



检测报告

Test Report

报告编号 A2250390769101011E
Report No. A2250390769101011E

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报告抬头公司名称 扬州升阳电子有限公司
Company Name YANGZHOU SHENGYANG ELECTRONICS CO.,LTD.
shown on Report
地 址 高邮市北开发区长兴路
Address CHANGXING ROAD,NORTH DEVELOPMENT ZONE,GAOYOU CITY,JIANGSU PROVINCE,CHINA.

以下测试之样品及样品信息由申请者提供并确认

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

样品名称 导电高分子型固态铝电解电容器
Sample Name Conductive polymer aluminum solid capacitors
样品接收日期 2025.06.07
Sample Received Date Jun. 7, 2025
样品检测日期 2025.06.07-2025.06.16
Testing Period Jun. 7, 2025 to Jun. 16, 2025

测试内容 Test Conducted:

根据客户的申请要求，具体要求详见下一页。

As requested by the applicant. For details refer to next page(s).

批准

Approved by

陈凯敏

实验室经理 Lab Manager

日期

Date

2025.06.17

No. R794241836

上海市闵行区万芳路 1351 号

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上海华测品标检测技术有限公司

Centre Testing International Pinbiao(Shanghai) Co., Ltd.

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测试摘要 Executive Summary:

测试要求

TEST REQUEST

- 欧盟持久性有机污染物(POPs)法规(EU) 2019/1021 及其修订指令
Regulation (EU) 2019/1021 on persistent organic pollutants (POPs) and its amendments
- 多溴二苯醚
Polybrominated Diphenyl Ethers (PBDEs)
 - 全氟辛烷磺酸(PFOS)及其衍生物
Perfluorooctane sulfonic acid (PFOS) and its derivatives
 - 六溴环十二烷
Hexabromocyclododecane (HBCDD)
 - 短链氯化石蜡
Short Chain Chlorinated Paraffins (SCCPs)
 - 五氯苯
Pentachlorobenzene
 - 六氯苯
Hexachlorobenzene
 - 六溴联苯
Hexabromobiphenyl
 - 多氯联苯
Polychlorinated Biphenyls(PCBs)
 - 多氯化萘
Polychlorinated Naphthalenes (PCNs)
 - 六氯丁二烯
Hexachlorobutadiene (HCBD)
 - 全氟辛酸(PFOA)及其盐和相关物质
Perfluorooctanoic acid (PFOA) and its salts & related substances
 - 全氟己基磺酸(PFHxS)及其盐和相关物质
Perfluorohexane-1-sulphonic acid (PFHxS) and its salts & related substances

测试结果

CONCLUSION

- 见结果页
See test result(s)

*****详细结果, 请见下页*****

***** For further details, please refer to the following page(s) *****

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欧盟持久性有机污染物(POPs)法规(EU) 2019/1021 及其修订指令 Regulation (EU) 2019/1021 on persistent organic pollutants (POPs) and its amendments

▼多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)

测试方法: IEC 62321-6:2015; 测试仪器: GC-MS

Test Method: IEC 62321-6:2015; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
	011		
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	2	--
五溴二苯醚 Pentabromodiphenyl ether	N.D.	2	--
六溴二苯醚 Hexabromodiphenyl ether	N.D.	2	--
七溴二苯醚 Heptabromodiphenyl ether	N.D.	2	--
十溴二苯醚 Decabromodiphenyl ether	N.D.	2	--
总和 Total	N.D.	--	500

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼全氟辛烷磺酸(PFOS)及其衍生物 Perfluorooctane sulfonic acid (PFOS) and its derivatives

测试方法: 参考 EN 17681-1:2022&EN 17681-2:2022*1; 测试仪器: LC-MS-MS & GC-MS

Test Method: Refer to EN 17681-1:2022&EN 17681-2:2022*1; Test Equipment: LC-MS-MS & GC-MS

测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011		
PFOS 及其盐 PFOS and its salts*	1763-23-1	N.D.	0.010	--
全氟辛基磺酰氟 Perfluoro-1-octanesulfonyl fluoride (PFOSF)	307-35-7	N.D.	0.010	--
氟虫胺 N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	4151-50-2	N.D.	0.050	--
1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-N-甲基-辛磺酰胺 N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)	31506-32-8	N.D.	0.050	--

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测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011		
N-乙基全氟辛基磺酰胺乙醇 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	1691-99-2	N.D.	0.050	--
1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-N-(2-羟乙基)-N-甲基-1-辛基磺酰胺 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)	24448-09-7	N.D.	0.050	--
PFOSA 及其盐 PFOSA and its salts*	754-91-6	N.D.	0.010	--
N-Me-FOSAA 及其盐 N-Me-FOSAA and its salts*	2355-31-9	N.D.	0.050	--
N-Et-FOSAA 及其盐 N-Et-FOSAA and its salts*	2991-50-6	N.D.	0.050	--
FOSAA 及其盐 FOSAA and its salts*	2806-24-8	N.D.	0.010	--
双(2-全氟辛基磺酰基-N-氨乙基)磷酸 Bis[2-[N-ethyl(heptadecafluorooctanesulphonyl)amino]ethyl]hydrogen phosphate (EtFOSEdiPAPs)	2965-52-8	N.D.	0.050	--
总和 Total	-	N.D.	--	1000

