

Test Report

No.: CANEC24001885903

Date: Feb 02, 2024

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Client Name: Uniroyal Electronics Industry Co., Ltd.

Client Address: 88 Longteng Road, Economic & Technical Development Zone, Kunshan City, Jiangsu, CHINA

Sample Name: Precision Metal Film Fixed Resistors

Buyer: Uniroyal Electronics Global Co.,Ltd

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

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

SGS Job No.: XMP24-000344

Sample Receiving Date: Jan 24, 2024

Testing Period: Jan 24, 2024 ~ Feb 01, 2024

Test Requested: Select test(s) as requested by the client.

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

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

Test Requirement	Conclusion
Entry 20 of Regulation (EC) No 276/2010 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Organostannic compounds	Pass
Entry 68 of Regulation (EU) 2021/1297 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - C9-C14 PFCAs, their salts and C9-C14 PFCa-related substances	Pass

Signed for and on behalf of
 SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jany Zhong

Jany Zhong
 Approved Signatory

scan to see the report



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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A2	CAN24-0018859-0001.C002	Blue "body" with multicolor printing

Remarks:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

Entry 20 of Regulation (EC) No 276/2010 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - Organostannic compounds

Test Method: With reference to ISO 17353:2004, analysis was performed by GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A2
Tributyltin(TBT) by Weight of Tin	-	%	0.01	ND
Triphenyltin(TPhT) by Weight of Tin	-	%	0.01	ND
Tricyclohexyltin(TCyT) by Weight of Tin	-	%	0.01	ND
Trioctyltin(TOT) by Weight of Tin	-	%	0.01	ND
Tripropyltin (TPT) by weight of Tin	-	%	0.01	ND
Trimethyltin(TMT) by Weight of Tin	-	%	0.01	ND
Σ of Tri substituted organotin compounds by Weight of Tin	0.1	%	-	ND
Dibutyltin(DBT) by Weight of Tin	0.1	%	0.01	ND
Diocetyl tin(DOT) by Weight of Tin	0.1	%	0.01	ND
Conclusion				Pass

Entry 68 of Regulation (EU) 2021/1297 amending Annex XVII of REACH Regulation (EC) No 1907/2006 - C9-C14 PFCAs, their salts and C9-C14 PFCA-related substances

Test Method: Modified CEN/TS 15968:2010, analysis was performed by LC-MS or LC-MS/MS and GC-MS.

Test Item(s)	CAS No.	Limit	Unit(s)	MDL	A2
C9-C14 PFCA, their salts					
Perfluorononane Acid (PFNA), its salts^	375-95-1	-	µg/kg	10	ND
Perfluorodecane Acid (PFDA), its salts^	335-76-2	-	µg/kg	10	ND
Perfluoroundecanoic Acid (PFUnDA), its salts^	2058-94-8	-	µg/kg	10	ND
Perfluorododecanoic Acid (PFDoDA), its salts^	307-55-1	-	µg/kg	10	ND
Perfluorotridecanoic Acid (PFTTrDA), its salts^	72629-94-8	-	µg/kg	10	ND
Perfluorotetradecanoic Acid (PFTDA)	376-06-7	-	µg/kg	10	ND
Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6	-	µg/kg	10	ND
Sum of C9-C14 PFCA, their salts	-	25	µg/kg	-	ND



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司 检验检测专用章

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Test Item(s)	CAS No.	Limit	Unit(s)	MDL	A2
C9-C14 PFCA-related substances					
Perfluorodecane Sulfonate (PFDS), its salts [^]	335-77-3	-	µg/kg	10	ND
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)	2144-54-9	-	µg/kg	100	ND
1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	-	µg/kg	10	ND
1,1,2,2-Tetrahydroperfluorododecyl iodide (10:2 FTI)	2043-54-1	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)	30046-31-2	-	µg/kg	100	ND
Perfluorononane sulfonic acid (PFNS), its salts [^]	68259-12-1	-	µg/kg	10	ND
Perfluoroundecane sulfonic acid (PFUnDS)	749786-16-1 / 441296-91-9 (anion)	-	µg/kg	10	ND
Perfluorododecane sulfonic acid (PFDoDS), its salts [^]	79780-39-5	-	µg/kg	10	ND
Perfluorotridecane sulfonic acid (PFTrDS), its salts [^]	791563-89-8	-	µg/kg	10	ND
10:2 Fluortelomerphosphatediester (10:2 diPAP)	1895-26-7	-	µg/kg	100	ND
Perfluorodecyl iodide (PFDI)	423-62-1	-	µg/kg	100	ND
Perfluorododecyl iodide (PFDoDI)	307-60-8	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS), its salts [^]	39108-34-4	-	µg/kg	10	ND
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	-	µg/kg	100	ND
2H,2H-Perfluorodecane Acid (H ₂ PFDA/8:2 FTCA), its salts [^]	27854-31-5	-	µg/kg	10	ND
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	-	µg/kg	100	ND
1-Iodo-1H,1H,2H,2H-perfluorodecane (8:2 FTI)	2043-53-0	-	µg/kg	100	ND
1H,1H,2H,2H-Perfluorodecyltriethoxysilane (8:2 FTSi(OC ₂ H ₅) ₃)	101947-16-4	-	µg/kg	100	ND
bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl) hydrogen phosphate (8:2 diPAP), its salts [^]	678-41-1	-	µg/kg	10	ND
2H,2H,3H,3H-Perfluoroundecanoic Acid (H ₄ PFUnDA/ 8:3 FTCA), its salts [^]	34598-33-9	-	µg/kg	10	ND



