Signature Not Verified
For Question
Please Contact with SGS
www.tw.sgs.com

# Test Report



ROGERS CORPORATION
245 WOODSTOCK ROAD, WOODSTOCK, CT. 06281, USA

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

| | | |
|---|---|---|
| Sample Description | : | PORON® URETHANES FOAM |
| Style/Item No. | : | 4701-60-XXXXX-04 |
| Material Component | : | URETHANES FOAM |
| Country of Origin | : | USA |
| Country of Destination | : | TAIWAN |
| Color | : | BLACK |
| Sample Receiving Date | : | 2012/11/30 |
| Testing Period | : | 2012/11/30 TO 2012/12/05 |
| Sample Submitted By | : | ROGERS CORPORATION |

==========

**Test Result(s)** : Please refer to next page(s).

Ray Chang

**Ray Chang / Asst. Manager**
**Signed for and on behalf of**
**SGS Taiwan Limited**

SGS TAIWAN LTD SGS TAIWAN

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SGS Taiwan Ltd.
台灣檢驗科技股份有限公司
No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 高雄市楠梓加工出口區開發路61號
t + 886 (07)301 2121 f + 886 (07)3010867 www.tw.sgs.com

# Test Report



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**Test Result(s)**

PART NAME NO.1 : BLACK URETHANES FOAM

| Test Item (s): | Unit | Method | MDL | Result 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 | n.d. |
| Mercury (Hg) | mg/kg | With reference to IEC 62321: 2008 and performed by ICP-AES. | 2 | n.d. |
| Hexavalent Chromium Cr(VI) by alkaline extraction | mg/kg | With reference to IEC 62321: 2008 and performed by UV-VIS. | 2 | n.d. |
| **Sum of PBBs** | mg/kg | With reference to IEC 62321: 2008 and performed by GC/MS. | - | 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 | | | 5 | n.d. |
| **Sum of PBDEs** | mg/kg | With reference to IEC 62321: 2008 and performed by GC/MS. | - | 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. |

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| Test Item (s): | Unit | Method | MDL | Result No.1 |
|---|---|---|---|---|
| Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4) | mg/kg | With reference to US EPA 3540C: 1996 method. Analysis was performed by GC/MS. | 5 | 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. |
| BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7) | % | 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. |
| **Halogen** | | | | |
| Halogen-Fluorine (F) (CAS No.: 14762-94-8) | mg/kg | With reference to BS EN 14582:2007. Analysis was performed by IC. | 50 | n.d. |
| Halogen-Chlorine (Cl) (CAS No.: 22537-15-1) | mg/kg | With reference to BS EN 14582:2007. Analysis was performed by IC. | 50 | 248 |
| Halogen-Bromine (Br) (CAS No.: 10097-32-2) | mg/kg | With reference to BS EN 14582:2007. Analysis was performed by IC. | 50 | n.d. |
| Halogen-Iodine (I) (CAS No.: 14362-44-8) | mg/kg | With reference to BS EN 14582:2007. Analysis was performed by IC. | 50 | n.d. |

