

Test Report (SVHC)

No. SHAEC2012511101

Date: 16 Jul 2020

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RALEC TECHNOLOGY (KUNSHAN) CO., LTD.
NO.333 HUANGPUJIANG ZHONG RD., KUNSHAN, JS, CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : Lead Free Thick Film Chip Resistor

SGS Job No. : SP20-020417 - SH

Client Ref. Information : RTT/RTA/RTN/RTH/RTG/RTV/RTR/RTP/RTB/RTW/RST/RSA/FTT/RAT/RAA/FTG/FTA/FTH/RAV/ARST/RSR/RSV/RAW/FST/FTW/FHH/RSW/RSH/RAH/RAR/RAG/RLD/RHG/AHH

Date of Sample Received : 06 Jul 2020

Testing Period : 06 Jul 2020 - 13 Jul 2020

Test Requested : As requested by client, SVHC screening is performed according to:
(i) Four (4) substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) on Jun 25, 2020 regarding Regulation (EC) No 1907/2006 concerning the REACH.
(ii) One (1) substance in the Public Consultation List of potential Substances of Very High Concern (SVHC) published by European Chemicals Agency (ECHA) on Mar 3, 2020 regarding Regulation (EC) No 1907/2006 concerning the REACH.

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

Summary :

According to the specified scope and evaluation screening, the test results of SVHC are $\leq 0.1\%$ (w/w) in the submitted sample.	PASS
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Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Sunny Wu

Sunny Wu
Approved Signatory



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Remark :

1. The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA:
<http://echa.europa.eu/web/guest/candidate-list-table>
These lists are under evaluation by ECHA and may subject to change in the future.

2. REACH obligation:

2.1 Concerning article(s):

Communication:

Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance in the Candidate List.

Notification:

In accordance with Regulation (EC) No 1907/2006, any EU producer or importer of articles shall notify ECHA, in accordance with paragraph 4 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance in the Candidate List is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance in the Candidate List is present in those articles above a concentration of 0.1% weight by weight (w/w).

SGS adopts the ruling of the Court of Justice of the European Union on the definition of an article under REACH unless indicated otherwise. Detail explanation is available at the following link:

<http://www.sgs.com/-/media/global/documents/technical-documents/technical-bulletins/sgs-crs-position-statement-on-svhc-in-articles-a4-en-16-06.pdf?la=en>

2.2 Concerning material(s):

Test results in this report are based on the tested sample. This report refers to testing result of tested sample submitted as homogenous material(s). In case such material is being used to compose an article, the results indicated in this report may not represent SVHC concentration in such article. If this report refers to testing result of composite material group by equal weight proportion, the material in each composite test group may come from more than one article.

If the sample is a substance or mixture, and it directly exports to EU, client has the obligation to comply with the supply chain communication obligation under Article 31 of Regulation (EC) No. 1907/2006 and the conditions of Authorization of substance of very high concern included in the Annex XIV of the Regulation (EC) No. 1907/2006.

2.3 Concerning substance and preparation:

If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and its amendments, client is suggested to prepare a Safety

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Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:

- a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
- a mixture that is classified as hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or
- a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:
 - (a) a substance posing human health or environmental hazards in an individual concentration of $\geq 1\%$ by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or $\geq 0.2\%$ by volume for gaseous mixtures; or
 - (b) a substance that is PBT, or vPvB in an individual concentration of $\geq 0.1\%$ by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
 - (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of $\geq 0.1\%$ by weight for non-gaseous mixtures; or
 - (d) a substance for which there are Europe-wide workplace exposure limits.

3. If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

Test Sample :

Sample Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA20-125111.001	Black/silvery/white chip resistor

Test Method :

SGS In-House method-SHTC-CHEM-SOP-302-T, Analyzed by GC-MS, HPLC-DAD/MS and Colorimetric Method.



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Test Result: (Substances in the Candidate List of SVHC)

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
-	All tested SVHC in candidate list	-	ND	-

Test Result: (Substances in the Consultation List of potential SVHC)

Batch	Substance Name	CAS No.	001 Concentration (%)	RL (%)
-	All tested SVHC in consultation list	-	ND	-



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Notes :

- (1) The table above only shows detected SVHC, and SVHC that below RL are not reported. Please refer to Appendix for the full list of tested SVHC.
- (2) RL = Reporting Limit (Test data will be shown if it \geq RL. RL is not regulatory limit.)
ND = Not detected (lower than RL), ND is denoted on the SVHC substance.
- (3) / = Substances in the Consultation List of SVHC



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Appendix

Full list of tested SVHC:

Batch	No.	Substance Name	CAS No.	RL (%)
XXIII	1	1-vinylimidazole	1072-63-5	0.050
XXIII	2	2-methylimidazole	693-98-1	0.050
XXIII	3	Butyl 4-hydroxybenzoate	94-26-8	0.050
XXIII	4	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	0.050
/	5	Resorcinol	108-46-3	0.050



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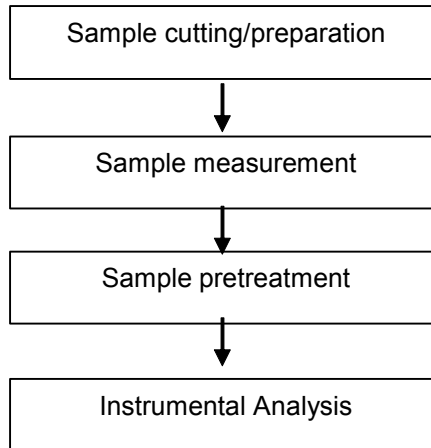
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SVHC Testing Flow Chart



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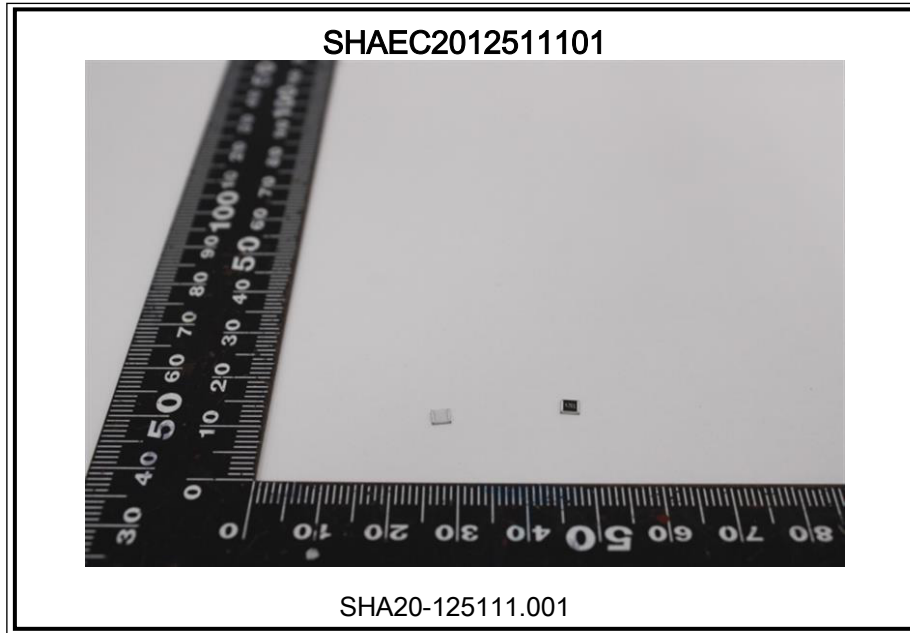
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