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Test Item(s)	CAS No.	Limit	Unit(s)	MDL	A2
1H,1H,2H-Heptadecafluoro-1-decene (PFDE)	21652-58-4	-	µg/kg	100	ND
Sum of C9-C14 PFCA-related substances	-	260	µg/kg	-	ND
Conclusion					Pass

Notes:

- (1) 1µg/kg=1ppb.
- (2) Until 25 August 2024, the concentration limit for the sum of C9-C14 PFCAs in fluoroplastics and fluoroelastomers that contain perfluoroalkoxy groups. From 25 August 2024, the concentration limit shall be 100 ppb for the sum of C9-C14 PFCAs, in fluoroplastics and fluoroelastomers that contain perfluoroalkoxy groups.
- (3) The concentration limit shall be 1000ppb for the sum of C9-C14 PFCAs, where these are present in PTFE micro powders produced by ionising irradiation or by thermal degradation, as well as in mixtures and articles for industrial and professional uses containing PTFE micro powders.
- (4) ^=Substances refer to its salts/derivative listed in below table.

Substance Name	CAS No.
PFNA, its salts	
Perfluorononane Acid (PFNA)	375-95-1
Perfluorononanoate Na-Salt (PFNA-Na)	21049-39-8
Nonanoic acid, heptadecafluoro-, ammonium salt (PFNA-NH ₄)	4149-60-4
Potassium perfluorononanoate (PFNA-K)	21049-38-7
Perfluorononanoate Li-Salt (PFNA-Li)	60871-92-3
Silver perfluorononanoate (PFNA-Ag)	7358-16-9
PFDA, its salts	
Perfluorodecane Acid (PFDA)	335-76-2
Sodium perfluorodecanoate (PFDA-Na)	3830-45-3
Perfluorodecanoate ammonium salt (PFDA-NH ₄)	3108-42-7
Potassium perfluorodecanoate (PFDA-K)	51604-85-4
Silver perfluorodecanoate (PFDA-Ag)	5784-82-7
Lithium perfluorodecanoate (PFDA-Li)	84743-32-8
PfUnDA, its salts	
Perfluoroundecanoic Acid (PFUnDA)	2058-94-8
Perfluoroundecanoic acid sodium salt (PFUnDA-Na)	60871-96-7
Ammonium perfluoroundecanoate (PFUnDA-NH ₄)	4234-23-5
Potassium perfluoroundecanoate (PFUnDA-K)	30377-53-8
Calcium perfluoroundecanoate (PFUnDA-Ca)	97163-17-2
PFDODA, its salts	
Perfluorododecanoic Acid (PFDODA)	307-55-1
Ammonium tricosafuorododecanoate (PFDODA-NH ₄)	3793-74-6
Sodium perfluorododecanoate (PFDODA-Na)	60872-01-7
PFTrDA, its salts	
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8
Ammonium perfluorotridecanoate (PFTrDA-NH ₄)	4288-72-6
PFDS, its salts	
Perfluorodecane Sulfonate (PFDS)	335-77-3
Perfluorodecanesulfonate Na-salt (PFDS-Na)	2806-15-7



