



Test Report

No. [5006465-CH27](#)

Date: [February 10, 2023](#)

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**Samtec Inc.
520 Park East Blvd
New Albany, IN 47150
United States**

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

**Ribbon Cable – Multi Color PVC outer Insulation
Jackets – Copper Conductors with Tin Plating
Country of Destination: USA
Model/ Part No.: Multi-Color 100-C**

Sample Received Date: **01/19/2023**

Testing Period: **01/24/2023 – 02/06/2023**

Test Requested : Please refer to the result summary.

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

Result Summary :

Test(s) Requested	Conclusion
1. RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU	See Test Results

Signed for and on behalf of SGS North America, Inc.

Prepared By:

Brian Murphy
Laboratory supervisor, Chemistry laboratory

Suzie Banik
Technical Report Writer, Chemistry Laboratory

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1. RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Item(s):	Unit	Test Method	Results		MDL
			1	2	
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd and Pb by ICP-OES and /or ICP-MS)	ND	ND	2
Lead (Pb)	mg/kg		ND	4.21	2
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013+A1:2017 (Determination of Hg by ICP-OES and/ or ICP-MS)	ND	ND	2
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND*	ND*	8
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015 (Determination of PBB and PBDE by GC-MS)	ND	ND	-
Monobromobiphenyl	mg/kg		ND	ND	5
Dibromobiphenyl	mg/kg		ND	ND	5
Tribromobiphenyl	mg/kg		ND	ND	5
Tetrabromobiphenyl	mg/kg		ND	ND	5
Pentabromobiphenyl	mg/kg		ND	ND	5
Hexabromobiphenyl	mg/kg		ND	ND	5
Heptabromobiphenyl	mg/kg		ND	ND	5
Octabromobiphenyl	mg/kg		ND	ND	5
Nonabromobiphenyl	mg/kg		ND	ND	5
Decabromobiphenyl	mg/kg		ND	ND	5
Sum of PBDEs	mg/kg		ND	ND	-
Monobromodiphenyl ether	mg/kg		ND	ND	5
Dibromodiphenyl ether	mg/kg		ND	ND	5
Tribromodiphenyl ether	mg/kg	ND	ND	5	
Tetrabromodiphenyl ether	mg/kg	ND	ND	5	
Pentabromodiphenyl ether	mg/kg	ND	ND	5	
Hexabromodiphenyl ether	mg/kg	ND	ND	5	
Heptabromodiphenyl ether	mg/kg	ND	ND	5	
Octabromodiphenyl ether	mg/kg	ND	ND	5	
Nonabromodiphenyl ether	mg/kg	ND	ND	5	
Decabromodiphenyl ether	mg/kg	ND	ND	5	
Bis (2-ethylhexyl) Phthalate (DEHP)	mg/kg	IEC 62321-8:2017 (Determination of DEHP, BBP, DBP and DIBP by GC-MS)	ND	70	50
Butyl Benzyl Phthalate (BBP)	mg/kg		ND	ND	50
Dibutyl Phthalate (DBP)	mg/kg		ND	ND	50
Diisobutyl Phthalate (DIBP)	mg/kg		ND	ND	50

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Test Item(s):	Unit	Test Method	Results	MDL
			3	
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013 (Determination of Cd and Pb by ICP-OES and /or ICP-MS)	ND	2
Lead (Pb)	mg/kg		ND	2
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013+A1:2017 (Determination of Hg by ICP-OES and/ or ICP-MS)	ND	2
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND*	8

Sample Description:

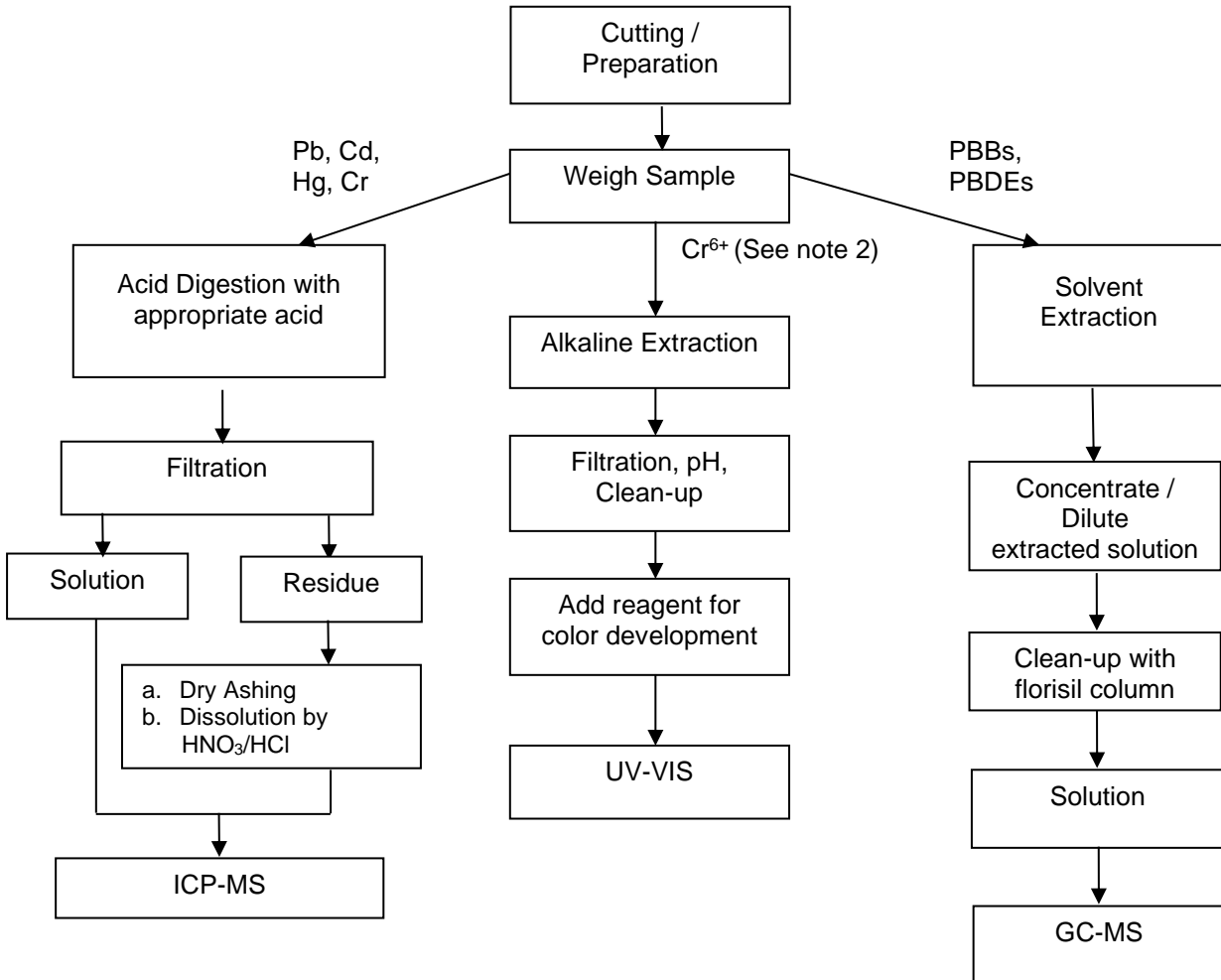
1. Bag 27 – Clear PVC Laminate
2. Bag 27 – Red PVC Dielectric Conductor Jacket
3. Bag 27 – Tin Plated Copper Conductor

Note:

- (a) mg/kg = ppm ; 0.1wt% = 1000ppm
- (b) ND= not detected
- (c) MDL = Method Detection Limit
- (d) - = not regulated
- (e) * = Total Chromium analysis by ICP-MS and/or ICP-OES was not detected in submitted sample. Therefore, Hexavalent Chromium determination using UV-Visible Spectroscopy was not performed.
- (f) IEC 62321 series is equivalent to EN 62321 series
http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

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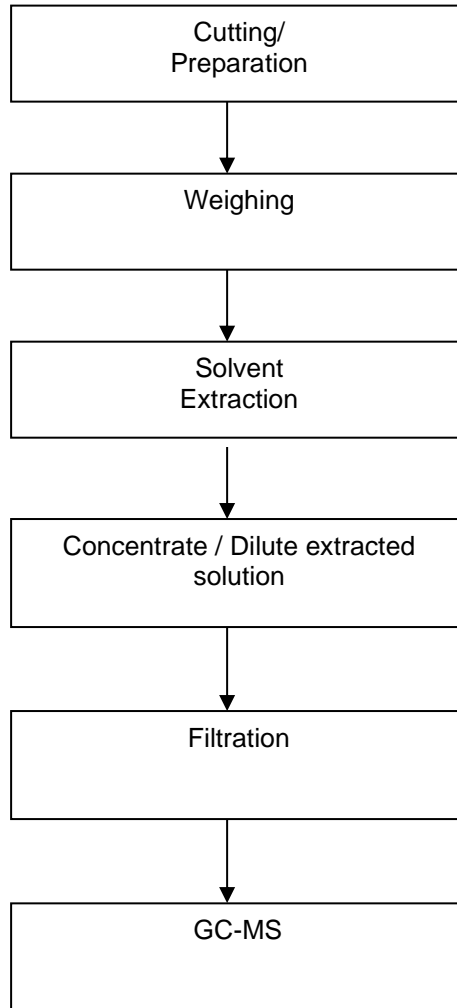
Flowchart for RoHS:



- Note : 1. The Cr, Cd, Pb and Hg contents test on polymeric samples were dissolved totally by pre-conditioning method according to above flow chart.
 2. Cr⁶⁺ is performed only when total Cr is detected

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Flowchart for Phthalates:



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Sample Photo(s):



SGS authenticates the photo(s) on the original report only

*** End of Report ***

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