备注 Remark:

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- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- * = PFOS 及其衍生物清单中列出的物质 The substances listed in the List of PFOS and its derivatives

PFOS 及其衍生物清单 List of PFOS and its derivatives

序号 No.	组名 Group Name	物质名称 Substance Name(s)	CAS No.
1	PFOS 及其盐 PFOS and its salts	全氟辛烷磺酸 Perfluorooctane Sulfonates (PFOS)	1763-23-1
2		全氟辛基磺酸钾 Perfluorooctanesulfonic acid, potassium salt (PFOS-K)	2795-39-3
3		全氟辛基磺酸锂 Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
4		全氟辛基磺酸钠 Sodium perfluorooctane sulfonate (PFOS-Na)	4021-47-0
5		全氟辛基磺酸镁 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-, magnesium salt (2:1) (PFOS-Mg)	91036-71-4
6		全氟辛基磺酸铵 Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH ₄)	29081-56-9
7		全氟辛基磺酸二乙醇胺 Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) ₂)	70225-14-8
8		全氟辛基磺酸四乙基铵 Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄)	56773-42-3
9		全氟辛烷磺酸四丁基铵 Tetrabutylammonium perfluorooctanesulfonate (PFOS-NH(C ₁₆ H ₃₆))	111873-33-7
10		全氟辛基磺酸二癸二甲基铵 Didecyl dimethyl ammonium perfluorooctane sulfonate (PFOS-DDA)	251099-16-8
11		全氟辛基磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluorooctanesulfonate	71463-74-6

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12		全氟辛基磺酸四甲基胺 Tetramethylammonium perfluorooctane sulfonate (PFOS-C ₄ H ₁₂ N)	56773-44-5
13		全氟辛基磺酸二乙胺 Perfluorooctanesulfonic acid diethylamine salt (PFOS-C ₄ H ₁₁ N)	2205029-08-7
14		全氟辛基磺酸三乙胺 Triethylammonium perfluorooctane sulfonate (PFOS-C ₆ H ₁₅ N)	54439-46-2
15		全氟辛基磺酸三丁基甲基胺 N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-C ₁₃ H ₃₀ N)	124472-68-0
16		全氟辛基磺酸戊基(三丙基)氮胺 N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-C ₁₄ H ₃₂ N)	56773-56-9
17		全氟辛基磺酸四丁基磷 Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-C ₁₆ H ₃₆ P)	2185049-59-4
18		全氟辛基磺酸庚基二甲基-[2-(2-甲基丙-2-烯酰氧基)乙基]胺 Heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium heptadecafluorooctane-1-sulfonate (PFOS-C ₁₅ H ₃₀ NO ₂)	1203998-97-3
19		全氟辛基磺酸双[4-(1,1-二甲基乙基)苯基]-碘鎓 Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1) (PFOS-C ₂₀ H ₂₆ I)	213740-80-8
20		全氟辛基磺酸二苯基(2,4,6-三甲基苯基)硫 Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate (PFOS-C ₂₁ H ₂₁ S)	258341-99-0
21		全氟辛基磺酸十六烷基吡啶 1-Hexadecylpyridinium perfluoro-1-octanesulfonate (PFOS-C ₂₁ H ₃₈ N)	334529-63-4
22		全氟辛基磺酸酐 Perfluorooctane sulfonic anhydride (PFOSAN)	423-92-7
23		N,N,N-三乙基癸-1-胺十七氟辛烷-1-磺酸盐 N,N,N-Triethyldecan-1-aminium heptadecafluorooctane-1-sulfonate (PFOS-C ₁₆ H ₃₆ N)	773895-92-4
24		全氟辛烷磺酸盐 Perfluorooctanesulfonate (PFOS (anion))	45298-90-6
25		全氟辛基磺酰氯 Perfluoro-1-octanesulfonyl chloride (PFOS-Cl)	423-60-9
26	--	全氟辛基磺酰氟 Perfluoro-1-octanesulfonyl fluoride (PFOSF)	307-35-7
27	--	氟虫胺 N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	4151-50-2
28	--	1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-N-甲基-辛磺酰胺 N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)	31506-32-8
29	--	N-乙基全氟辛基磺酰胺乙醇 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	1691-99-2
30	--	1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-N-(2-羟乙基)-N-甲基-1-辛基磺酰胺 2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Me-FOSE)	24448-09-7
31	PFOSA 及其盐 PFOSA and its salts	全氟辛基磺酰胺 Perfluorooctanesulfonamide (PFOSA)	754-91-6
32		全氟辛基磺酰胺锂盐(1:1) Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
33		全氟辛基磺酰胺钠盐(1:1) Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
34		全氟辛基磺酰胺钾盐(1:1) Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
35		全氟辛基磺酰胺铵盐(1:1) Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH ₄)	76752-72-2
36		全氟辛基磺酰胺三乙胺 Heptadecafluorooctane-1-sulphonamide, compound with triethylamine (1:1) (PFOSA-C ₆ H ₁₅ N)	76752-82-4

