

# Test Report

No. CANEC2209443405

Date: 28 May 2022

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Client Name : UNIROYAL ELECTRONICS INDUSTRY(KUNSHAN) CO.,LTD.

Client Address : 88 LONGTENG ROAD, ECONOMIC & TECHNICAL DEVELOPMENT ZONE, KUNSHAN CITY, JIANGSU, CHINA

Sample Name : Metal Strip Chip Resist

Supplier : Uniroyal Electronics Industry Co., Ltd / Aeon Technology Corporation Co.,Ltd. / Royal Electronic Factory (Thailand) Co.,Ltd. / Royal Technology (Thailand) Co.,Ltd. / UNUS TECHNOLOGY CORPORATION

Buyer : Uniroyal Electronics Global Co.,Ltd

The above sample(s) and information were provided by the client.

SGS Job No. : CP22-025327 - GZ

Internal Reference No. : SP22-007839

Date of Sample Received : 12 May 2022

Testing Period : 12 May 2022 - 28 May 2022

Test Requested : Persistent organic pollutants (POP) screening against.  
- Substances in Annex I of European Regulation POPs (EU) 2021/277 amending to Regulation (EU) 2019/1021.

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

Summary :

According to the specified scope and analytical techniques, concentration of test POPs are < regulation limit in the submitted sample.	PASS
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Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

*Coral Qiu*

Coral Qiu  
Approved Signatory

scan to see the report



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SGS-CSTC Standards Technical Services Co., Ltd.  
Guangzhou Branch Testing Center Chemical Laboratory.

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Remark :

1. Substances in Annex I of European Regulation POPs (EU) 2019/1021 are prohibited in preparations and constituents of articles unless otherwise specified.
2. Exemptions: Tetrabromodiphenyl ether, pentabromodiphenyl ether, hexabromodiphenyl ether, heptabromodiphenyl ether and decabromodiphenyl ether are  $\leq 10$  mg/kg for substances, and Sum of tetra-, penta-, hexa-, hepta- and decaBDE  $\leq 500$  mg/kg for mixtures or articles, this restriction is subject to review and assessment by the European by 16 July 2021.
3. Exemption: Tetrabromodiphenyl ether, pentabromodiphenyl ether, hexabromodiphenyl ether, heptabromodiphenyl ether and decabromodiphenyl ether in electrical and electronic equipment within the scope of Directive 2011/65/EU are exempted.
4. Exemption: Alkanes C10-13, chloro (short chain-chlorinated paraffins) (SCCPs)  $< 1.0\%$  in preparation,  $< 0.15\%$  for articles.
5. Exemptions: Perfluorooctane sulfonates (PFOS) and its derivatives (acid, metal salt, halide, amide, and other derivatives including polymers)  $\leq 10$  mg/kg for preparations,  $< 0.1\%$  (w/w) for articles and  $< 1$   $\mu\text{g}/\text{m}^2$  for textiles and coated materials.
6. Exemptions: HBCDD, No more than 100 mg/kg as an unintentional trace contaminant in substances, mixtures, articles or flame-retarded parts of articles.
7. The chemical analysis of substances is performed by means of currently available analytical techniques against substances laid down in Test Requested.
8. ^ Detected substance(s) may come from one or more components in composite testing. Client is suggested to identify the component(s) and the exact concentration of the substance(s) by requesting further quantitative analysis from the laboratory.

Test Sample :

Sample Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN22-094434.003	"Metal Strip Chip Resist"



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**Test Method :**

SGS In-House method –GZTC CHEM-TOP-268-01, Analyzed by Gas Chromatography – Mass Spectrometry (GC-MS), Gas Chromatography – Electro Capture Detector (GC-ECD), High Performance Liquid Chromatography – Diode Array Detector – Mass Spectrometry (HPLC-DAD-MS) or Liquid Chromatography – Mass /Mass Spectrometry (LC-MS/MS).

**Test Result:**

No.	Substance Name	CAS No.	Unit	RL	003 Concentration
-	All tested POPs in list	-	mg/kg	-	ND

**Notes :**

- (1) The table above only shows detected POPs, and POPs that below RL are not reported. Please refer to Appendix for the full list of tested POPs.
- (2) RL = Reporting Limit. All RL are based on homogenous material  
ND = Not detected (lower than RL)
- (3) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH4 (CAS No.: 29081-56-9), PFOS-NH(OH)2 (CAS No.: 70225-14-8), PFOS-N(C2H5)4 (CAS No.: 56773-42-3), PFOS-DDA(CAS No.:251099-16-8) and POSF (CAS No.: 307-35-7);
- (4) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (5) Sum of PBDEs\* Means Sum of Tetrabromodiphenyl ether, Pentabromodiphenyl ether, Hexabromodiphenyl ether, Heptabromodiphenyl ether and Decabromodiphenyl ether.



