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COMCHIP TECHNOLOGY CO., LTD. NO. 31, YONGXIN LN., YINGTAO RD., YINGGE DIST., NEW TAIPEI CITY 239, TAIWAN (R.O.C.)

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

Sample Description Style/Item No.	SMD DIODES CXXZ, CXXK, CXXF, CXXU, CXXQR, CXXER, CXXFR, CXXUR, CXXVR, CX CXXHR SERIES	XTR,
Sample Receiving Date Testing Period	2013/01/25 2013/01/25 TO 2013/02/01	

Test Result(s)

: Please refer to next page(s).



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Test Result(s)

PART NAME No.1

: MIXED ALL PARTS (11 TYPES)

	Unit	Method	MDL	Result	
Test Item(s)				No.1	
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	23	
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	
Antimony (Sb)	mg/kg	With reference to US EPA Method 3050B. Analysis was performed by ICP-AES.	2	n.d.	
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.	
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.	
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.	
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.	
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.	
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.	
PVC	**	Analysis was performed by FTIR and FLAME Test.	-	Negative	

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Test Item(s)	Unit	Method	MDL	Result
Test item(s)	Unit	Method	WIDE	No.1
Sum of PBBs	-		-	n.d.
Monobromobiphenyl			5	n.d.
Dibromobiphenyl			5	n.d.
Tribromobiphenyl			5	n.d.
Tetrabromobiphenyl			5	n.d.
Pentabromobiphenyl			5	n.d.
Hexabromobiphenyl			5	n.d.
Heptabromobiphenyl			5	n.d.
Octabromobiphenyl			5	n.d.
Nonabromobiphenyl			5	n.d.
Decabromobiphenyl	malka	With reference to IEC 62321: 2008 and performed by GC/MS.	5	n.d.
Sum of PBDEs	mg/kg		-	n.d.
Monobromodiphenyl ether			5	n.d.
Dibromodiphenyl ether			5	n.d.
Tribromodiphenyl ether			5	n.d.
Tetrabromodiphenyl ether			5	n.d.
Pentabromodiphenyl ether	-		5	n.d.
Hexabromodiphenyl ether			5	n.d.
Heptabromodiphenyl ether			5	n.d.
Octabromodiphenyl ether			5	n.d.
Nonabromodiphenyl ether			5	n.d.
Decabromodiphenyl ether			5	n.d.
Halogen				
Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg		50	274
Halogen-Chlorine (CI) (CAS No.: 22537-15-1)	mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	228
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg		50	n.d.
Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg	1	50	n.d.

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Note :

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected
- 3. MDL = Method Detection Limit
- 4. " " = Not Regulated
- 5. ** = Qualitative analysis (No Unit)
- 6. Negative = Undetectable / Positive = Detectable
- 7. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

PFOS Reference Information : POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1µg/m².

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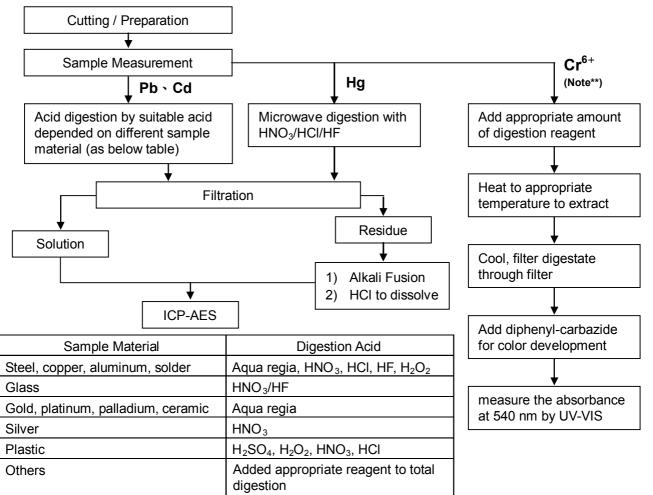


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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. $(Cr^{6+} test method excluded)$
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note**: (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 °C.
(2) For metallic material, add pure water and heat to boiling.