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37	N-Me-FOSAA	N-(十七氟辛基磺酰基)-N-甲基甘氨酸 N-Methyl perfluorooctanesulfonamidoacetic acid (N-Me-FOSAA)	2355-31-9
38	及其盐 N-Me-FOSAA	N-(十七氟辛基磺酰基)-N-甲基甘氨酸钾 Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
39	and its salts	N-(十七氟辛基磺酰基)-N-甲基甘氨酸盐 2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA (anion))	909405-48-7
40	N-Et-FOSAA 及其盐 N-Et-FOSAA and its salts	N-乙基-N-((十七氟辛基)磺酰基)甘氨酸 N-ethyl-N-[(heptadecafluorooctyl)sulphonyl] glycine (N-Et-FOSAA)	2991-50-6
41		N-乙基-N-[(十七烷氟辛基)磺酰基]-甘氨酸钾盐 Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt (N-Et-FOSAA-K)	2991-51-7
42		N-乙基-N-((十七氟辛基)磺酰基)甘氨酸钠 Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
43		N-乙基-N-((十七氟辛基)磺酰基)甘氨酸铵 Ammonium 2-(N-ethylperfluorooctanesulfonamido) acetate (N-Et-FOSAA-NH ₄)	2991-52-8
44		N-乙基-N-((十七氟辛基)磺酰基)甘氨酸盐 2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA (anion))	909405-49-8
45	FOSAA 及其 盐 FOSAA and its salts	全氟辛烷磺酰氨基乙酸 Glycine, N-[(heptadecafluorooctyl)sulfonyl]- (FOSAA)	2806-24-8
46		全氟辛烷磺酰氨基乙酸钾 N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4
47		全氟辛烷磺酰氨基乙酸钠 N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
48		全氟辛烷磺酰氨基乙酸盐 N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA (anion))	909405-47-6
49	--	双(2-全氟辛基磺酰基-N-氨乙基)磷酸 Bis[2-[N-ethyl(heptadecafluorooctanesulphonyl)amino]ethyl]hydrogen phosphate (EtFOSEdiPAPs)	2965-52-8

▼ 六溴环十二烷 Hexabromocyclododecane (HBCDD)

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018*1; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*1; Test Equipment: GC-MS

测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限	限值 Limit
		011	MDL (mg/kg)	(mg/kg)
六溴环十二烷 Hexabromocyclododecane (HBCDD)	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	N.D.	5	75

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备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- “六溴环十二烷(HBCDD)”指：六溴环十二烷(HBCDD)、1,2,5,6,9,10-六溴环十二烷及其非对映异构体 (α -HBCDD, β -HBCDD, γ -HBCDD)
'Hexabromocyclododecane (HBCDD)' means: Hexabromocyclododecane (HBCDD), 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: α -HBCDD, β -HBCDD, γ -HBCDD

▼ **短链氯化石蜡 Short Chain Chlorinated Paraffins (SCCPs)**

测试方法：参考 US EPA 3550C:2007 & US EPA 8270E:2018*¹；测试仪器：GC-MS(NCI)

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*¹; Test Equipment: GC-MS(NCI)

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011	
短链氯化石蜡 Short Chain Chlorinated Paraffins (SCCPs)	N.D.	100	1500

备注 Remark:

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- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ **五氯苯 Pentachlorobenzene**

测试方法：参考 US EPA 3550C:2007 & US EPA 8270E:2018*¹；测试仪器：GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*¹; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011	
五氯苯 Pentachlorobenzene	N.D.	5	N.D.

备注 Remark:

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- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 六氯苯 Hexachlorobenzene

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018*¹; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*¹; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011	
六氯苯 Hexachlorobenzene	N.D.	5	10

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 六溴联苯 Hexabromobiphenyl

测试方法: IEC 62321-6:2015; 测试仪器: GC-MS

Test Method: IEC 62321-6:2015; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011	
六溴联苯 Hexabromobiphenyl	N.D.	5	N.D.

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ 多氯联苯 Polychlorinated Biphenyls(PCBs)

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018*¹; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*¹; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011	
多氯联苯 Polychlorinated Biphenyls(PCBs)	N.D.	0.2	N.D.

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备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ **多氯化萘 Polychlorinated Naphthalenes (PCNs)**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018*¹; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*¹; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限	限值 Limit
	011	MDL (mg/kg)	(mg/kg)
多氯化萘 Polychlorinated Naphthalenes (PCNs)	N.D.	5	N.D.

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

▼ **六氯丁二烯 Hexachlorobutadiene (HCBd)**

测试方法: 参考 US EPA 3550C:2007 & US EPA 8270E:2018*¹; 测试仪器: GC-MS

Test Method: Refer to US EPA 3550C:2007 & US EPA 8270E:2018*¹; Test Equipment: GC-MS

测试项目 Tested Item(s)	结果 Result (mg/kg)	方法检出限	限值 Limit
	011	MDL (mg/kg)	(mg/kg)
六氯丁二烯 Hexachlorobutadiene	N.D.	20	N.D.

