

**BURIM CHEMICAL CO., LTD.** 

403-111, Hyuam-ro 284beon-gil Nam-myeon Yangju-si, Gyeonggi-do Korea

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

SGS File No. : AYAA20-68719

Product Name : Pressure Sensitive Adhesive(Acryl based)

Item No./Part No. : N/A

**Received Date** : 2020. 12. 24

Test Period : 2020. 12. 24 to 2021. 01. 04

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

SGS Korea Co., Ltd.

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Tommy Oh / Chemical Lab Mgr



**Sample No.** : AYAA20-68719.001

Sample Description : Pressure Sensitive Adhesive(Acryl based)

Item No./Part No. : N/A
Materials : N/A

#### Heavy Metals

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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+A1 : 2017, 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.
Antimony (Sb)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP	10	N.D.
Beryllium (Be)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP	5	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.

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**Sample No.** : AYAA20-68719.001

Sample Description : Pressure Sensitive Adhesive(Acryl based)

Item No./Part No. : N/A
Materials : N/A

### Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
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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#### **Phthalates**

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Test Items	Unit	Test Method	MDL	Results
Benzyl butyl phthalate (BBP)	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.
Di-(2-ethylhexyl) phthalate (DEHP)	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-isobutyl phthalate (DIBP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-ethyl phthalate(DEP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-methyl phthalate (DMP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
[di(C7-C11 alkyl)phthalate] linear and branched (DHNUP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
[di(C6-C8 alkyl)phthalate] branched (DIHP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Bis(2-methoxyethyl) phthalate (BMP, BMEP, DMEP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-iso-pentyl phthalate(DIPP)	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.
Di-n-pentyl phthalate(DPP, DnPP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
n-Pentyl-isopentyl phthalate (iPnPP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-pentyl phthalate, linear and branched (TDPP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Di-cyclohexyl phthalate (DCHP)	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.
Dipropyl Heptyl Phthalate	mg/kg	With reference to IEC 62321-8 : 2017, by GC-MS	50	N.D.

### **Chlorinated Paraffin**

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



**Sample No.** : AYAA20-68719.001

Sample Description : Pressure Sensitive Adhesive(Acryl based)

Item No./Part No. : N/A
Materials : N/A

#### Halogen Content

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

NOTE: (1) N.D. = Not detected.(<MDL)

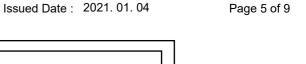
- (2) mg/kg = ppm,  $\mu$ g/kg = ppb, mg/L=ppm
- (3) MDL = Method Detection Limit
- (4) = No regulation
- (5) Negative = Undetectable / Positive = Detectable
- (6) \*\* = Qualitative analysis (No Unit)
- (7) \* = a. The result of Hexavalent Chromium (Cr(VI)) is "ND" as the result of Chromium (Cr) is "ND", and confirmation test of Hexavalent Chromium (Cr(VI)) is not required.
  - b. If the Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.
- (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.

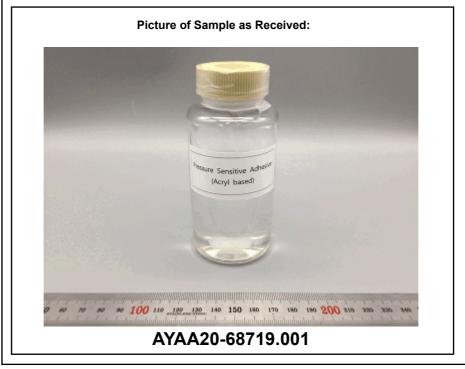
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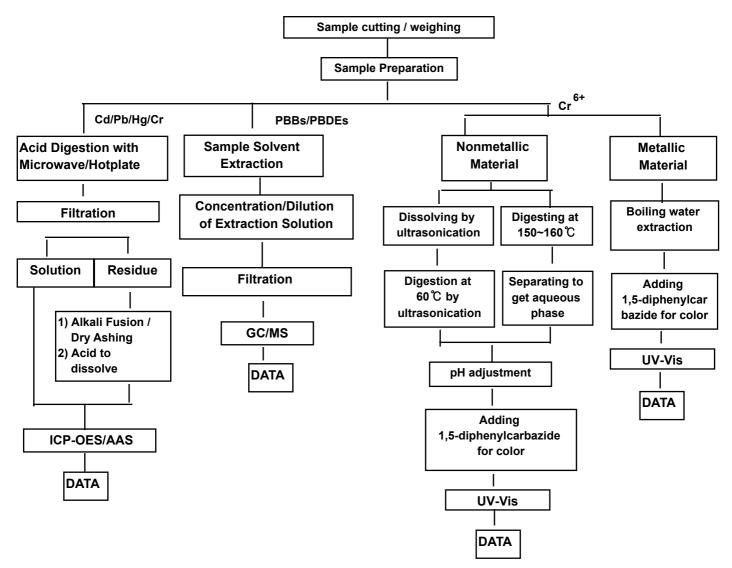




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## Testing Flow Chart for RoHS:Cd/Pb/Hg/Cr6+ /PBBs&PBDEs Testing

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

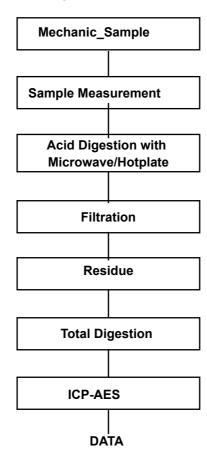


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## Flow Chart for Inorganic Elements Testing

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## Inorganic Elements

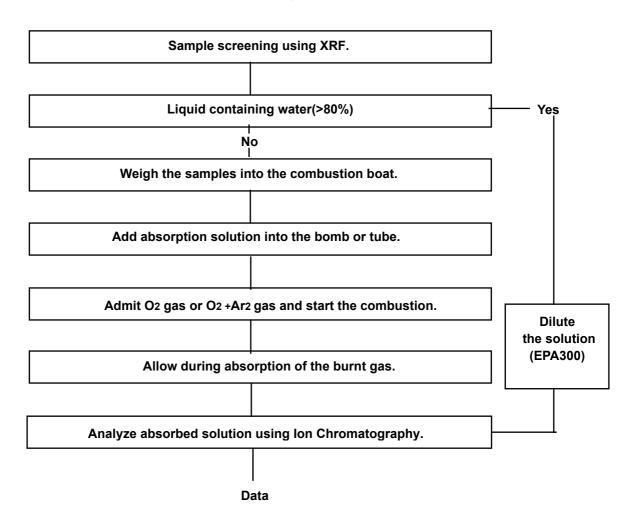


Major Inorganic Antimony(Sb) , Beryllium(Be) , Phosphorus(P) ,
Heavy Metals Arsenic(As) etc.



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### Flow Chart for Halogen Test



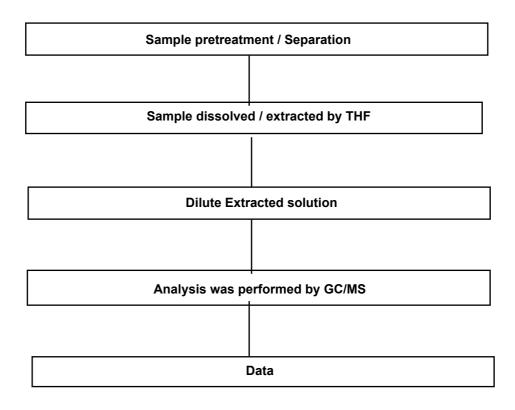
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### Flow Chart for Phthalate Test

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