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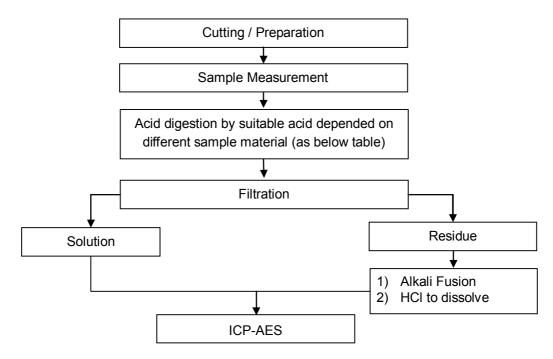
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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

Flow Chart of digestion for the elements analysis performed by ICP-AES



Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCI
Others	Added appropriate reagent to total digestion

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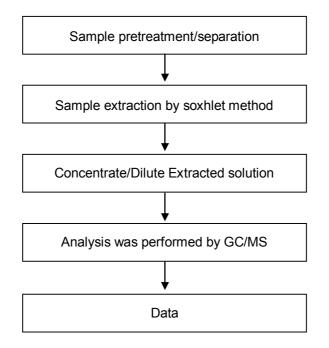
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Analytical flow chart of phthalate content

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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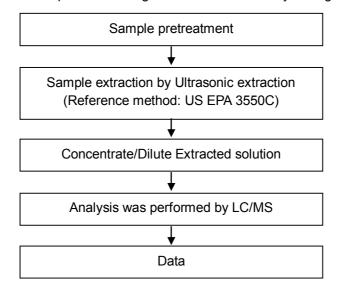


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PFOA/PFOS analytical flow chart of Ultrasonic extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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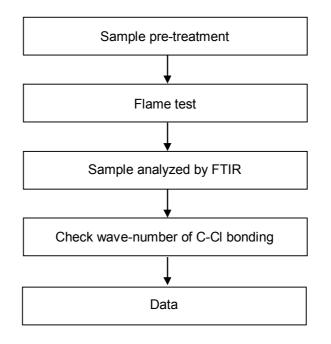
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Analysis flow chart for determination of PVC in material

- Name of the person who made measurement: Ginny Chen
- Name of the person in charge of measurement: Troy Chang



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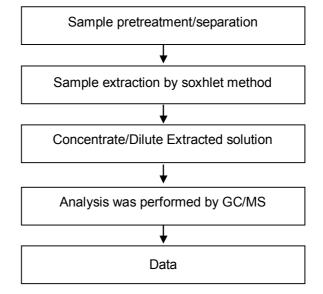


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HBCDD analytical flow chart

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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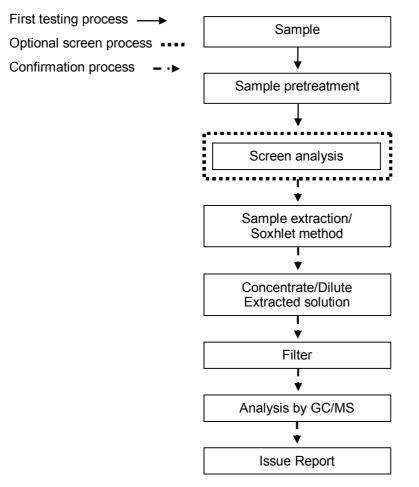
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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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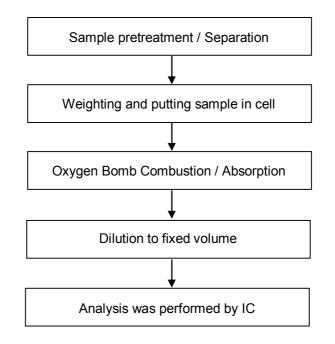
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Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- 2) Name of the person in charge of measurement: Troy Chang



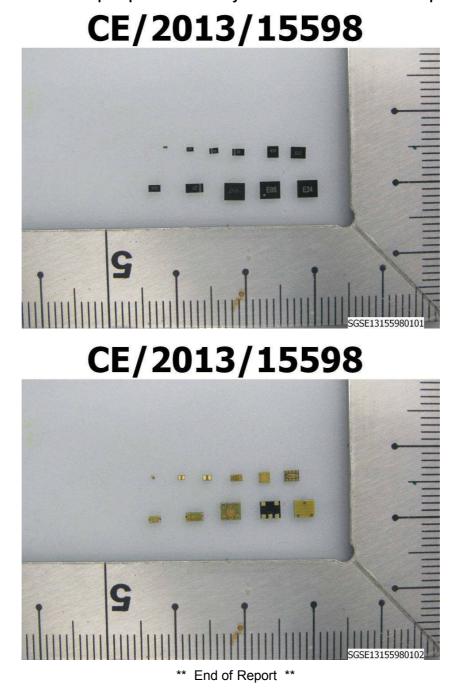
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* The tested sample / part is marked by an arrow if it's shown on the photo. *



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