.: 70225-14-8), PFOS-$N(C_2H_5)_4$ (CAS No.: 56773-42-3), PFOS-DDA(CAS No.:251099-16-8) and POSF (CAS No.: 307-35-7)

Remark▲:According to the declaration from the client, Lead (Pb) in specimen 019 is exempted by EU RoHS directive 2011/65/EU based on |ANNEX III 7(a)|: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

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.

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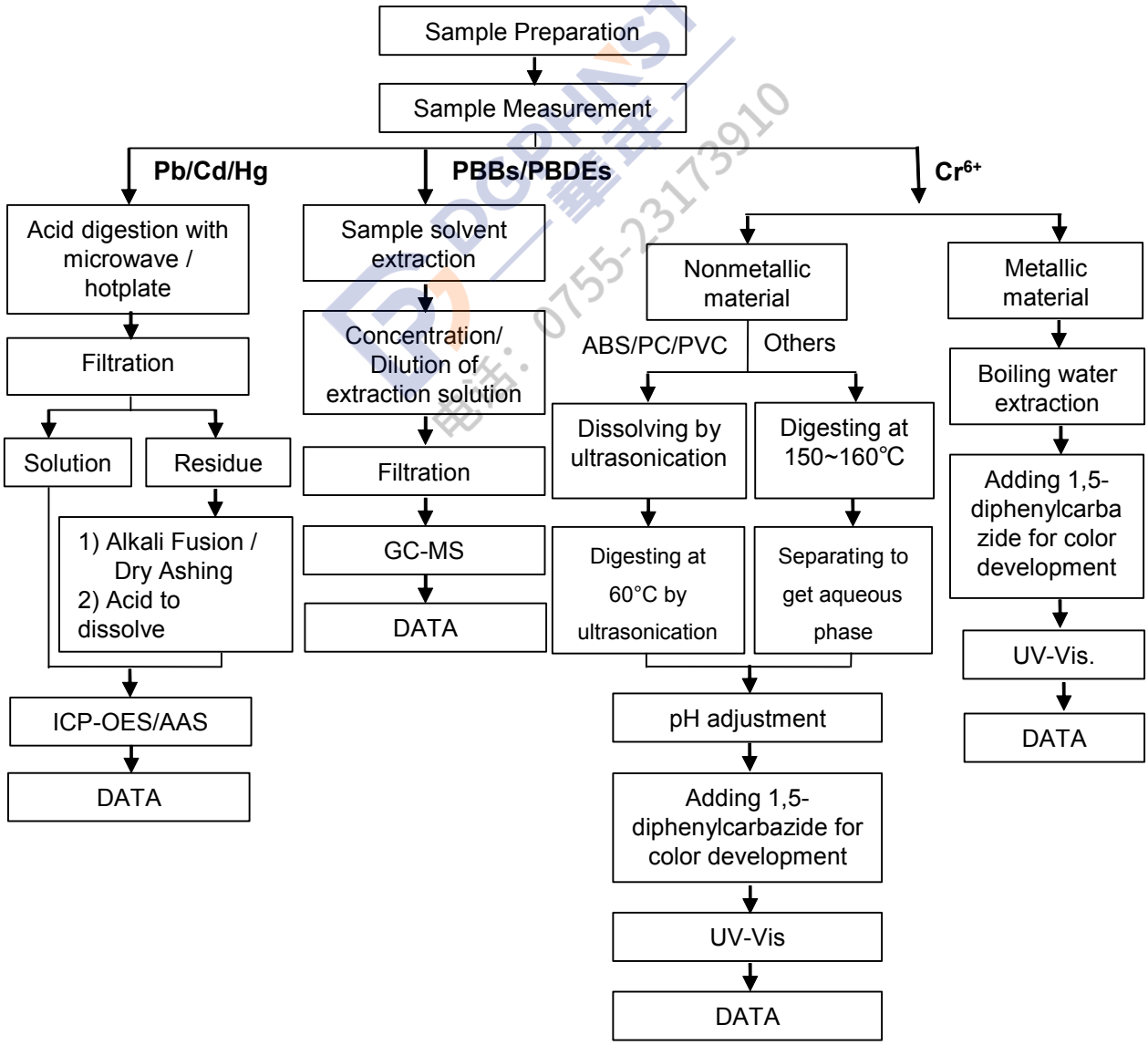
ATTACHMENTS

Pb/Cd/Hg/Cr^{6+}/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre -conditioning method according to below flow chart. (Cr^{6+} and PBBs/PBDEs test method excluded).



