

Test Report

No. 2340509-CH13

Date: March 22, 2011

Page 1 of 7

Samtec Inc.
520 Park East Blvd
New Albany, IN 47151
United States

Attn: Dick Bowyer

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

Plastic Polymer – Thermx CG933
Color: White
Sample/Style #: Sample Labeled: Thermx CG933

Sample Received Date: **3/9/2011**

Testing Period: **3/10/2011 – 3/18/2011**

Test Requested : Please refer to the result summary.

Test Method & Results : Please refer to next page(s).

Result Summary :

| Test Requested | Conclusion |
|---|------------------|
| European Directive 2002/95/EC (RoHS) and its subsequent amendments | PASS |
| European Regulation (EC) No. 1907/2006 (REACH) Annex XVII and its amendments – Phthalates content (Formerly Directive 2005/84/EC) | PASS |
| Diisobutyl phthalate (DIBP) content | PASS |
| To determine the halogen content (Cl, Br) of the submitted sample(s). | See test results |

Signed for and on behalf of SGS North America

Prepared By:




Cyrus Chan
 Laboratory Manager, Chemistry Laboratory

Veronica Marrero
 Report Writer, Chemistry Laboratory

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1. Test results by chemical method:

Cadmium, Lead, Mercury, Hexavalent Chromium, Polybromobiphenyl (PBB) and Polybromodiphenyl ether (PBDE) content

Method : With reference to IEC 62321:2008. Lead, Cadmium and Mercury were analyzed by Inductively Coupled Argon Plasma Spectrometry, Chromium (VI) was analyzed by UV-Visible Spectroscopy and PBB, PBDE were analyzed by Gas Chromatography – Mass Spectrometry (GC-MS).

| Test Item | Result (mg/kg) | Detection Limit (mg/kg) | Permissible Limit (mg/kg) |
|------------------------------|----------------|-------------------------|---------------------------|
| | 1 | | |
| Cadmium (Cd) | ND | 20 | 100 |
| Lead (Pb) | ND | 20 | 1000 |
| Mercury (Hg) | ND | 20 | 1000 |
| Hexavalent Chromium (Cr(VI)) | ND* | 20 | 1000 |
| Sum of PBBs | ND | -- | 1000 |
| Monobromobiphenyl | ND | 5 | -- |
| Dibromobiphenyl | ND | 5 | -- |
| Tribromobiphenyl | ND | 5 | -- |
| Tetrabromobiphenyl | ND | 5 | -- |
| Pentabromobiphenyl | ND | 5 | -- |
| Hexabromobiphenyl | ND | 5 | -- |
| Heptabromobiphenyl | ND | 5 | -- |
| Octabromobiphenyl | ND | 5 | -- |
| Nonabromobiphenyl | ND | 5 | -- |
| Decabromobiphenyl | ND | 5 | -- |
| Sum of PBDEs | ND | -- | 1000 |
| Monobromodiphenyl ether | ND | 5 | -- |
| Dibromodiphenyl ether | ND | 5 | -- |
| Tribromodiphenyl ether | ND | 5 | -- |
| Tetrabromodiphenyl ether | ND | 5 | -- |
| Pentabromodiphenyl ether | ND | 5 | -- |
| Hexabromodiphenyl ether | ND | 5 | -- |
| Heptabromodiphenyl ether | ND | 5 | -- |
| Octabromodiphenyl ether | ND | 5 | -- |
| Nonabromodiphenyl ether | ND | 5 | -- |
| Decabromodiphenyl ether ## | ND | 5 | -- |
| Comment | PASS | -- | -- |

Sample Description:

1. **Thermx CG933**

Note :

1. ND = Not Detected = denoted less than reporting limit

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*Total Chromium analysis by ICP-OES was not detected in submitted sample. Therefore, Hexavalent Chromium determination using UV-Visible Spectroscopy was not performed.

Remark : 1.## = The exemption of DecaBDE in polymeric application according 2005/717/EC was overruled by the European Court of Justice by its decision of 01.04.2008. Subsequently DecaBDE will be included in the sum of PBDE after 01.07.2008.