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million

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▼ 全氟辛酸(PFOA)及其盐和相关物质 Perfluorooctanoic acid (PFOA) and its salts & related substances

测试方法: 参考 EN 17681-1:2022&EN 17681-2:2022*1; 测试仪器: LC-MS-MS & GC-MS

Test Method: Refer to EN 17681-1:2022&EN 17681-2:2022*1; Test Equipment: LC-MS-MS & GC-MS

测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限	限值 Limit
		011	MDL (mg/kg)	(mg/kg)
PFOA 及其盐 PFOA and its salts*	335-67-1	N.D.	0.010	--
全氟辛酸(PFOA)及其盐 Perfluorooctanoic acid (PFOA) and its salts	-	N.D.	--	0.025
全氟辛酸甲酯 Methyl perfluorooctanoate (Me-PFOA)	376-27-2	N.D.	0.010	1
全氟辛酸乙酯 Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5	N.D.	0.010	1
全氟正辛基碘烷 Perfluorooctyl iodide (PFOI)	507-63-1	N.D.	0.200	1
1H,1H,2H,2H-全氟-1-癸醇 1H,1H,2H,2H- Perfluoro-1-decanol (8:2 FTOH)	678-39-7	N.D.	0.200	1
8:2 FTS 及其盐 8:2 FTS and its salts*	39108-34-4	N.D.	0.200	1
丙烯酸 1H,1H,2H,2H-十七氟癸酯 1,1,2,2-Tetrahydroperfluorodecyl acrylate (8:2 FTAC)	27905-45-9	N.D.	0.200	1
2-(全氟辛基)乙基甲基丙烯酸酯 2-Propenoic acid,2-methyl-,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10, 10-heptafluorodecyl ester (8:2 FTMA)	1996-88-9	N.D.	0.200	1
1H,1H,2H,2H-全氟癸基三乙氧基硅烷 1H,1H,2H,2H-Perfluorodecyltriethoxysilane (PFSI)	101947-16-4	N.D.	0.200	1
1-碘-1H,1H,2H,2H-全氟癸烷 Decane,1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8- heptafluoro-10-iodo- (8:2 FTI)	2043-53-0	N.D.	0.200	1
8:2diPAP 及其盐 8:2diPAP and its salts*	678-41-1	N.D.	0.200	1
2H,2H-全氟癸酸 2H,2H-Perfluorodecanoate (H ₂ PFDA)	27854-31-5	N.D.	0.010	1
四丁基磷 2H,2H-全氟癸酸酯 Tetrabutylphosphonium 2H,2H- Perfluorodecanoate (H ₂ PFDA-P(C ₄ H ₉) ₄)	882489-14-7	N.D.	0.010	1
H ₄ PFUnA 及其盐 H ₄ PFUnA and its salts*	34598-33-9	N.D.	0.010	1
全氟辛基乙烯 1-Decene,3,3,4,4,5,5,6,6,7,7, 8,8,9,9,10,10,10-heptafluoro- (PFOE)	21652-58-4	N.D.	0.200	1
全氟癸基三氯硅烷 Perfluorooctylethyltrichlorosilane (FDTS)	78560-44-8	N.D.	0.200	1
全氟癸基三甲氧硅烷 Perfluorooctylethyltrimethoxysilane (FDTMOS)	83048-65-1	N.D.	0.200	1
10:2 diPAP 及其盐 10:2 diPAP and its salts*	1895-26-7	N.D.	0.200	1

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测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011		
8:2 monoPAPS 及其盐 8:2 monoPAPS and its salts*	57678-03-2	N.D.	0.200	1
2H-全氟-2-癸烯酸 2H-Perfluoro-2-decenoic acid (8:2 FTUCA)	70887-84-2	N.D.	0.010	1
C8-14-全氟烷基乙醇 Alcohols, C8-14, gamma- omega-perfluoro (C8-14-PFEtOH)	68391-08-2	N.D.	0.200	1
2-全氟辛基乙基乙酸酯 1H,1H,2H,2H- Perfluorodecyl acetate (8:2FTOAc)	37858-04-1	N.D.	0.200	1
全氟辛酸(PFOA)相关物质 Perfluorooctanoic acid (PFOA) related substances	--	N.D.	--	1

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- * = PFOA 及其盐和相关物质清单中列出的物质 The substances listed in the List of PFOA and its salts & related substances

PFOA 及其盐和相关物质清单 List of PFOA and its salts & related substances

序号 No.	组名 Group Name	物质名称 Substance Name(s)	CAS No.
全氟辛酸(PFOA)及其盐 Perfluorooctanoic acid (PFOA) and its salts			
1	PFOA 及其盐 PFOA and its salts	全氟辛酸 Perfluorooctanoic acid (PFOA)	335-67-1
2		全氟辛酸铵 Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
3		全氟辛酸钠 Sodium perfluorooctanoate (PFOA-Na)	335-95-5
4		全氟辛酸钾 Potassium perfluorooctanoate (PFOA-K)	2395-00-8
5		全氟辛酸锂 Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
6		全氟辛酸银 Silver perfluorooctanoate (PFOA-Ag)	335-93-3
7		全氟辛氟 Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
8		全氟辛酸铯 Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
9		全氟辛酸钴 Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
10		全氟辛酸铬 Chromium(III) perfluorooctanoate (PFOA-Cr)	68141-02-6
11		全氟辛酸四乙基铵 N,N,N-Triethylethanaminium perfluorooctanoate (PFOA-NH(C ₂ H ₅) ₃)	98241-25-9
12		全氟辛酸四丙基铵 Tetrapropylammonium perfluorooctanoate (PFOA-NH(C ₃ H ₇) ₄)	277749-00-5
13		全氟辛酸 N,N,N-三甲基甲烷 Perfluorooctanoate N,N,N-Trimethylmethanaminium (PFOA-NH(C ₄ H ₁₁) ₃)	32609-65-7
14		全氟辛酸-哌嗪 Pentadecafluorooctanoic acid-piperazine (2/1) (PFOA-NH(C ₄ H ₁₀ N))	423-52-9
15		全氟辛酸钾水合物 Potassium pentadecafluorooctanoate-water (1/1/2) (PFOA-K(H ₂ O) ₂)	98065-31-7

