

#### KCC CORPORATION(JEONJU PLANT#2)

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F07 (02)

ESTING S

Issued Date : 2025. 01. 02

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

SGS File No.	: AYAA24-45128
Product Name	: KTMC-1050G(+)
Item No./Part No.	: N/A
Received Date	: 2024. 12. 17
Test Period	: 2024. 12. 17 to 2025. 01. 02
Test Results	: For further details, please refer to following page(s)

Monet Jeong

Monet Jeong Technical Manager / SGS Korea Co., Ltd

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Sample No.	: AYAA24-45128.001
Sample Description	: KTMC-1050G(+)
Item No./Part No.	: N/A
Materials	: N/A

#### Red phosphorus

Test Items	Unit	Test Method	MDL	Results
Red phosphorus	**	In-house method by Pyrolyzer-GC/MS	-	Negative

#### 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.

#### **Total Metals**

Test Items	Unit	Test Method	MDL	Results
Beryllium (Be)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.
Antimony (Sb)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	10	136

#### 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.

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Sample No.	: AYAA24-45128.001
Sample Description	: KTMC-1050G(+)
Item No./Part No.	: N/A
Materials	: N/A

#### Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
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.

#### 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.

#### **Chlorinated Paraffin**

Test Items Unit	Test Method N	MDL Results	esults
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Sample No.	: AYAA24-45128.001
Sample Description	: KTMC-1050G(+)
Item No./Part No.	: N/A
Materials	: N/A

#### **Chlorinated Paraffin**

Test Items	Unit	Test Method	MDL	Results
Alkanes, C14~17, Medium Chain	mg/kg	With reference to ISO 18219 : 2015, by CI- GC-MS	50	N.D.
Chlorinated Paraffins(MCCP)				

#### Halogen Content

Test Items	Unit	Test Method	MDL	Results
Bromine(Br)	mg/kg	With reference to BS EN 14582 : 2016, by IC	30	49.8
Chlorine(Cl)	mg/kg	With reference to BS EN 14582 : 2016, by IC	30	113
Fluorine(F)	mg/kg	With reference to BS EN 14582 : 2016, by IC	30	N.D.
lodine(I)	mg/kg	With reference to BS EN 14582 : 2016, by IC	50	N.D.

#### PFAS (Per-and polyfluoroalkyl substances)

Test Items	Unit	Test Method	MDL	Results
Perfluorootanoic acid (PFOA)	µg/kg	with reference to ISO 23702-1: 2023, HPLC/MS/MS	10	N.D.
Perfluorooctanesulfonic Acid (PFOS)	µg/kg	with reference to ISO 23702-1: 2023, HPLC/MS/MS	10	N.D.

#### Flame Retardants

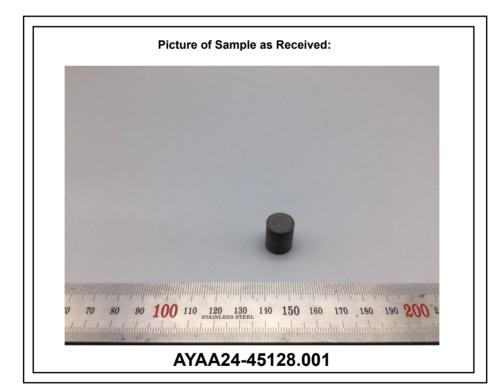
Test Items	Unit	Test Method	MDL	Results
Hexabromocyclododecane (HBCDD)	mg/kg	With reference to USEPA 3540 C, by LC/MS	5	N.D.

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- 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) ++= a. The sample is positive for Cr VI if the Cr VI concentration is greater than 0.13 ug/cm2.
    - The sample coating is considered to contain  $\mbox{Cr}\mbox{VI}\,.$
    - b. The sample is negative for Cr VI if Cr VI is ND(concentration less than 0.10 ug/cm2). The coating is considered a non-Cr VI based coating.
    - c. The result between 0.10 ug/cm2 and 0.13 ug/cm2 is considered to be inconclusive unavoidable coating variations may influence the determination.