2. European Regulation (EC) No. 1907/2006 (REACH) Annex XVII and its amendments – Phthalate content

Method : With reference to CPSC-CH-C1001-09.3. Analysis was performed by Gas Chromatography / Mass Spectrometry.

| Test Item | Result (%) | Detection Limit (%) | Permissible Limit (%) |
|-------------------------------------|------------|---------------------|-----------------------|
| | 1 | | |
| Dibutyl Phthalate (DBP) | ND | 0.015 | -- |
| Benzylbutyl Phthalate (BBP) | ND | 0.015 | -- |
| Bis-(2-ethylhexyl) Phthalate (DEHP) | ND | 0.015 | -- |
| DBP + BBP + DEHP | < 0.05 | -- | 0.1 |
| Diisononyl Phthalate (DINP) | ND | 0.015 | -- |
| Di-n-octyl Phthalate (DNOP) | ND | 0.015 | -- |
| Diisodecyl Phthalate (DIDP) | ND | 0.015 | -- |
| DINP + DNOP + DIDP | < 0.05 | -- | 0.1 |
| Comment | PASS | -- | -- |

Sample Description :

1. **Thermx CG933**

Note : 1. % = percentage by weight
 2. ND = Not Detected
 3. < = less than

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3. Diisobutyl phthalate (DIBP) content

Method : With reference to CPSC-CH-C1001-09.3. Analysis was performed by Gas Chromatography / Mass Spectrometry.

| Test Item | Result (%) | | Detection Limit (%) |
|-----------------------------|------------|--|---------------------|
| | 1 | | |
| Diisobutyl phthalate (DIBP) | ND | | 0.015 |

Sample Description :

1. **Thermx CG933**

Note : 1. % = percentage by weight
2. ND = Not Detected

4. Halogen Results :

| Test Items | Unit | Method | Method Detection Limit | 1 |
|---|-------|---------------------|------------------------|-------------------|
| Halogen – Chlorine (Cl) CAS # 007782-50-5 | mg/kg | BS EN 14582:2007 | 50 | ND |
| Halogen – Bromine (Br) CAS # 007726-95-6 | mg/kg | BS EN 14582:2007 | 50 | 35,219 ppm |

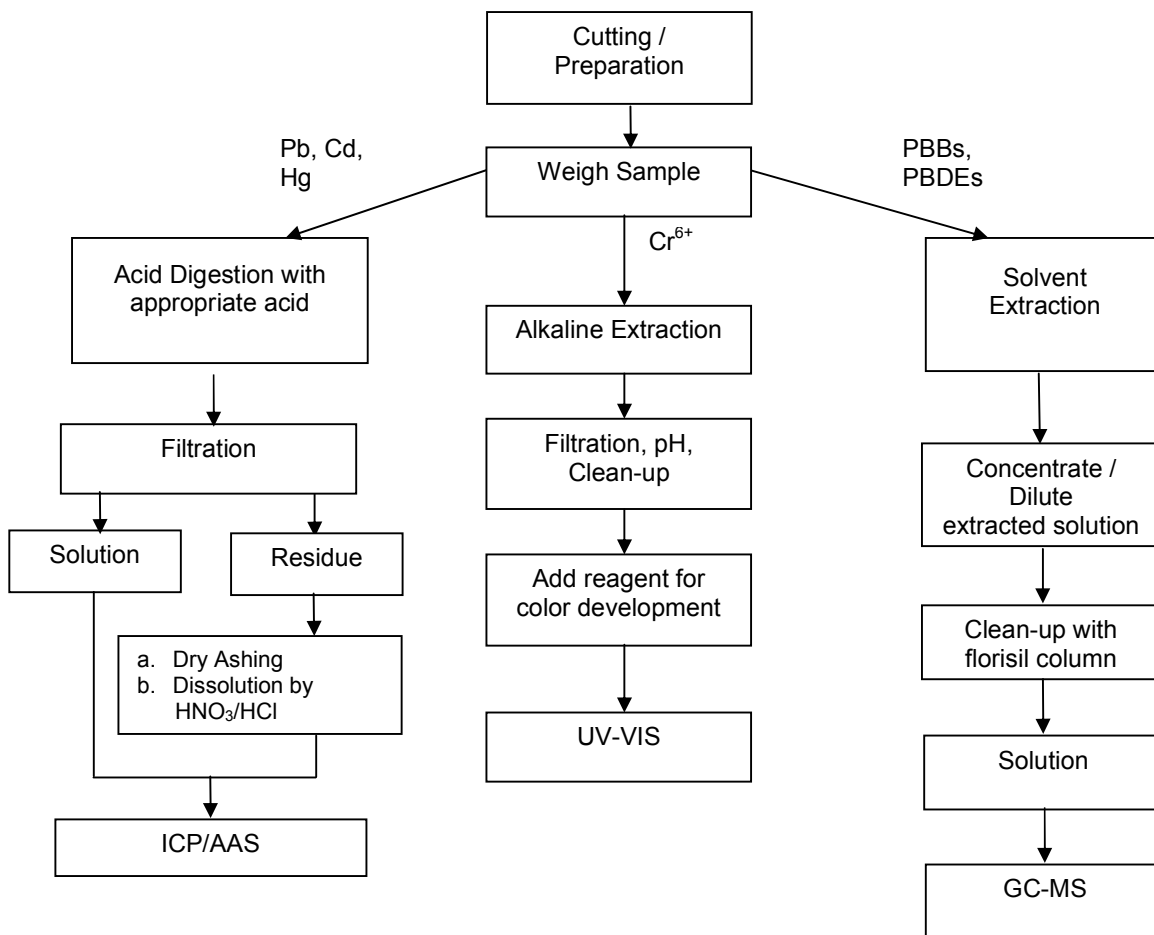
Sample Description:

1. **Thermx CG933**

Note: 1. mg/kg = ppm
2. ND = Not Detected, reported when the reading is less than the detection limit value.

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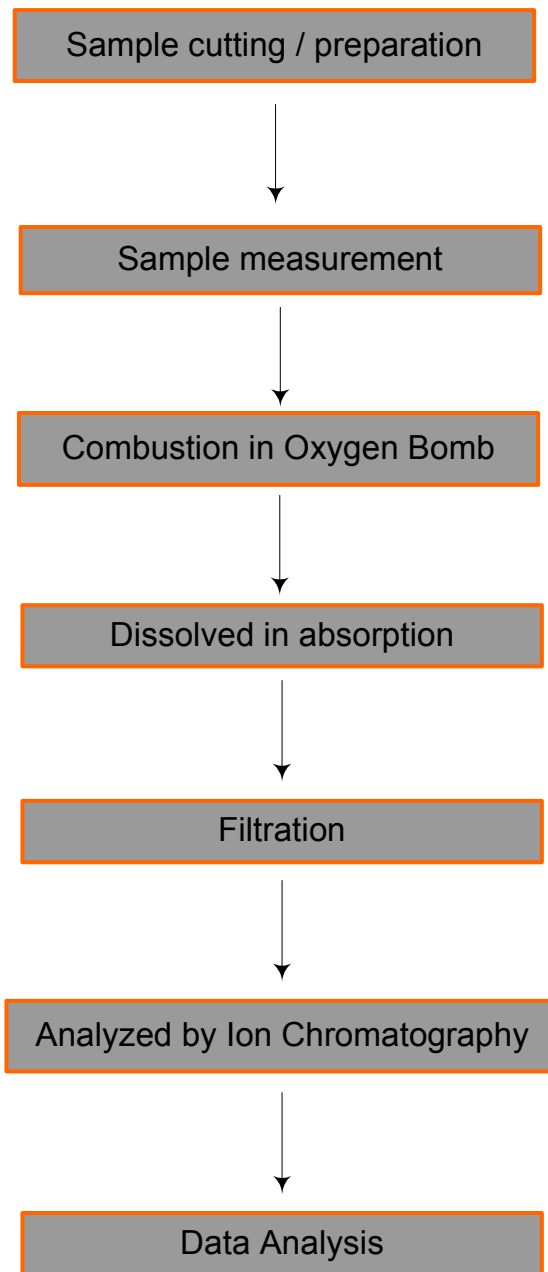
Flowchart for ROHS Testing:



- Note : 1. For Cr(VI), spot test is adopted for metal sample.
 2. The Cd, Pb and Hg contents test on polymeric samples were dissolved totally by pre-conditioning method according to above flow chart.

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Halogen Testing Flow Chart



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Sample Photo:

SGS authenticates the photo on the original report only

*** End of Report ***

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