

#### **POONGSAN CORPORATION**

94 Sanam-ro, Onsan-eup Ulju-gun, Ulsan Korea

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

SGS File No. : AYGA25-00311

Product Name : C5240

Item No./Part No. : Hyper Phosphorus Bronze

**Received Date** : 2025. 01. 08

Test Period : 2025. 01. 08 to 2025. 01. 23

Test Performed : Based on the performed testes on selected part of submitted samples, the results of Cadmium,

Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB),

Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl

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phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP) comply

With the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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

Manat Isaan

Monet Jeong

Monet Jeong

Technical Manager / SGS Korea Co., Ltd

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**Sample No.** : AYGA25-00311.001

Sample Description : C5240

Item No./Part No. : Hyper Phosphorus Bronze

Materials : N/A

### **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	19.0
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 : 2013+AMD1:2017CSV, by ICP-OES	2	N.D.
Hexavalent Chromium (Cr VI)++	μg/cm²	With reference to IEC 62321-7-1 : 2015, by UV-Vis	0.1	N.D.

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## **Total Metals**

Test Items	Unit	Test Method	MDL	Results
Arsenic (As)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	10	N.D.
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	N.D.

#### Flame Retardants-PBBs/PBDEs

Tiame Hetardants 1 bbs/1 bbcs				
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.
		1		ı

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**Sample No.** : AYGA25-00311.001

Sample Description : C5240

Item No./Part No. : Hyper Phosphorus Bronze

Materials : N/A

### Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
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-isobutyl phthalate (DIBP)	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-(2-ethylhexyl) phthalate (DEHP)	mg/kg	With reference to IEC 62321-8: 2017, by GC-MS	50	N.D.

### PCBs & PCTs

Test Items	Unit	Test Method	MDL	Results
Polychlorinated Biphenyls (PCBs)	mg/kg	With reference to US EPA 8082,(US EPA 3550C),	3	N.D.
		by GC/MS		

## PFAS (Per-and polyfluoroalkyl substances)

Test Items	Unit	Test Method	MDL	Results
Perfluorootanoic acid (PFOA)	μg/kg	with reference to EN 17681-1:2022, HPLC/MS/MS	10	N.D.
Perfluorooctanesulfonic Acid (PFOS)	μg/kg	with reference to EN 17681-1:2022, HPLC/MS/MS	10	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



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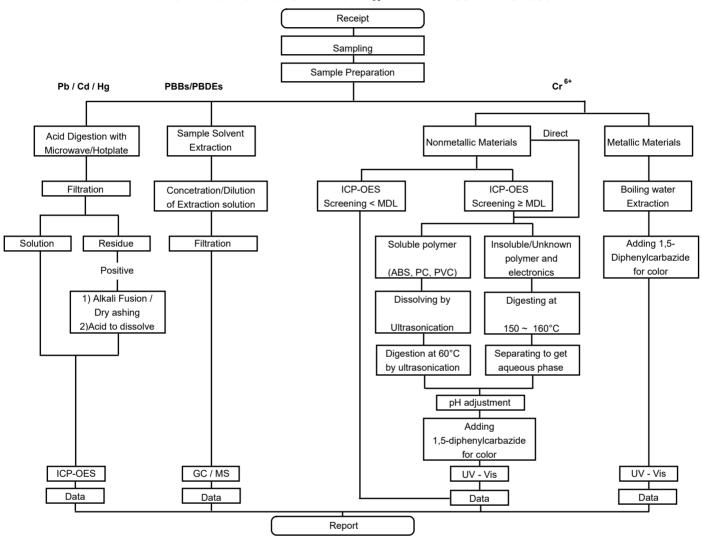
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## Flow Chart for RoHS Pb / Cd / Hg / Cr<sup>6+</sup>/ PBBs&PBDEs Test

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The samples were dissolved totally at the acid digestion step of the above flow chart for Cd, Pb, Hg.

Technician: Aubrey Kim, Jieun Yoo, Dongoh kim

Supervisor: Monet Jeong

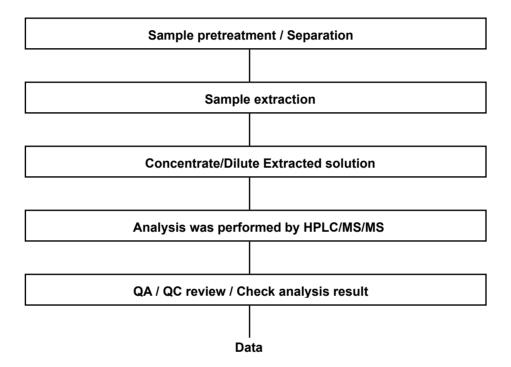
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## Flow Chart for PFOS/PFOA Test

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Technician : Moonju Kim Supervisor: Joice Lee

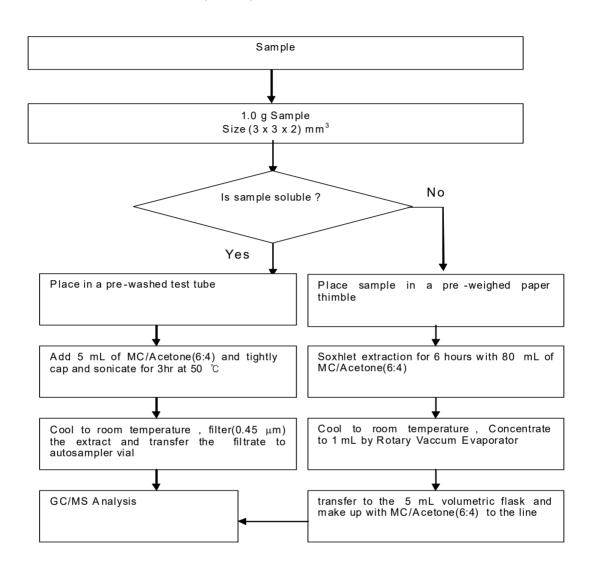
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## PCBs,PCTs,PCNs Flow Chart

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Technician : Jinhee Kim Supervisor: Jieun Lee

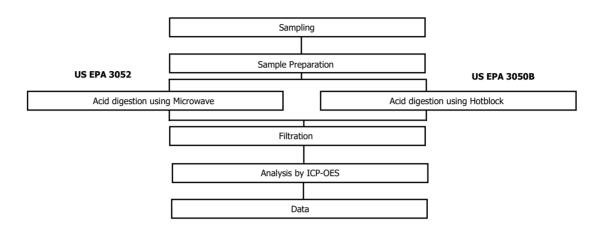
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## Flow Chart for Heavy metal

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Major Inorganic
Heavy Metals
Antimony(Sb) , Beryllium(Be) , Phosphorus(P) , Arsenic(As) etc.

Technician : JunHyuk Choi Supervisor: Heejin Kim

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

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