

KOREA ENGINEERING PLASTICS CO., LTD.

84, Jangsaengpogorae-ro
Nam-gu, Ulsan
Korea



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

SGS File No. : AYGA24-00823

Product Name : TX-31 NAT

Item No./Part No. : TX-31 NAT



Client Reference Data : F10-01 NAT, F10-02 NAT, F10-03H(M) NAT, F10-03H NC, F10-03H LOF NAT, F10-01 T2 NAT, F10-52(H/D) NAT, F10-52H LOF NAT, F15-33 NAT, F20-02 NAT, F20-03 NAT, F20-03 NT, F20-03M NAT, F20-03 LOF(2) NAT, F20-03 LOF NAT2, F20-33 NAT, F20-52(G) NAT, F20-52 LOF(2) NAT, F25-03(M) NAT, F25-03 LOF NAT, F25-03H NAT, F25-03H NC, F25-03HT NAT, F25-03HT LOF NAT, F25-63 NAT, F30-01 NAT, F30-03 NAT, F30-03 LOF NAT, F30-34 NAT, F30-52(G) NAT, F40-03 NAT, F40-34 NAT, TX-11H NAT, TX-11H NC, TX-11H LOF NAT, TX-11HK NAT, TX-11HK LOF2 NAT, TX-21(LOF) NAT, TX-31(LOF) NAT, MX20BT01 NAT, MX25BT01 NAT, MX30BT01 NAT, TX-81DT NAT, AR-15 NAT, K9 NAT, K27 NAT, CE66 NAT, KP20 NAT, POM C9N NAT, CN CE M90 CF2001 NATURAL, CN CE M270 CF2001 NATURAL

Received Date : 2024. 01. 04

Test Period : 2024. 01. 04 to 2024. 01. 15

Report Comments : By the applicant's request, item No.s/part No.s & client reference information are stated/added on report.

Test Results : For further details, please refer to following page(s)

 
Tonny Park Billy Oh

Technical Manager / SGS Korea Co., Ltd

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Test Report No. F690101/LF-CTSAYGA24-00823

Issued Date : 2024. 01. 15

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Sample No. : AYGA24-00823.001
Sample Description : TX-31 NAT
Item No./Part No. : TX-31 NAT
Materials : POM

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 : 2013, by ICP-OES	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321-5 : 2013, by ICP-OES	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 : 2013+AMD1:2017CSV, by ICP-OES	2	N.D.
Hexavalent Chromium (Cr VI)*	mg/kg	With reference to IEC 62321-7-2 : 2017, by UV-Vis and/or with reference to IEC 62321-5 : 2013, by ICP-OES	8	N.D.

Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6 : 2015, by GC-MS	5	N.D.

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Sample No. : AYGA24-00823.001
Sample Description : TX-31 NAT
Item No./Part No. : TX-31 NAT
Materials : POM

Phthalates

Test Items	Unit	Test Method	MDL	Results
Di-(2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-butyl phthalate (DBP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Benzyl butyl phthalate (BBP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-isodecyl phthalate (DIDP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-isononyl phthalate (DINP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-n-octyl phthalate (DNOP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-n-hexyl phthalate (DNHP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.

Flame Retardants

Test Items	Unit	Test Method	MDL	Results
Hexabromocyclododecane (HBCDD)	mg/kg	With reference to USEPA 3540 C, by LC/MS	5	N.D.

- NOTE: (1) N.D. = Not detected. (<MDL)
(2) mg/kg = ppm, ug/kg = ppb, mg/L = ppm
(3) MDL = Method Detection Limit
(4) - = No regulation
(5) ** = Qualitative analysis (No Unit)
(6) Negative = Undetectable / Positive = Detectable
(7) * = a. The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
b. If the content of Total Chromium (Cr) is greater than the MDL of Hexavalent Chromium (Cr(VI)), it is the result of hexavalent Chromium by UV-VIS.
(8) The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test report is not related to Korea Laboratory Accreditation Scheme.