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16		全氟辛酸乙胺 Perfluorooctanoic acid compd. with ethanamine (1:1) (PFOA-C ₂ H ₇ N)	1376936-03-6
17		全氟辛酸吡啶 Pentadecafluorooctanoic acid-pyridine (1/1) (PFOA-C ₅ H ₅ N)	95658-47-2
18		全氟辛酸苯基哌嗪 Pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-C ₁₀ H ₁₄ N ₂)	1514-68-7
19		全氟辛酸辛基三甲基铵 N,N,N-Trimethyloctan-1-aminium pentadecafluorooctanoate (PFOA-C ₁₁ H ₂₆ N)	927835-01-6
20		全氟辛酸酐 Perfluorooctanoic Anhydride (PFOAA)	33496-48-9
21		全氟辛酸盐 Pentadecafluorooctanoate (anion) (PFOA (anion))	45285-51-6
22		全氟辛酸氯 Pentadecafluorooctanoyl chloride (PFOA-Cl)	335-64-8
全氟辛酸(PFOA)相关物质 Perfluorooctanoic acid (PFOA) related substances			
23	--	全氟辛酸甲酯 Methyl perfluorooctanoate (Me-PFOA)	376-27-2
24	--	全氟辛酸乙酯 Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5
25	--	全氟正辛基碘烷 Perfluorooctyl iodide (PFOI)	507-63-1
26	--	1H,1H,2H,2H-全氟-1-癸醇 1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7
27		1H,1H,2H,2H-全氟癸磺酸 1H,1H,2H,2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4
28		1H,1H,2H,2H-全氟癸磺酸钠 1H,1H,2H,2H-Perfluorodecanesulfonic Acid Sodium (8:2 FTS-Na)	27619-96-1
29	8:2 FTS 及其盐	1H,1H,2H,2H-全氟癸磺酸钾 Potassium 2-(perfluorooctyl)ethane-1-sulfonate (8:2 FTS-K)	438237-73-1
30	8:2 FTS and its salts	1H,1H,2H,2H-全氟癸磺酸铵 8:2 Fluorotelomer sulfonate ammonium salt (8:2 FTS-NH ₄)	149724-40-3
31		1H,1H,2H,2H-全氟癸磺酸盐 2-(Perfluorooctyl)ethane-1-sulfonate (8:2 FTS (anion))	481071-78-7
32		1H,1H,2H,2H-全氟癸磺酰氯 2-(Perfluorooctyl)ethanesulfonyl chloride (8:2 FTS-Cl)	27619-90-5
33	--	丙烯酸 1H,1H,2H,2H-十七氟癸酯 1,1,2,2-Tetrahydroperfluorodecyl acrylate (8:2 FTAC)	27905-45-9
34	--	2-(全氟辛基)乙基甲基丙烯酸酯 2-Propenoic acid,2-methyl-,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester (8:2 FTMA)	1996-88-9
35	--	1H,1H,2H,2H-全氟癸基三乙氧基硅烷 1H,1H,2H,2H-Perfluorodecyltriethoxysilane (PFSI)	101947-16-4
36	--	1-碘-1H,1H,2H,2H-全氟癸烷 Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8- heptadecafluoro-10-iodo- (8:2 FTI)	2043-53-0
37		双(2-(全氟乙基)磷酸 8:2 Fluorotelomer phosphate diester (8:2diPAP)	678-41-1
38	8:2diPAP 及其盐	双(2-(全氟乙基)磷酸钠 Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-Na)	114519-85-6
39	8:2diPAP and its salts	双(2-(全氟乙基)磷酸铵 Ammonium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-NH ₄)	93776-20-6
40		双(2-(全氟乙基)磷酸二乙醇胺 Bis(2-hydroxyethyl)ammonium bis((perfluorooctyl)ethyl) hydrogen phosphate (8:2diPAP-C ₄ H ₁₁ NO ₂)	57677-97-1
41		双(2-(全氟乙基)磷酸盐 8:2 Fluorotelomer phosphate diester ion (1-) (8:2diPAP (anion))	1411713-91-1
42	--	2H,2H-全氟癸酸 2H,2H-Perfluorodecanoate (H ₂ PFDA)	27854-31-5
43	--	四丁基磷 2H,2H-全氟癸酸酯 Tetrabutylphosphonium 2H,2H-Perfluorodecanoate (H ₂ PFDA-P(C ₄ H ₉) ₄)	882489-14-7