Note： 1. mg/kg = ppm；0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated

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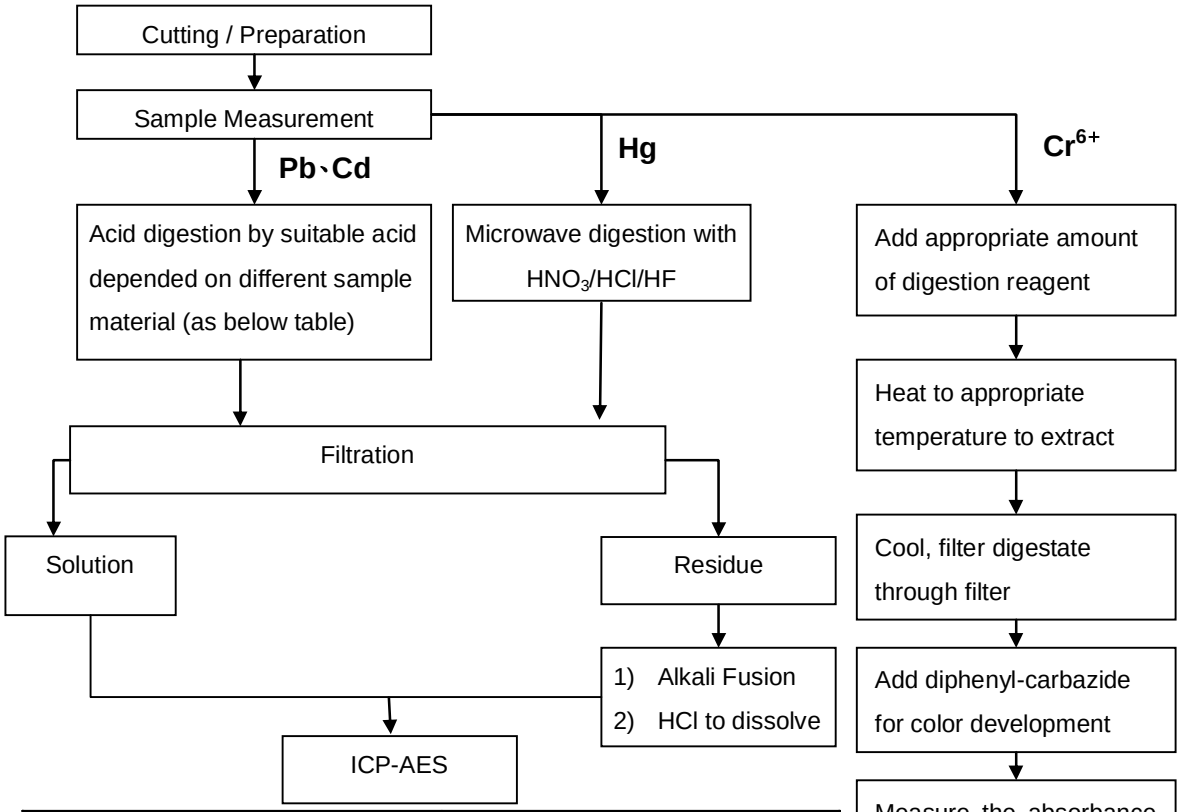
1) These samples were dissolved totally by pre-conditioning method according to below flow chart.（Cr6+ test method excluded）
2) Name of the person who made measurement: Alex Chang
3) Name of the person in charge of measurement: Ray Chang




| Sample Material | Digestion Acid |
|---|---|
| Steel, copper, aluminum, solder | Aqua regia, $HNO_3$, HCl, HF, $H_2O_2$ |
| Glass | $HNO_3$/HF |
| Gold, platinum, palladium, ceramic | Aqua regia |
| Silver | $HNO_3$ |
| Plastic | $H_2SO_4$, $H_2O_2$, $HNO_3$, HCl |
| Others | Any acid to total digestion |