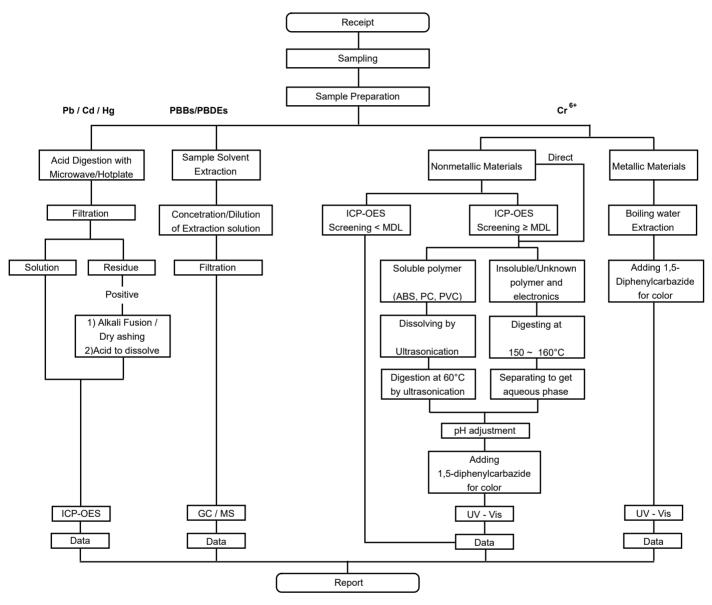


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# Flow Chart for RoHS Pb / Cd / Hg / Cr<sup>6+</sup>/ PBBs&PBDEs Test



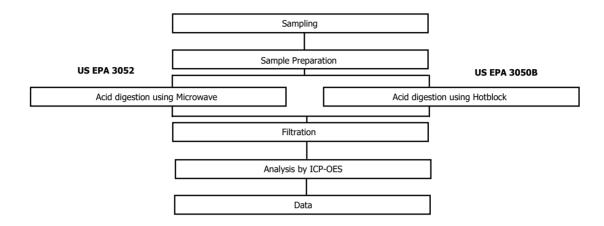
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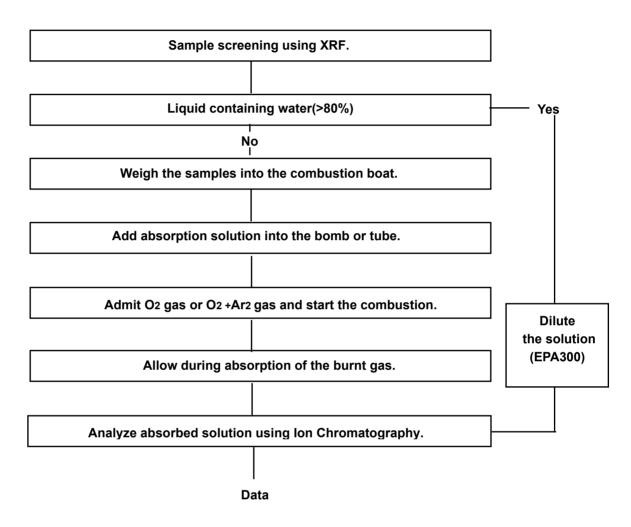
#### Flow Chart for Heavy metal



Major Inorganic Heavy Metals	Antimony(Sb) , Beryllium(Be) , Phosphorus(P) , Arsenic(As) etc.
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### Flow Chart for Halogen Test

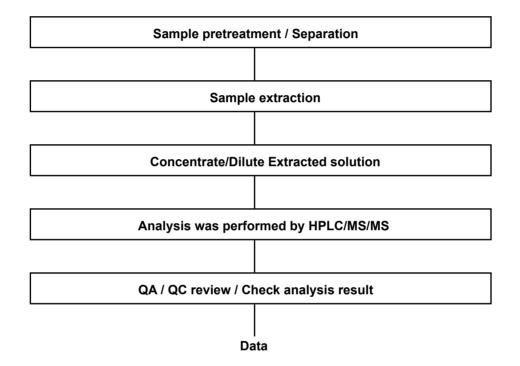
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Flow Chart for PFOS/PFOA Test



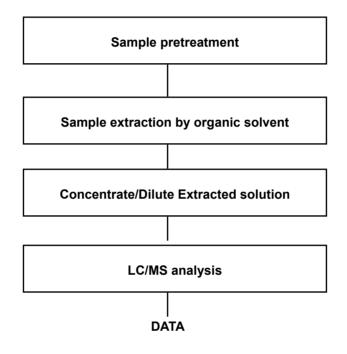
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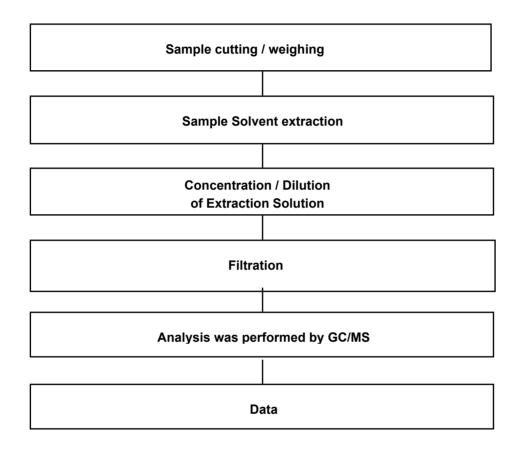
# **Testing Flow Chart for HBCD**



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## Flow Chart for PhthalateTest



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