

**Cal Chip Electronics**  
**59 Steam Whistle Drive**  
**Warminster, PA 18974**  
**United States**

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

**Sample Description:** Eight MLCC dielectric parts with one thick and one thin resistor  
**Model/Part No.:** MLCC dielectric parts labeled on the outside of the bag, including a single thick, thin, and CN resistor

Sample Received Date: **12/22/2025**

Testing Period: **12/23/2025-01/05/2026**

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:




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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	Limit
			1	2	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	ND	ND	2	100
Lead (Pb)	mg/kg		329	1490	ND	2	1000
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	ND	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND	ND	ND	8	1000

Test Item(s):	Unit	Test Method	Results			MDL	Limit
			4	5	6		
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	ND	2	100
Lead (Pb)	mg/kg		ND	ND	ND	2	1000
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	ND	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND*	ND	ND	8	1000

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Test Item(s):	Unit	Test Method	Results			MDL	Limit
			7	8	9		
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	ND	2	100
Lead (Pb)	mg/kg		ND	ND	ND	2	1000
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	ND	2	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND*	ND	ND	8	1000

Test Item(s):	Unit	Test Method	Results	MDL	Limit
			10		
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	100
Lead (Pb)	mg/kg		ND	2	1000
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	1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017 (Determination of CrVI by UV-Vis)	ND*	8	1000

**Sample Description:**

1. Resister Array CN Series-200
2. Thick Film Chips Resister-100
3. Thin Film Resister-200
4. MLCC CG/NPC Dielectric-200
5. MLCC YSV/25u Dielectric-100
6. MLCC X5R Dielectric-100
7. MLCC X6S Dielectric-100
8. MLCC X7R Dielectric-200
9. MLCC X7S Dielectric-200
10. MLCC X7T Dielectric-200

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## 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](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)

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Decision Rule: When statement of conformity is made, unless the decision rule was mentioned in above specified test items, the decision rule would be based on the non-binary statement with guard band (is equal to the expanded measurement uncertainty with a 95% coverage probability,  $w = U95$ ) in ILAC-G8:09/2019 Clause 4.2.3.

**"Pass** - the measured value is within (or below / above) the acceptance limit, where the acceptance limit is below / above to the guard band." or "Pass - The measured values were observed in tolerance at the points tested. The specific false accept risk is up to 2.5%."