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

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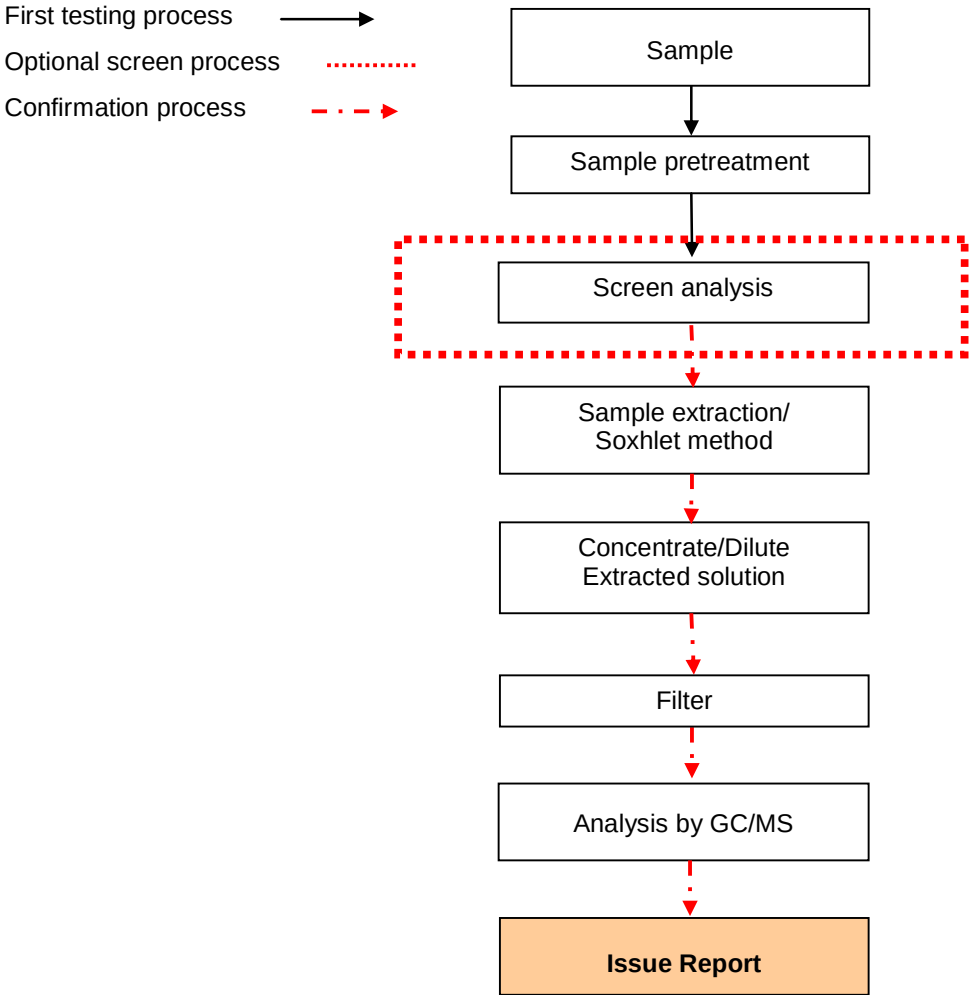
## PBB/PBDE analytical FLOW CHART

1) Name of the person who made measurement: Anson Tsao

2) Name of the person in charge of measurement: Ray Chang





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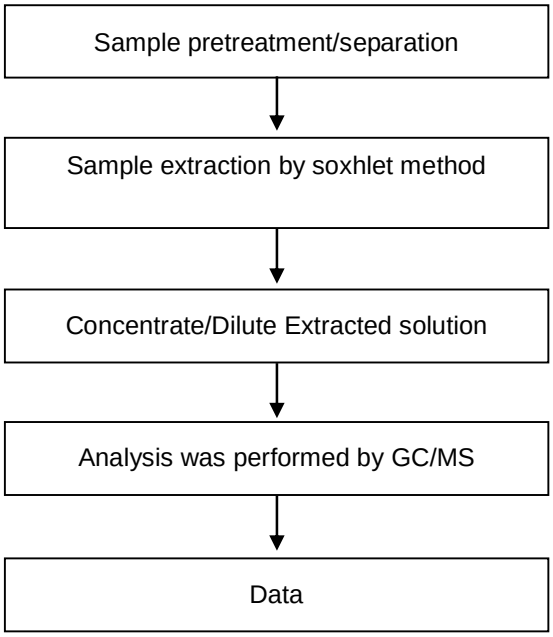
## Analytical flow chart of phthalate content