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44	H ₄ PFUnA 及其盐	2H,2H,3H,3H-全氟十一酸 2H,2H,3H,3H-Perfluoroundecanoic acid (H ₄ PFUnA)	34598-33-9
45	H ₄ PFUnA and its salts	3-(全氟辛基)丙酸钾 Potassium 3-(perfluorooctyl)propanoate (H ₄ PFUnA-K)	83310-58-1
46		2H,2H,3H,3H-全氟十一酸锂 Lithium 3-(perfluorooctyl)propanoate (H ₄ PFUnA-Li)	67304-23-8
47	--	全氟辛基乙烯 1-Decene,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro- (PFOE)	21652-58-4
48	--	全氟癸基三氯硅烷 Perfluorooctylethyltrichlorosilane (FDTS)	78560-44-8
49	--	全氟癸基三甲氧硅烷 Perfluorooctylethyltrimethoxysilane (FDTMOS)	83048-65-1
50	10:2 diPAP 及其盐	双[2-(全氟癸基)乙基]磷酸酯 Bis[2-(perfluorodecyl)ethyl] Phosphate (10:2 diPAP)	1895-26-7
51	10:2 diPAP and its salts	2,2'-亚氨基二乙醇双[2-(全氟癸基)乙基]磷酸盐 Bis((perfluorodecyl)ethyl) hydrogen phosphate 2,2'-iminodiethanol (10:2 diPAP-C ₄ H ₁₁ O ₂)	57677-98-2
52	8:2 monoPAPS 及其盐	十七氟-1-癸醇磷酸二氢酯 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl dihydrogen phosphate (8:2 monoPAPS)	57678-03-2
53		8:2 氟调聚物磷酸单酯钠盐 Sodium 1H,1H,2H,2H-perfluorodecyl phosphate (8:2 monoPAPS-Na)	92678-93-8
54		8:2 氟调聚物磷酸单酯二钠盐 Disodium 1H,1H,2H,2H-perfluorodecylphosphate (8:2 monoPAPS-Na ₂)	438237-75-3
55		8:2 氟调聚物磷酸单酯二铵盐 8:2 Fluorotelomer diammonium phosphate (8:2 monoPAPS-NH ₄ NH ₄)	93857-44-4
56	--	2H-全氟-2-癸烯酸 2H-Perfluoro-2-decenoic acid (8:2 FTUCA)	70887-84-2
57	--	C8-14-全氟烷基乙醇 Alcohols, C8-14, gamma-omega-perfluoro (C8-14-PF _{Et} OH)	68391-08-2
58	--	2-全氟辛基乙基乙酸酯 1H,1H,2H,2H-Perfluorodecyl acetate (8:2FTOAc)	37858-04-1

▼ **全氟己基磺酸(PFHxS)及其盐和相关物质 Perfluorohexane-1-sulphonic acid (PFHxS) and its salts & related substances**

测试方法: 参考 EN 17681-1:2022&EN 17681-2:2022*¹; 测试仪器: LC-MS-MS & GC-MS

Test Method: Refer to EN 17681-1:2022&EN 17681-2:2022*¹; Test Equipment: LC-MS-MS & GC-MS

测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011		
PFHxS 及其盐 PFHxS and its salts*	355-46-4	N.D.	0.010	--
全氟己基磺酸(PFHxS)及其盐 Perfluorohexanesulfonic acid (PFHxS) and its salts	-	N.D.	--	0.025
全氟己基磺酰胺 1-Hexane-sulfonamide,1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- (FHxSA)	41997-13-1	N.D.	0.010	--
N-甲基全氟己烷磺酰胺 N-methylperfluorohexanesulfonamide (MeFHxSA)	68259-15-4	N.D.	0.200	--
N-[3-(二甲基氨基)丙基]十三氟己基磺酰胺 N-(3-(Dimethylamino)propyl) perfluorohexane sulfonamide (N-AP-FHxSA)	50598-28-2	N.D.	0.010	--

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测试项目 Tested Item(s)	CAS No.	结果 Result (mg/kg)	方法检出限 MDL (mg/kg)	限值 Limit (mg/kg)
		011		
丙烯酸(N-甲基全氟己基磺酰胺基)乙酯 (N-Methylperfluorohexanesulfonamido)ethyl acrylate (N-MeFHxSA-EA)	67584-57-0	N.D.	0.200	--
全氟己基磺酸(PFHxS)相关物质 Perfluorohexanesulfonic acid (PFHxS) related substances	-	N.D.	--	1

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 Not Detected (小于方法检出限 <MDL)
- mg/kg = ppm = 百万分之一 parts per million
- * = PFHxS 及其盐和相关物质清单中列出的物质 The substances listed in the List of PFHxS and its salts & related substances

PFHxS 及其盐和相关物质清单 List of PFHxS and its salts & related substances

序号 No.	组名 Group Name	物质名称 Substance Name(s)	CAS No.
全氟己基磺酸(PFHxS)及其盐 Perfluorohexanesulfonic acid (PFHxS) and its salts			
1	PFHxS 及其盐 PFHxS and its salts	全氟己基磺酸 Perfluorohexanesulfonic acid (PFHxS)	355-46-4
2		全氟己基磺酸钠 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,6- tridecafluoro-, sodium salt (PFHxS-Na)	82382-12-5
3		全氟己基磺酸钾 Potassium perfluorohexane-1-sulphonate (PFHxS-K)	3871-99-6
4		全氟己基磺酸锂 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, lithium salt(1:1) (PFHxS-Li)	55120-77-9
5		全氟己基磺酸锌 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, zinc salt (PFHxS-Zn)	70136-72-0
6		全氟己基磺酸镓盐(9Cl) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, gallium salt (9Cl) (PFHxS-Ga)	341035-71-0
7		全氟己基磺酸钪盐(3:1) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, scandium(3+) salt (3:1) (PFHxS-Sc)	350836-93-0
8		全氟己基磺酸钕盐(3:1) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, neodymium(3+) salt (3:1) (PFHxS-Nd)	41184-65-0
9		全氟己基磺酸钇盐(3:1) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, yttrium(3+) salt (3:1) (PFHxS-Y)	41242-12-0
10		全氟己基磺酸铯 Cesium Perfluorohexanesulfonate (PFHxS-Cs)	92011-17-1
11		全氟己基磺酸铵 1-Hexanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt (1:1) (PFHxS-NH ₄)	68259-08-5
12		全氟己基磺酰氟 1-Hexanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- (PFHxSF)	423-50-7
13		全氟己基磺酰氯 1,1,2,2,3,3,4,4,5,5,6,6,6-Tridecafluorohexane-1-sulphonyl chloride (PFHxS-Cl)	55591-23-6
14		全氟己烷磺酸盐 Perfluorohexylsulfonate (PFHxS (anion))	108427-53-8