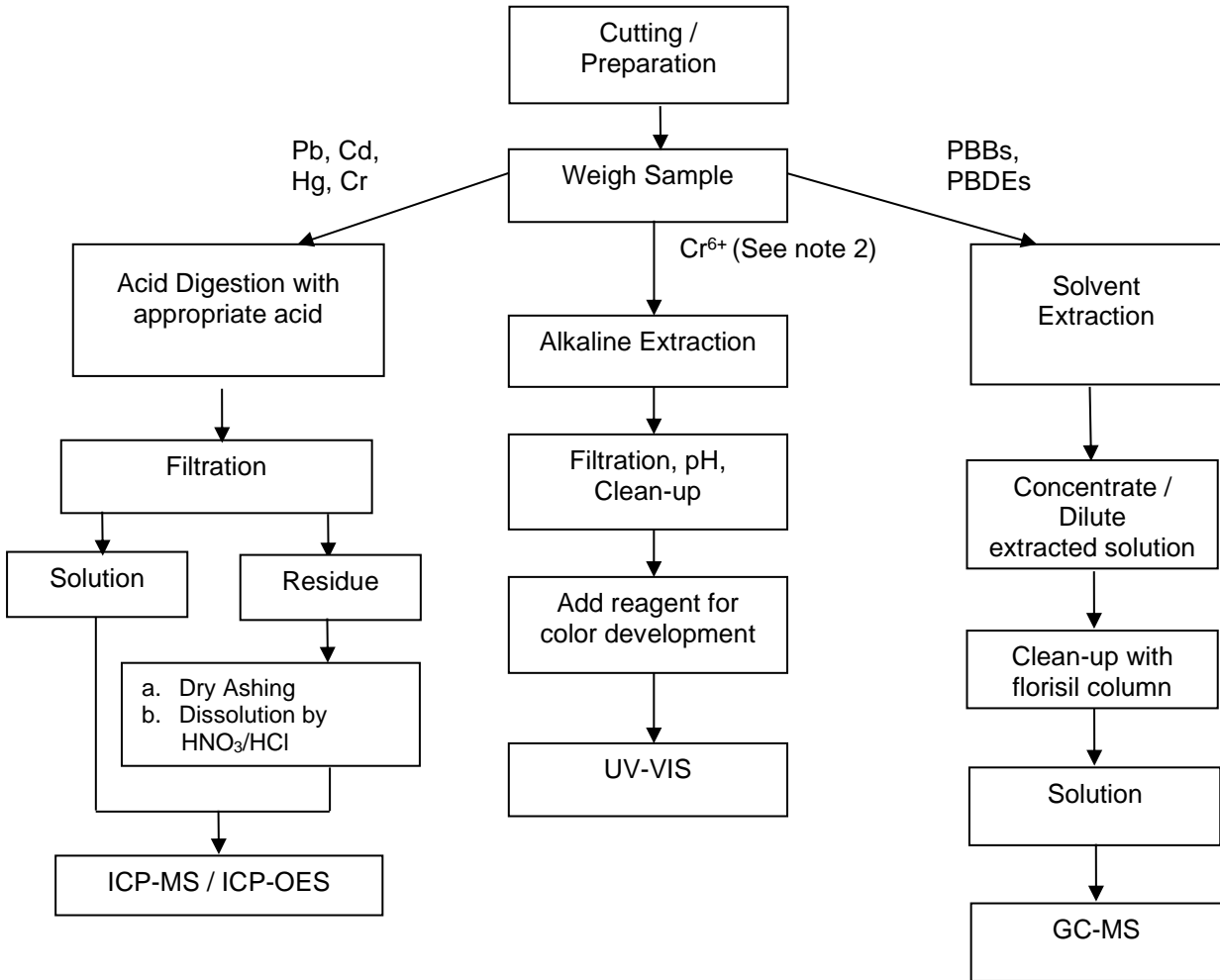
**"Fail** - the measured value is out of (or below / above) the tolerance limit added / subtracted to the guard band." or "Fail - One or more measured values were observed out of tolerance at the points tested." The specific false reject risk is up to 2.5%."

**"Guarded Pass** if the result is within the uncertainty passing band close to the specification."

**"Guarded Fail** if the result is within the uncertainty failing band close to the specification."

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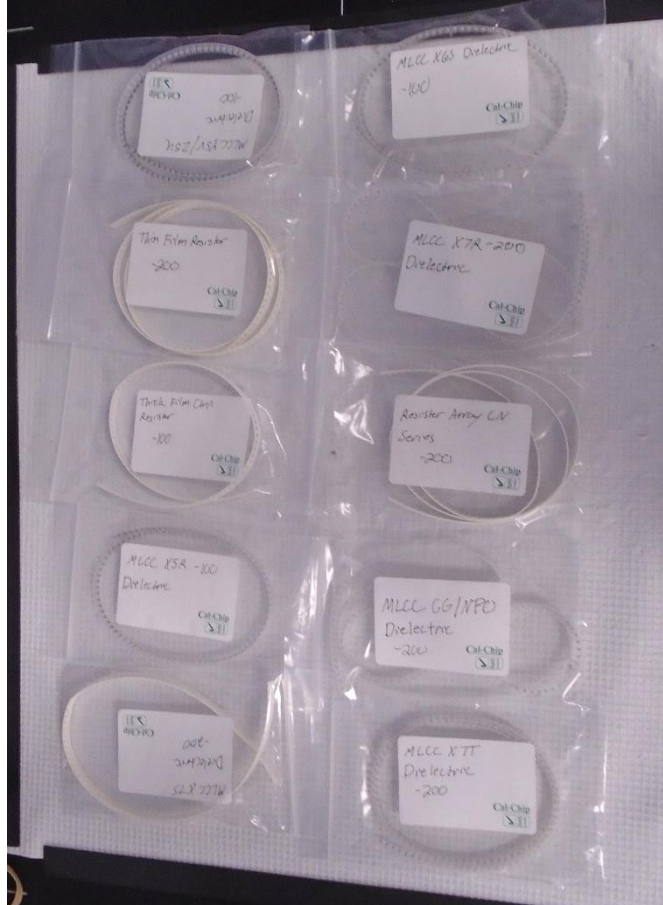
**Flowchart for RoHS:**



- 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. Cr<sup>6+</sup> is performed only when total Cr is detected

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Sample Photo(s):



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

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

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