Appendix

POPs substances tested in Article list:

No.	Substance Name	CAS No.	Unit	RL	Regulatory requirement / Exemption	Sample ID
1	Tetrabromodiphenyl ether	40088-47-9 and others	mg/kg	5	-	003
2	Pentabromodiphenyl ether	32534-81-9 and others	mg/kg	5	-	003
3	Hexabromodiphenyl ether	36483-60-0 and others	mg/kg	5	-	003
4	Heptabromodiphenyl ether	68928-80-3 and others	mg/kg	5	-	003
5	Decabromodiphenyl ether; (decaBDE)	1163-19-5	mg/kg	5	-	003
-	Sum of PBDEs*	-	mg/kg	-	500	003
6	Perfluorooctane sulfonates (PFOS) and its derivatives	-	mg/kg	-	1000	003
6-1	Perfluorooctane sulfonates (PFOS) ^	1763-23-1	mg/kg	0.01	-	003
6-2	N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	mg/kg	0.01	-	003
6-3	N-methylperfluoro-1-octanesulfonamide(MeFOSA)	31506-32-8	mg/kg	0.01	-	003
6-4	2-(N-ethylperfluoro-1-octanesulfonamido) -ethanol(EtFOSE)	1691-99-2	mg/kg	0.01	-	003
6-5	2-(N-methylperfluoro-1-octanesulfonamido) -ethanol(MeFOSE)	24448-09-7	mg/kg	0.01	-	003
6-6	Perfluorooctane Sulfonamide (PFOSA)	754-91-6	mg/kg	0.01	-	003
14	Hexachlorobenzene	118-74-1	mg/kg	5	Prohibited	003
17	Pentachlorobenzene	608-93-5	mg/kg	5	Prohibited	003
18	Polychlorinated biphenyls (PCB)	1336-36-3 and others	mg/kg	5	Prohibited	003



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POPs substances tested in Article list:

No.	Substance Name	CAS No.	Unit	RL	Regulatory requirement / Exemption	Sample ID
21	Hexabromobiphenyl	36355-01-8	mg/kg	5	Prohibited	003
22	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	mg/kg	10	100	003
23	Hexachlorobutadiene	87-68-3	mg/kg	5	Prohibited	003
24	Pentachlorophenol (PCP) and its salts and esters	87-86-5 and others	mg/kg	0.5	5	003
25	Polychlorinated naphthalenes (PCN)	70776-03-3 and others	mg/kg	5	Prohibited	003
26	Alkanes C <sub>10</sub> ~C <sub>13</sub> , chloro (short chain-chlorinated paraffins) (SCCPs)	85535-84-8 and others	mg/kg	50	1500	003
27	Perfluorooctanoic acid (PFOA) and its salts+	335-67-1	mg/kg	0.010	0.025	003
28	PFOA related substances	-	mg/kg	-	1.0	003
28-1	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	mg/kg	0.2	-	003
28-2	Methyl perfluorooctanoate (Me-PFOA)	376-27-2	mg/kg	0.2	-	003
28-3	Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5	mg/kg	0.2	-	003
28-4	1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	mg/kg	0.2	-	003
28-5	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	mg/kg	0.2	-	003
28-6	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	mg/kg	0.2	-	003
28-7	Perfluoro-1-iodooctane (PFOI)	507-63-1	mg/kg	0.2	-	003



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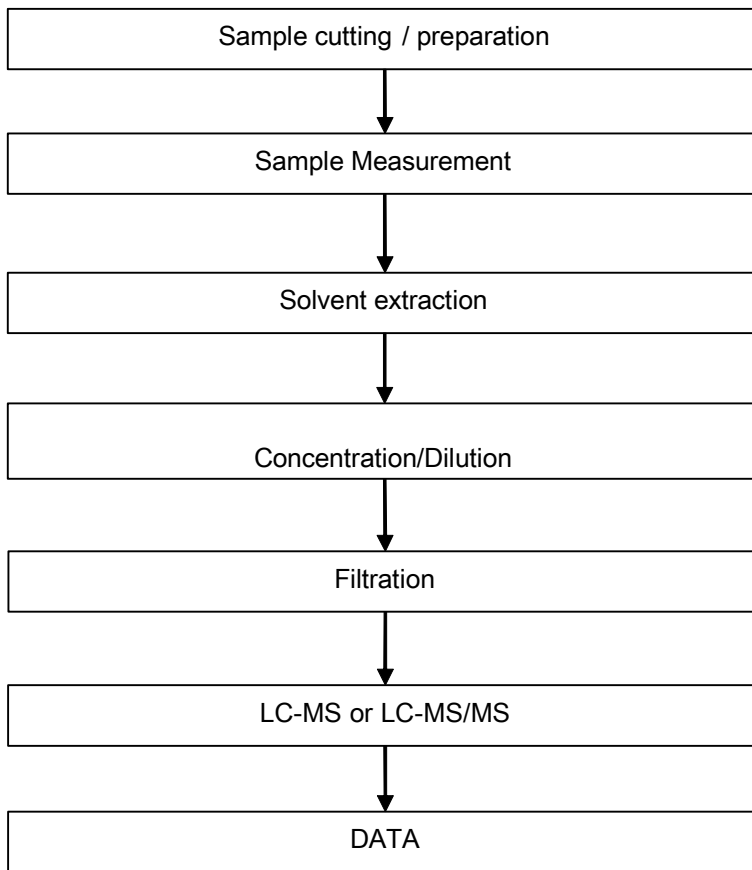


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## ATTACHMENTS

### PFOA / PFOS Testing Flow Chart



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