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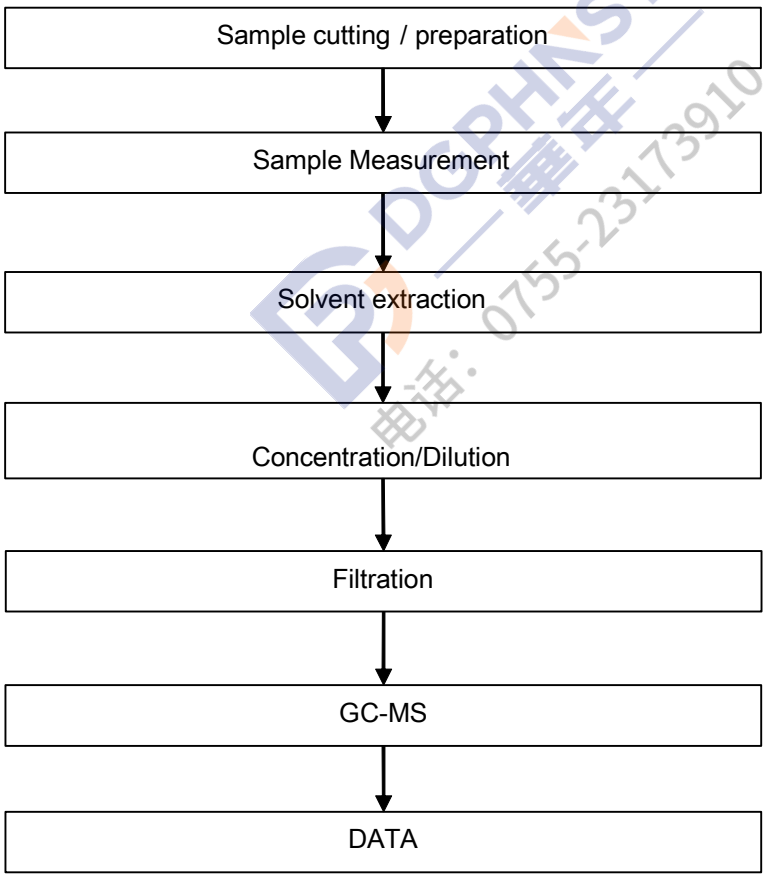
Phthalates Testing Flow Chart



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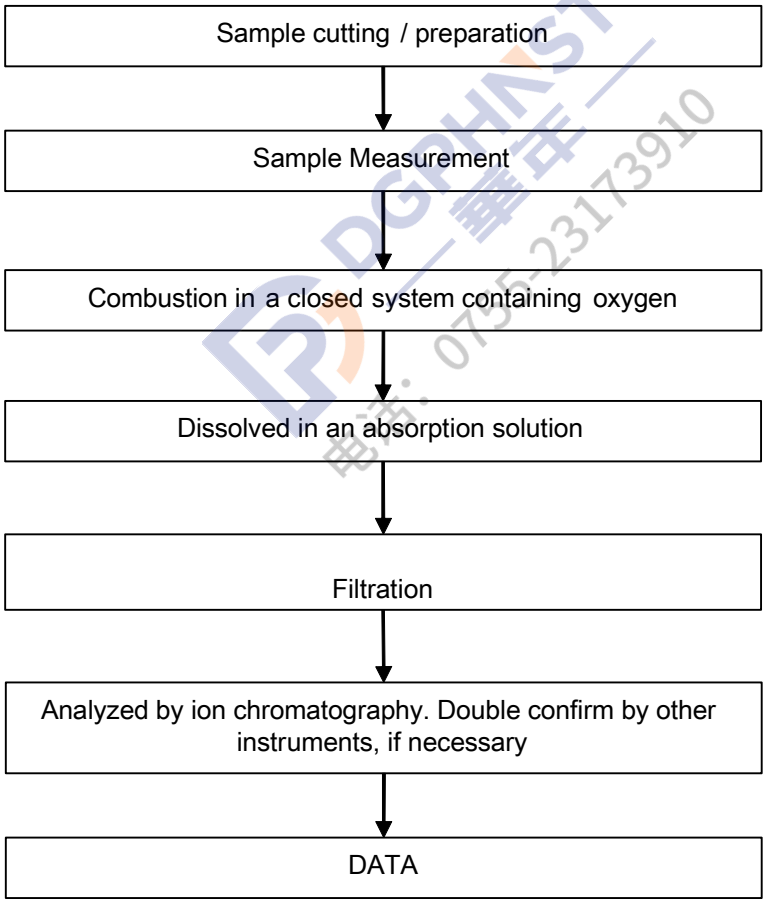
Halogen Testing Flow Chart