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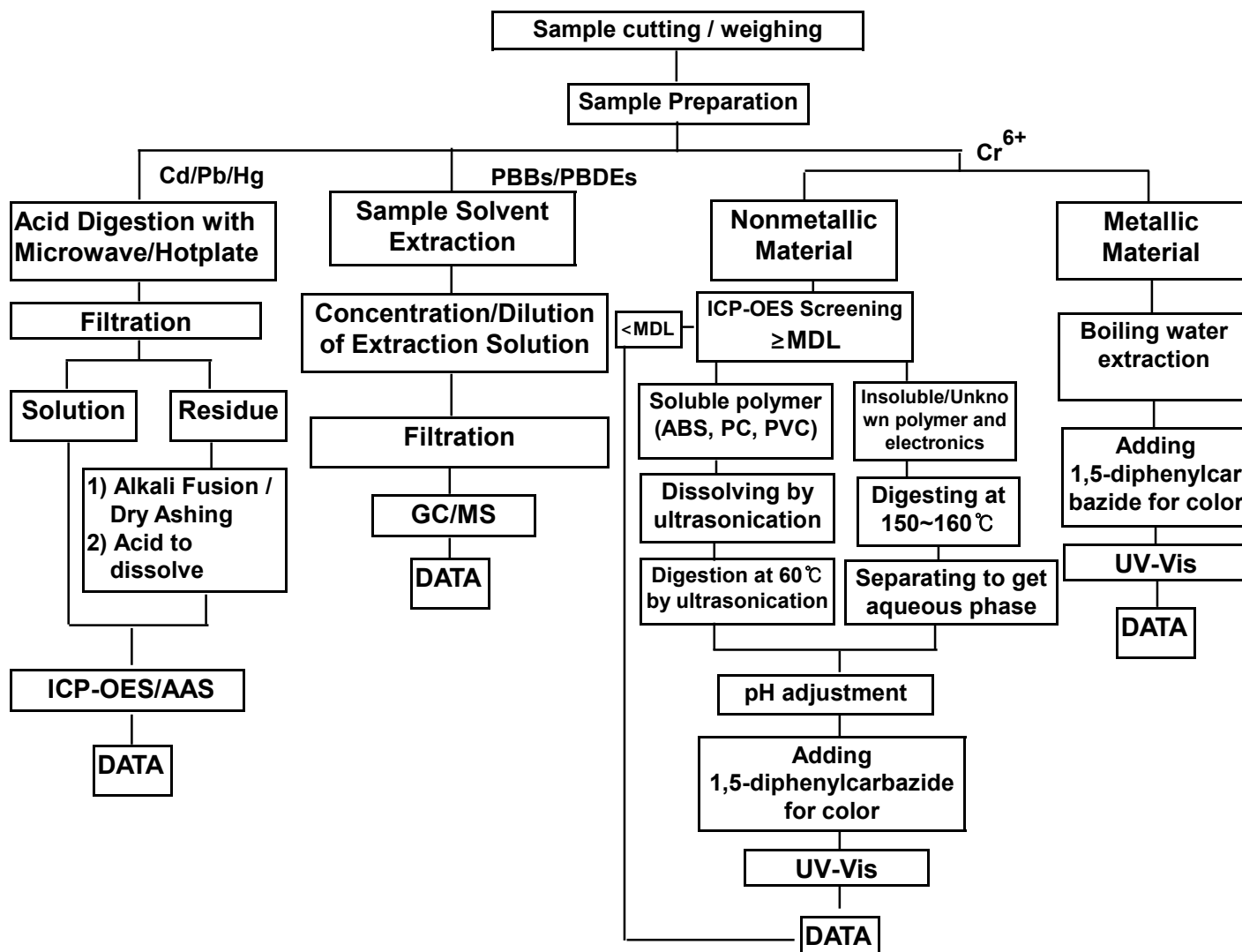
Picture of Sample as Received:



AYGA24-00823.001

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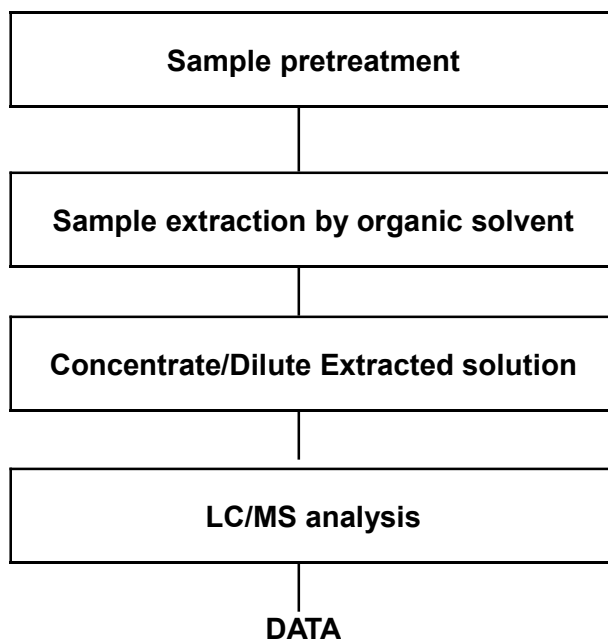
Testing Flow Chart for RoHS: Cd/Pb/Hg/Cr⁶⁺ /PBBs&PBDEs Testing



The samples were dissolved totally at the acid digestion step of the above flow chart for Cd,Pb,Hg
 Section Chief : Tonny Park



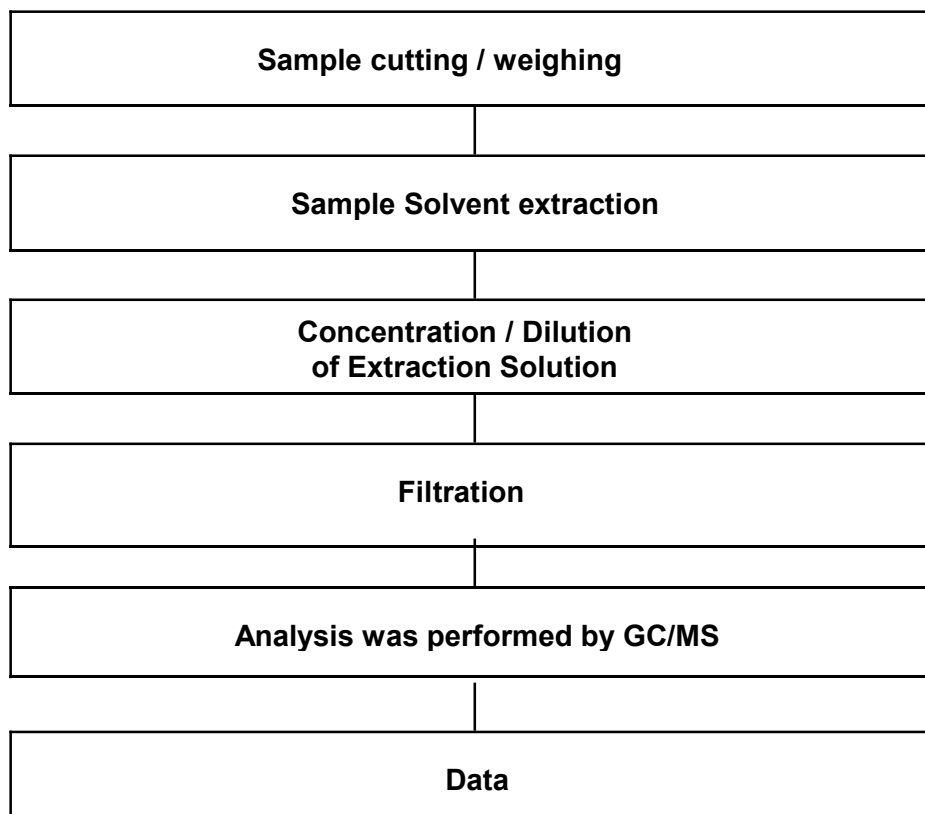
Testing Flow Chart for HBCD



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Flow Chart for Phthalate Test



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

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