1) Name of the person who made measurement: Anson Tsao

2) Name of the person in charge of measurement: Ray Chang

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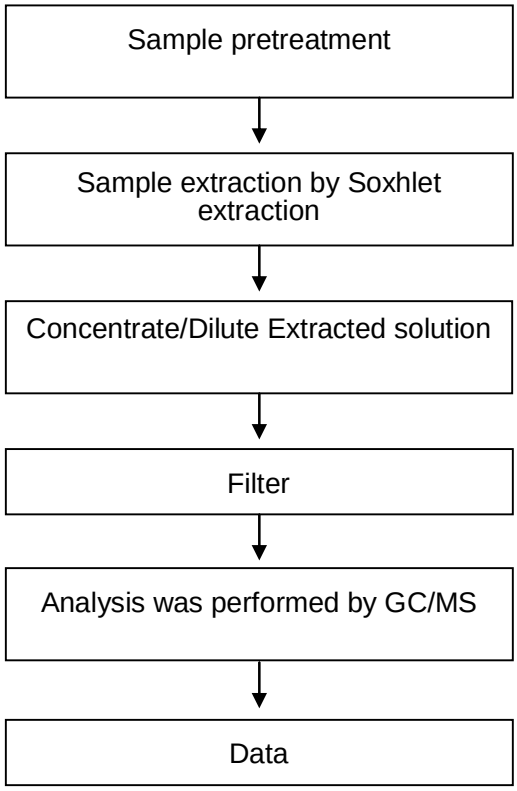
## HBCDD Analytical FLOW CHART

1) Name of the person who made measurement: Anson Tsao
2) Name of the person in charge of measurement: Ray Chang

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## Analytical flow chart of halogen content

1) Name of the person who made measurement: Jean Hung
2) Name of the person in charge of measurement: Ray Chang

Sample picture and report number
↓
Sample pretreatment/separation
↓
Weighting and putting sample in cell
↓
Oxygen Bomb Combustion /Absorption
↓
Dilution to fixed volume
↓
Analysis was performed by IC

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No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 高雄市楠梓加工出口區開發路61號
t + 886 (07)301 2121 f + 886 (07)3010867 www.tw.sgs.com
Member of the SGS Group

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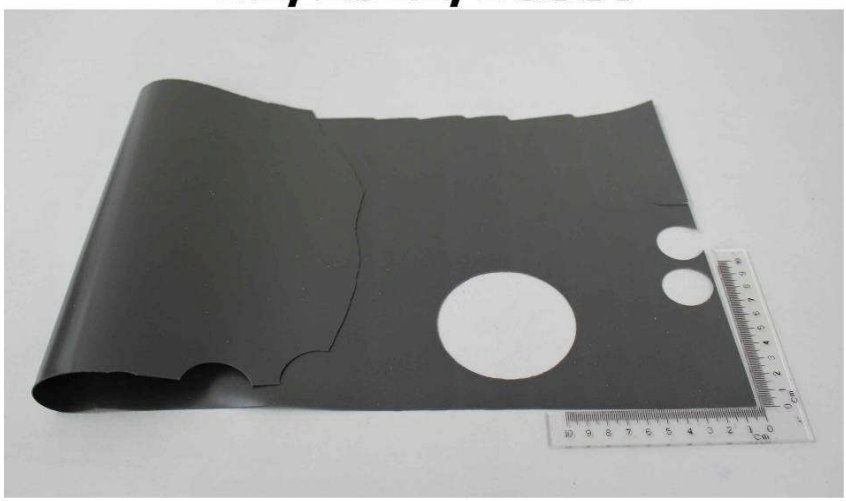
* The tested sample / part is marked by an arrow if it's shown on the photo. *

**KE/2012/B3339**



** End of Report **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SGS Taiwan Ltd.
台灣檢驗科技股份有限公司
No. 61, Kai-Fa Road, Nanzih Export Processing Zone , Kaohsiung, Taiwan / 高雄市楠梓加工出口區開發路61號
t + 886 (07)301 2121 f + 886 (07)3010867 www.tw.sgs.com