

**Test Report**

No. 2340509-CH02

Date: March 22, 2011

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**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 – Celanex 3316**  
**Color: Black**  
**Sample/Style #: Sample Labeled: Celanex 3316**

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

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
<b>Sum of PBBs</b>	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	--
<b>Sum of PBDEs</b>	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	--
<b>Comment</b>	PASS	--	--

Sample Description:

1. **Celanex 3316**

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

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## Note :

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

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
<b>Comment</b>	PASS	--	--

## Sample Description :

 1. **Celanex 3316**

Note : 1. % = percentage by weight

2. ND = Not Detected

3. &lt; = 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

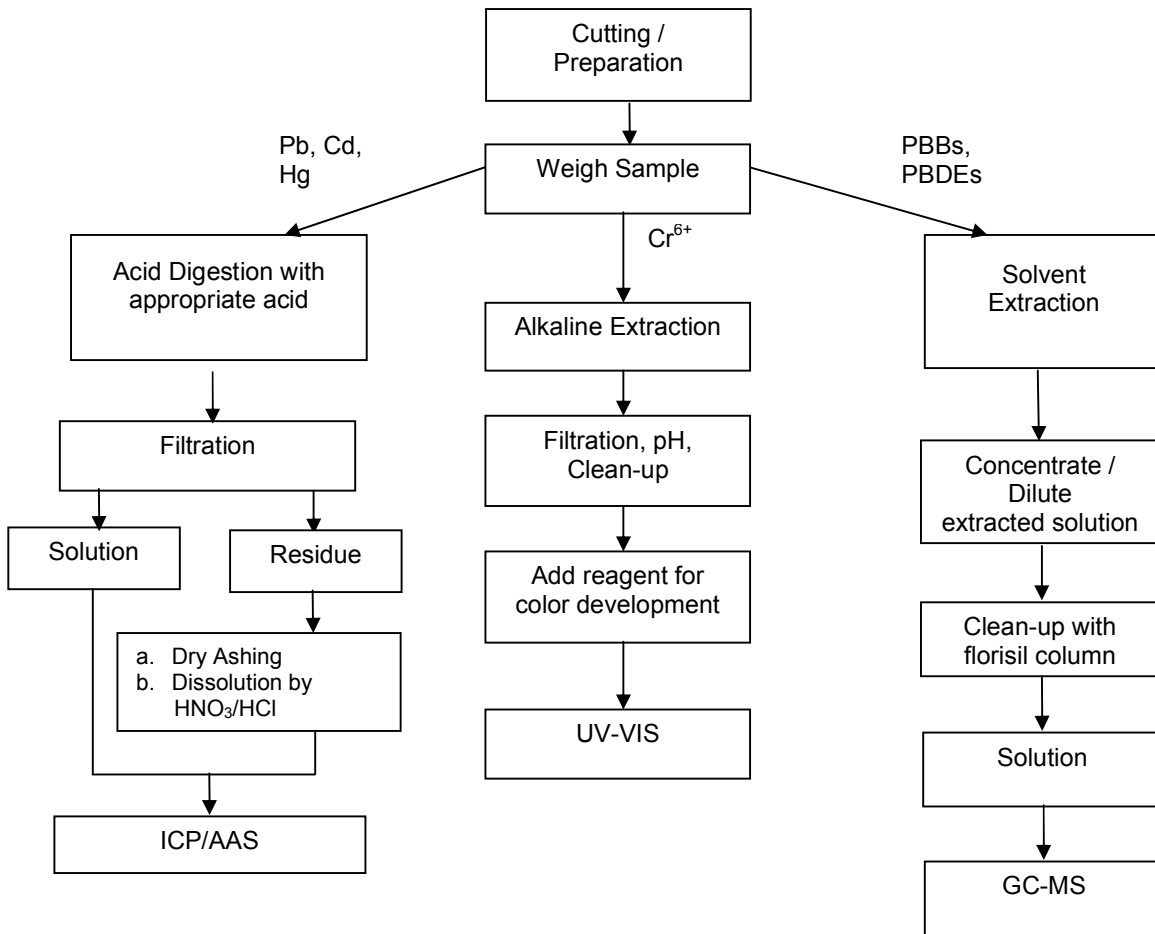
Sample Description :

1. **Celanex 3316**

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

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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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**Sample Photo:**



SGS authenticates the photo on the original report only

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

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