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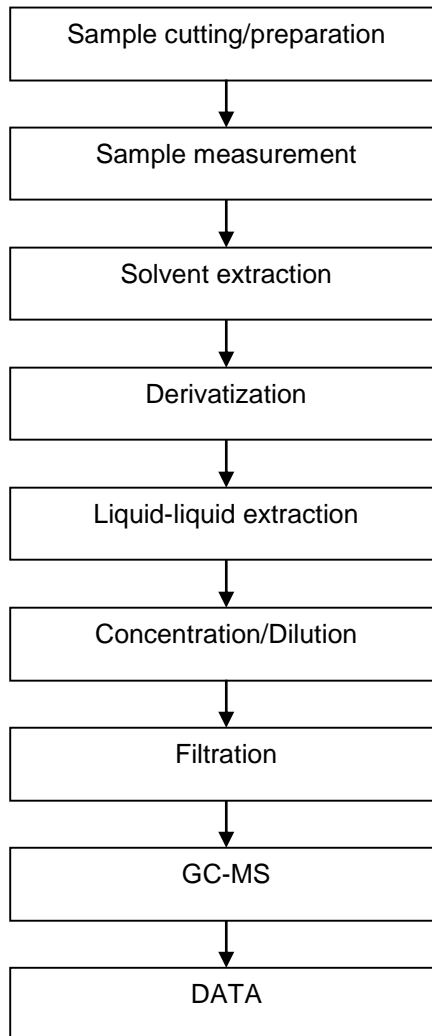
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Perfluorodecanesulfonate K-salt (PFDS-K)	2806-16-8
Perfluorodecanesulfonic acid ammonium salt (PFDS-NH ₄)	67906-42-7
PFNS, its salts	
Perfluoro nonane sulfonic acid (PFNS)	68259-12-1
Sodium perfluoro-1-nonanesulfonate (PFNS-Na)	98789-57-2
ammonium nonadecafluorononanesulphonate (PFNS-NH ₄)	17202-41-4
Potassium perfluorononanesulfonate (PFNS-K)	29359-39-5
PFDoDS, its salts	
Perfluorododecanesulfonic acid (PFDoDS)	79780-39-5
Sodium perfluoro-1-dodecanesulfonate (PFDoDS-Na)	1260224-54-1
PFTrDS, its salts	
Perfluorotridecane sulfonic acid (PFTrDS)	791563-89-8
Sodium perfluoro-1-tridecanesulfonate (PFTrDS-Na)	174675-49-1
8:2 FTS, its salts	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4
Potassium 1H,1H,2H,2H-Perfluorododecane sulfonate (8:2 FTS-K)	438237-73-1
Ammonium 1H,1H,2H,2H-Perfluorododecane sulfonate (8:2 FTS-NH ₄)	149724-40-3
Sodium 1H,1H,2H,2H-Perfluorododecane sulfonate (8:2 FTS-Na)	27619-96-1
H₂PFDA/8:2 FTCA, its salts	
2H,2H-Perfluorodecane Acid (H ₂ PFDA/8:2 FTCA)	27854-31-5
Tetrabutylphosphonium 2H,2H-Perfluorodecanoate (8:2 FTCA-P(C ₄ H ₉) ₄)	882489-14-7
8:2diPAP, its salts	
Bis(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl) hydrogen phosphate (8:2diPAP)	678-41-1
Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-Na)	114519-85-6
H₄PFUnDA/ 8:3 FTCA, its salts	
2H,2H,3H,3H-Perfluoroundecanoic acid (H ₄ PFUnDA/ 8:3 FTCA)	34598-33-9
Potassium 2H,2H,3H,3H-Perfluoroundecanoate (H ₄ PFUnDA-K)	83310-58-1

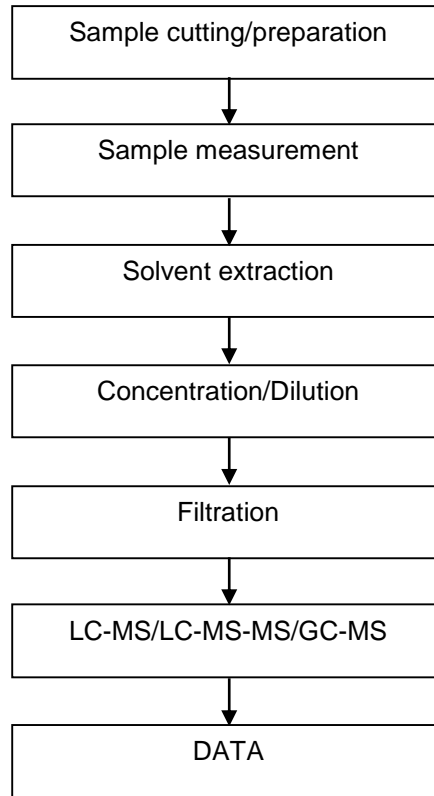
Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.



Organotin Testing Flow Chart



PFASs/ PFOS/PFOA Testing Flow Chart



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Sample Photo:



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