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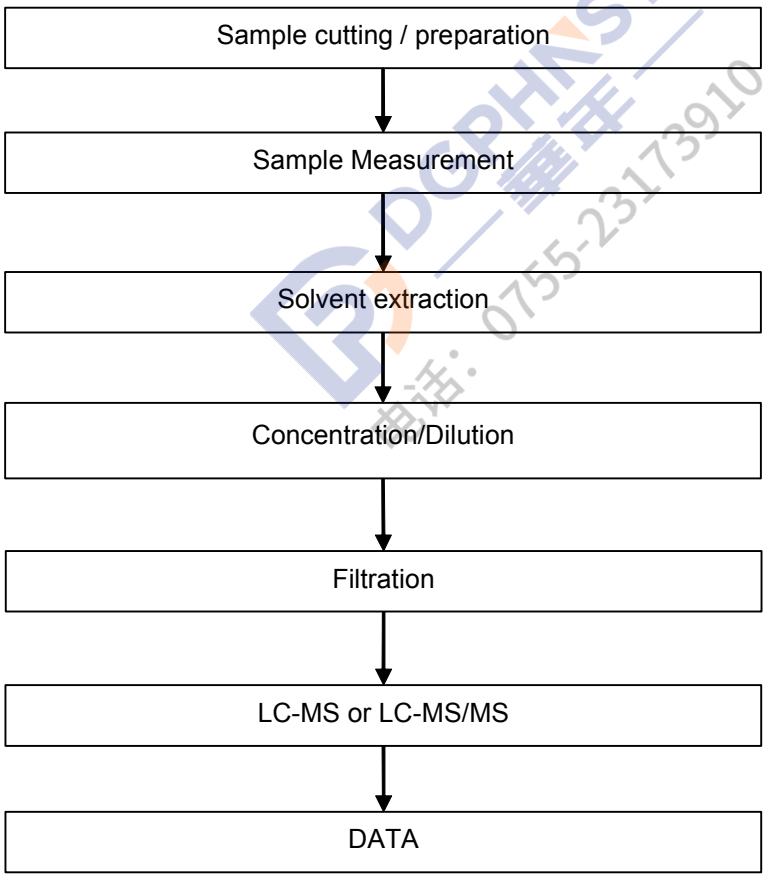
Testing Flow Chart



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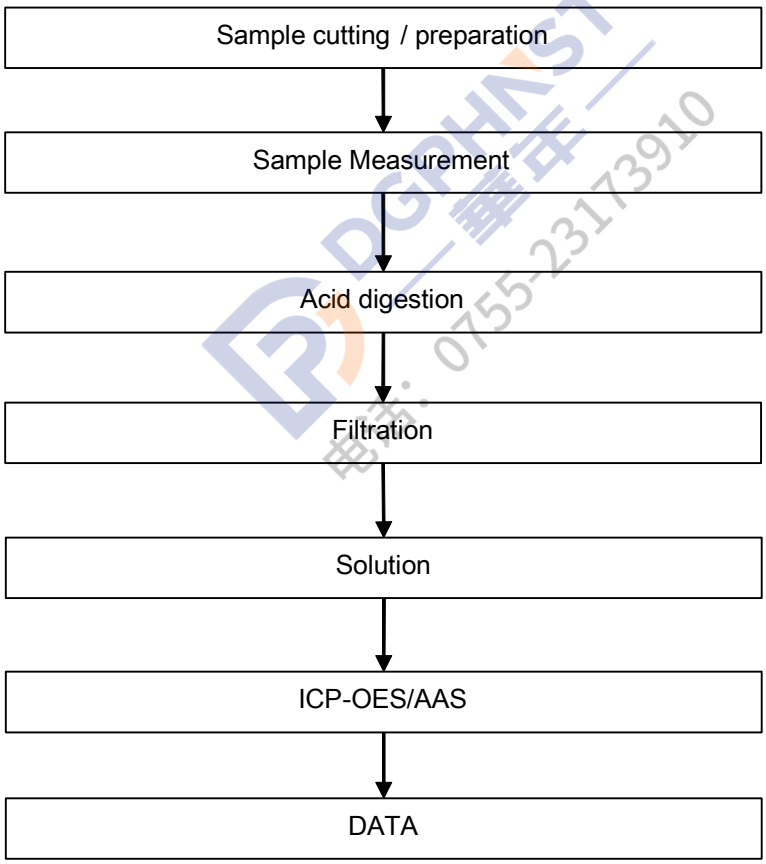
Elementary Testing Flow Chart



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Sample photo:

CAN22-228320.015

CAN22-228320.016

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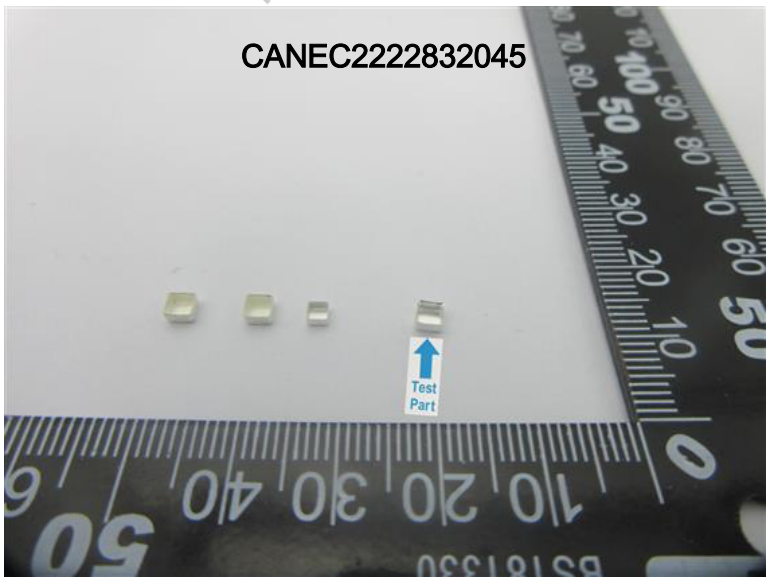
CAN22-228320.017



CAN22-228320.018

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SGS authenticate the photo on original report only

*** End of Report ***

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