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15	(二-4,1-苯撑硫)双二苯基硫与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸(1:2)的盐 Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl]-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:2) (PFHxS-S ₃ (C ₆ H ₅) ₄ (C ₆ H ₄) ₂)	421555-73-9
16	二[4-(1,1-二甲基丙基)苯基]碘与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸的盐 Iodonium, bis[4-(1,1-dimethylpropyl)phenyl]-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic (PFHxS-I(C ₆ H ₄) ₂ (C ₅ H ₁₁) ₂)	421555-74-0
17	三[4-(1,1-二甲基乙基)苯基]硫-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯 Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-S(C ₆ H ₄) ₃ (C ₄ H ₉) ₃)	425670-70-8
18	1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸锌与 N,N-二乙基乙胺(1:1) 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with N,N-diethylethanamine (1:1) (PFHxS-N(C ₂ H ₅) ₃)	72033-41-1
19	二[(1,1-二甲基乙基)苯基]碘与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸的盐 (1:1) (9CI) Iodonium, bis[(1,1-dimethylethyl)phenyl]-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1) (9CI) (PFHxS-I(C ₆ H ₄) ₂ (C ₄ H ₉) ₂)	866621-50-3
20	(4-甲基苯基)二苯基硫-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Sulfonium, (4-methylphenyl)diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-S(C ₆ H ₅) ₂ C ₇ H ₇)	910606-39-2
21	[4-[(2-甲基-1-氧代-2-丙烯-1-基)氧基]苯基]二苯基硫-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Sulfonium, [4-[(2-methyl-1-oxo-2-propen-1-yl)oxy]phenyl]diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-S(C ₆ H ₅) ₂ C ₁₀ H ₉ O ₂)	911027-68-4
22	[4-[(2-甲基-1-氧代-2-丙烯基)氧基]苯基]二苯基硫与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸的盐与 2-乙基三环[3.3.1.1 ^{3,7}]癸-2-甲基-2-丙烯酸酯、3-羟基三环[3.3.1.1 ^{3,7}]癸-2-甲基-2-丙烯酸酯和四氢呋喃-2-甲基-2-丙烯酸酯的聚合物 Sulfonium, [4-[(2-methyl-1-oxo-2-propenyl)oxy]phenyl]diphenyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1), polymer with 2-ethyltricyclo[3.3.1.1 ^{3,7}]dec-2-yl 2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.1 ^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate	911027-69-5
23	二苯并[k,n][1,4,7,10,13]四氧硫酰氯代十六烷基铵, 19-[4-(1,1-二甲基乙基)苯基]-6,7,9,10,12,13-六氢-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Dibenzof[k,n][1,4,7,10,13]tetraoxathiacyclopentadecinium, 19-[4-(1,1-dimethylethyl)phenyl]-6,7,9,10,12,13-hexahydro-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-SC ₂₈ H ₃₁ O ₄)	928049-42-7
24	三苯基(苯甲基)膦-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Phosphonium, triphenyl(phenylmethyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-P(C ₆ H ₅) ₃ C ₇ H ₇)	1000597-52-3
25	N,N,N-三丁基-1-丁胺与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸的盐 1-Butanaminium, N,N,N-tributyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (PFHxS-N(C ₄ H ₉) ₄)	108427-54-9
26	N,N,N-三乙基乙胺与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸(1:1)的盐 Ethanaminium, N,N,N-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1) (PFHxS-N(C ₂ H ₅) ₄)	108427-55-0
27	吡咯烷与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸(1:1)的盐 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with pyrrolidine (1:1) (PFHxS-NC ₄ H ₉)	1187817-57-7

