



**Test Report No. F690501/LF-CTSAYAA10-31376**

Issued Date: September 10, 2010 Page 1 of 4

To: **SHINHAN TEK. CO., LTD**  
55-1 Namsan-ri  
Paengseong-eup  
Pyeongtaek-city  
GYEONGGI-DO 451-803  
Korea

The following merchandise was submitted and identified by the client as :

**SGS File No.** : AYAA10-31376  
**Product Name** : COPAN  
**Item No./Part No.** : PMMA SHEET(Bare)  
**Received Date** : Sep. 07, 2010  
**Test Period** : Sep. 08, 2010 to Sep. 10, 2010  
**Test Performed** : SGS Testing Korea tested the sample(s) selected by applicant with following results  
**Test Results** : For further details, please refer to following page(s)

**SGS Testing Korea Co. Ltd.**

**Jeff Jang / Chemical Lab Mgr**

**Timothy Jeon**  
**Jinhee Kim**  
**Cindy Park**  
**Jerry Jung/ Testing Person**



# Test Report No. F690501/LF-CTSAYAA10-31376

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Sample No. : AYAA10-31376.001  
Sample Description : COPAN  
Item No./Part No. : PMMA SHEET(Bare)  
Comments : Material is PMMA.

## Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Cadmium (Cd)	mg/kg	With reference to IEC 62321:2008, ICP	0.5	N.D.
Lead (Pb)	mg/kg	With reference to IEC 62321:2008, ICP	5	N.D.
Mercury (Hg)	mg/kg	With reference to IEC 62321:2008, ICP	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	With reference to IEC 62321:2008, UV-VIS	1	N.D.

## Flame Retardants-PBBs/PBDEs

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Dibromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tribromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Pentabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Hexabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Heptabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Octabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Nonabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Decabromobiphenyl	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321:2008, GC-MS	5	N.D.

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

(2) mg/kg = ppm

(3) MDL = Method Detection Limit

(4) - = No regulation

(5) \*\* = Qualitative analysis (No Unit)

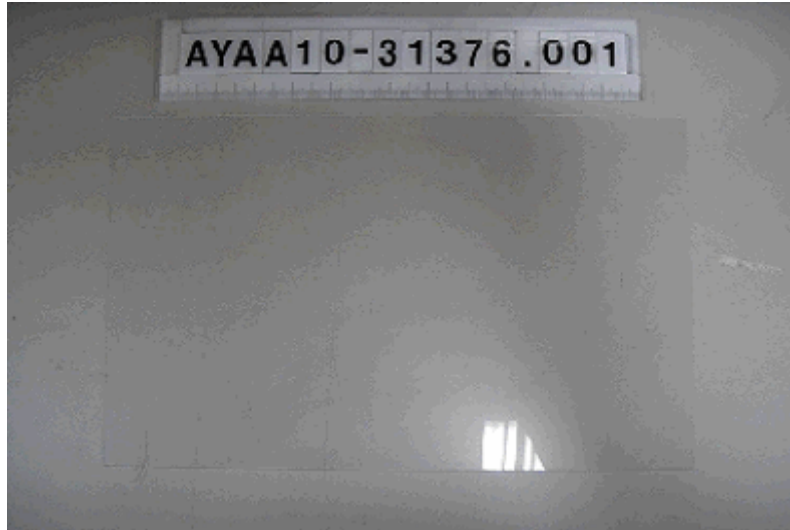
(6) \* = Boiling-water-extraction:

Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

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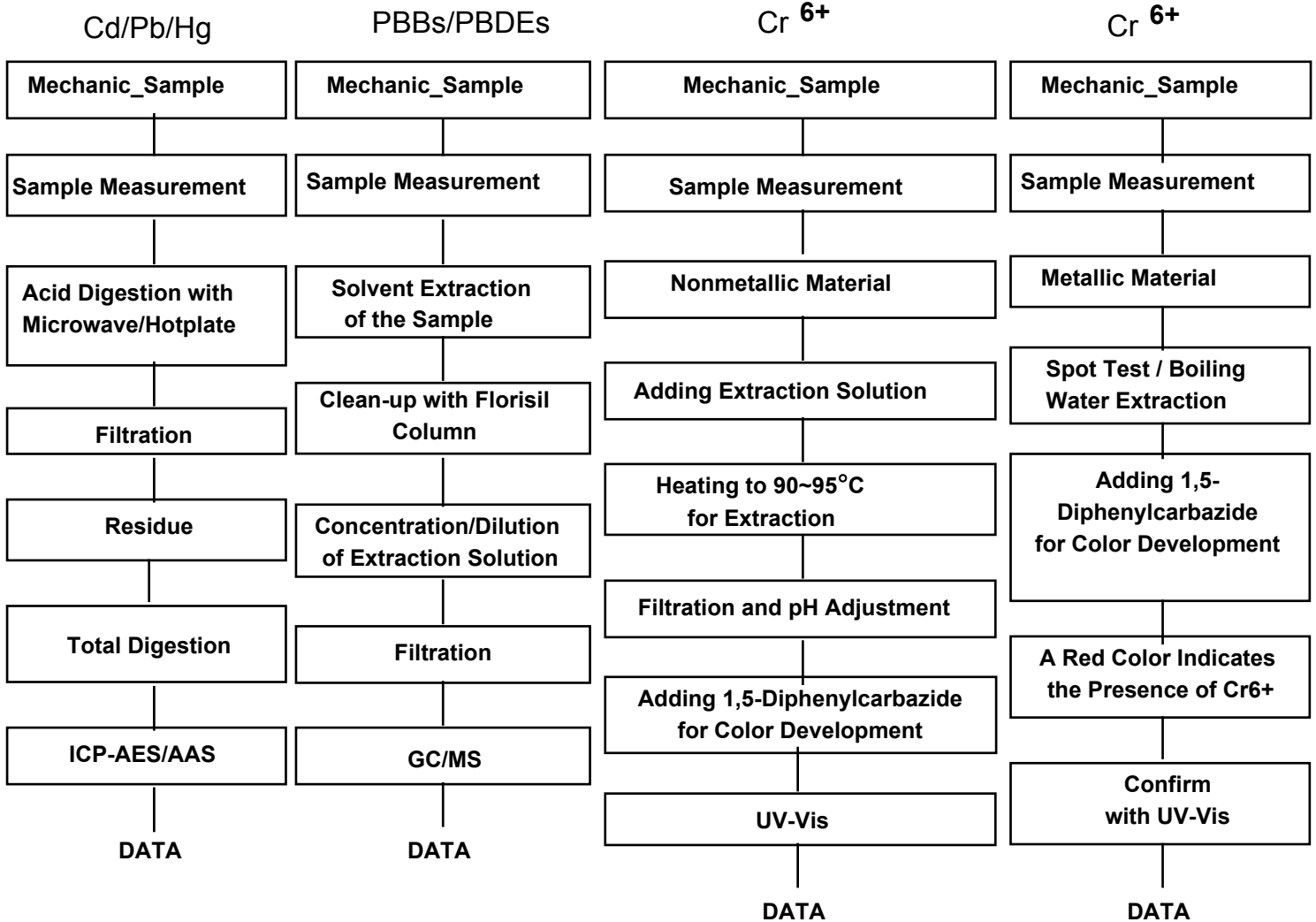
**Picture of Sample as Received:**



- NOTE:**
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  - (2) mg/kg = ppm
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  - (4) - = No regulation
  - (5) \*\* = Qualitative analysis (No Unit)
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**Testing Flow Chart for RoHS: Cd/Pb/Hg/Cr<sup>6+</sup>/PBBs&PBDEs Testing**



The samples were dissolved totally by pre-conditioning method according to above flow chart for Cd,Pb,Hg.

Section Chief : Gilsae Yi

\*\*\* End \*\*\*

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  - (5) \*\* = Qualitative analysis (No Unit)
  - (6) \* = Boiling-water-extraction:  
 Negative = Absence of CrVI coating  
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