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28	三苯基硫-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-S(C ₆ H ₅) ₃)	144116-10-9
29	1-(羧甲基)-4-[2-[4-[4-(2,2-二苯基乙烯基)苯基]-1,2,3,3a,4,8b-六氢旋流器戊烷[b]吡啶-7-基]乙烯基]喹啉-十三氟-1-己基磺酸酯(1:1) Quinolinium, 1-(carboxymethyl)-4-[2-[4-[4-(2,2-diphenylethenyl)phenyl]-1,2,3,3a,4,8b-hexahydrocyclopent[b]indol-7-yl]ethenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-C ₄₄ H ₃₇ N ₂ O ₂)	1462414-59-0
30	二苯基碘-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Iodonium, diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-I(C ₆ H ₅) ₂)	153443-35-7
31	N,N,N-三甲基甲胺与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸(1:1)的盐 Methanaminium, N,N,N-trimethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid (1:1) (PFHxS-N(CH ₃) ₄)	189274-31-5
32	2-甲基-2-丙胺与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸(1:1)的盐 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2-methyl-2-propanamine (1:1) (PFHxS-NH ₂ (CH ₃) ₃)	202189-84-2
33	二[4-(1,1-二甲基乙基)苯基]碘-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-I(C ₆ H ₄) ₂ (C ₄ H ₉) ₂)	213740-81-9
34	二(4-甲基苯基)苯基硫-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Sulfonium, bis(4-methylphenyl)phenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-S(C ₇ H ₇) ₂ C ₆ H ₅)	341548-85-4
35	N-[4-[[4-(二乙氨基)苯基][4-(乙氨基)-1-萘基]亚甲基]-2,5-环己二烯-1-亚基]-N-乙基乙胺-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Ethanaminium, N-[4-[[4-(diethylamino)phenyl][4-(ethylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-ethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-(NC ₁₀ H ₁₄) ₃ C ₅ H ₄)	1310480-24-0
36	N-[4-[[4-(二甲氨基)苯基][4-(乙胺基)-1-萘基]亚甲基]-2,5-环己二烯-1-亚基]-N-甲基甲胺-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Methanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(ethylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-(NC ₈ H ₁₀) ₂ C ₁₃ H ₁₂)	1310480-27-3
37	N-[4-[[4-(二甲氨基)苯基][4-(苯氨基)-1-萘基]亚甲基]-2,5-环己二烯-1-亚基]-N-甲基甲胺-1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸酯(1:1) Methanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(phenylamino)-1-naphthalenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-(NC ₈ H ₁₀) ₂ C ₁₇ H ₁₂)	1310480-28-4
38	β-环糊精与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸根(1-)(1:1)形成的化合物 Beta-Cyclodextrin, compd. with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid ion(1-)(1:1) (PFHxS-C ₄₂ H ₇₀ O ₃₅)	1329995-45-0
39	γ-环糊精与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸根(1-)(1:1)形成的化合物 Gamma-Cyclodextrin, compd. with 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonic acid ion(1-)(1:1) (PFHxS-C ₄₈ H ₈₀ O ₄₀)	1329995-69-8
40	2,2'-亚氨基二乙醇与 1,1,2,2,3,3,4,4,5,5,6,6,6-十三氟-1-己基磺酸(1:1)形成的化合物 Tridecafluorohexanesulphonic acid, compound with 2,2'-iminodiethanol (1:1) (PFHxS-NH(C ₂ H ₅ O) ₂)	70225-16-0

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41		全氟己基磺酸四丁基磷 Tetrabutylphosphonium perfluorohexane sulfonate (PFHxS-P(C ₄ H ₉) ₄)	2310194-12-6
全氟己基磺酸(PFHxS)相关物质 Perfluorohexanesulfonic acid (PFHxS) related substances			
42	--	全氟己基磺酰胺 1-Hexane-sulfonamide,1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- (FHxSA)	41997-13-1
43	--	N-甲基全氟己烷磺酰胺 N-methylperfluorohexanesulfonamide (MeFHxSA)	68259-15-4
44	--	N-[3-(二甲基氨基)丙基]十三氟己磺酰胺 N-(3-(Dimethylamino)propyl) perfluorohexane sulfonamide (N-AP-FHxSA)	50598-28-2
45	--	丙烯酸(N-甲基全氟己基磺酰胺基)乙酯 (N-Methylperfluorohexanesulfonamido)ethyl acrylate (N-MeFHxSA-EA)	67584-57-0

样品/部位描述 Sample/Part Description

序号 No.	CTI 样品 ID CTI Sample ID	描述 Description
1	011	电子元器件（整体混合测试） Electronic components(Mix all)

备注 Remark:

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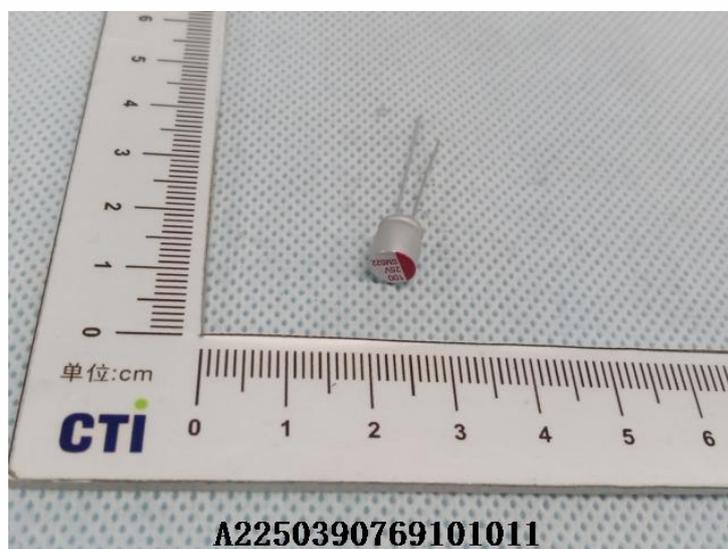
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样品图片

Photo(s) of the sample(s)



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