

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 1 页, 共 24 页

客户名称: 浙江里阳半导体有限公司
客户地址: 浙江省玉环市芦蒲镇漩门工业区

样品名称: 轴向成品
以上样品及信息由客户提供。

SGS 工作编号: GZP25-002871
样品接收时间: 2025 年 03 月 18 日
检测周期: 2025 年 03 月 18 日 ~ 2025 年 03 月 24 日
检测要求: 根据客户要求检测
检测方法: 见后续页。
检测结果: 见后续页。

检测要求	结论
AfPS GS 2019:01 PAK-多环芳香烃 (PAHs)	见检测结果
聚氯乙烯(PVC)	见检测结果
加拿大消费品安全法案(S.C. 2010, c. 21), SOR/2014-79-三(2-氯乙基)磷酸酯 (TCEP)	见检测结果
卤素	见检测结果
红磷	见检测结果
全氟辛酸(PFOA)及其盐和全氟辛烷磺酸(PFOS)及其衍生物	见检测结果
元素分析	见检测结果
欧盟 POPs 法规(EU) 2019/1021 附录 I 及其修正法规	符合

通标标准技术服务有限公司广州分公司
授权签名

陈江梨

Allie Chen 陈江梨
批准签署人

Scan to see the report



C5191290



SGS-CS Standards Technical Services Co., Ltd.
Guangzhou Branch Technical Services Co., Ltd. Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 2 页, 共 24 页

检测结果:

检测部件外观描述:

样品序号	样品编号	SGS 样品 ID	样品描述
SN1	A1	CAN25-0055329-0001.C001	银灰色金属脚
SN2	A2	CAN25-0055329-0001.C002	带芯片的铜色金属
SN3	A3	CAN25-0055329-0001.C003	带灰色印字的黑色塑料
SN4	A4	CAN25-0055329-0001.C004	带白色印刷 & 银色金属脚的黑色本体 (混合)

备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%
 (2) MDL= 方法检出限
 (3) ND = 未检出 (< MDL)
 (4) "-" = 未规定

AfPS GS 2019:01 PAK-多环芳香烃 (PAHs)

检测方法: 参考 AfPS GS 2019:01 PAK, 采用 GC-MS 进行分析。

检测项目	CAS No.	单位	MDL	A4
苯并(a)芘 (BaP)	50-32-8	mg/kg	0.1	ND
苯并(e)芘 (BeP)	192-97-2	mg/kg	0.1	ND
苯并(a)蒽 (BaA)	56-55-3	mg/kg	0.1	ND
苯并(b)荧蒽 (BbF)	205-99-2	mg/kg	0.1	ND
苯并(j)荧蒽 (BjF)	205-82-3	mg/kg	0.1	ND
苯并(k)荧蒽 (BkF)	207-08-9	mg/kg	0.1	ND
蒽 (CHR)	218-01-9	mg/kg	0.1	ND
二苯并(a,h)蒽 (DBA)	53-70-3	mg/kg	0.1	ND
苯并(g,h,i)花(二萘嵌苯) (BPE)	191-24-2	mg/kg	0.1	ND
茚并(1,2,3-c,d)芘 (IPY)	193-39-5	mg/kg	0.1	ND
菲 (PHE)	85-01-8	mg/kg	0.1	ND
芘 (PYR)	129-00-0	mg/kg	0.1	ND
蒽 (ANT)	120-12-7	mg/kg	0.1	ND
荧蒽 (FLT)	206-44-0	mg/kg	0.1	ND
4 项多环芳香烃总和[菲 (PHE), 芘 (PYR), 蒽 (ANT), 荧蒽 (FLT)]	-	mg/kg	-	ND
萘 (NAP)	91-20-3	mg/kg	0.1	ND
15 项多环芳香烃总和	-	mg/kg	-	ND
材料分类	-	-	-	-

备注:

AfPS(德国产品安全委员会): 认证对多环芳香烃的要求

SGS-CSTC Standards Technical Services Co., Ltd.
 Guangzhou Branch: Guangzhou Science City Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
 Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
 中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
 t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 3 页, 共 24 页

参数 单位: mg/kg	1 类	2 类		3 类	
	设计意图为放入口中的材料, 或与皮肤长期接触 (超过 30 秒) 的材料用于 -2009/48/EC 定义的玩具, 或 -供 3 岁以下儿童 ^{a,b} 使用。	不属于第 1 类, 设计意图或可预见 ^d 与皮肤长期接触 (超过 30 秒) 或短期重复接触 ^c 的材料		不属于第 1 和 2 类, 设计意图或可预见与皮肤短期接触 (不超过 30 秒) 材料	
		a. 供儿童使用的产品	b. 其他产品	a. 供儿童使用的产品	b. 其他产品
苯并(a)芘 (BaP)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(e)芘 (BeP)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(a)蒽 (BaA)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(b)荧蒽 (BbF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(j)荧蒽 (BjF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(k)荧蒽 (BkF)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
蒽 (CHR), mg/kg	< 0.2	< 0.2	< 0.5	< 0.5	< 1
二苯并(a,h)蒽 (DBA)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
苯并(g,h,i)花(二苯嵌苯) (BPE)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
茚并(1,2,3-c,d)芘 (IPY)	< 0.2	< 0.2	< 0.5	< 0.5	< 1
菲 (PHE), 芘 (PYR), 蒽 (ANT), 荧蒽 (FLT)	< 1 (总和)	< 5 (总和)	< 10 (总和)	< 20 (总和)	< 50 (总和)
萘 (NAP)	< 1	< 2		< 10	
15 PAH 之和	< 1	< 5	< 10	< 20	< 50

注释:

^a 儿童是指法定年龄未满 14 周岁的人。^b 供儿童使用包括儿童的主动接触或被动接触。^c “短期重复接触”的定义摘自 REACH 附录 XVII 第 50 条修正案 (EC) No. 1272/2013)。^d 根据德国产品安全法 (ProdSG) (第一章第 2 条第 28 款) 的定义, “可预见的使用”是指将产品投放市场的人无意但可以合理预见的方式使用产品。

备注:

德国产品安全委员会 (AfPS) 于 2020 年 4 月 10 日发布了关于多环芳香烃 (PAHs) 的新文件 (AfPS GS 2019:01 PAK), 该文件将于 2020 年 7 月 1 日起用于 GS-MARK 认证。

聚氯乙烯(PVC)

检测方法: 参考 ASTM E1252-98 (2021), 采用 FTIR 进行分析。

检测项目	CAS No.	A4
聚氯乙烯 (PVC)	9002-86-2	阴性



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 4 页, 共 24 页

备注:

(1) 阴性=未检测到, 阳性= 已检测到。

加拿大消费品安全法案(S.C. 2010, c. 21), SOR/2014-79-三(2-氯乙基)磷酸酯 (TCEP)

检测方法: 参考加拿大卫生部产品安全实验室检测方法 C-38:2012, 采用 GC-MS 进行分析。

检测项目	CAS No.	单位	MDL	A4
三(2-氯乙基)磷酸酯 (TCEP)	115-96-8	mg/kg	200	ND

卤素

检测方法: 参考 EN 14582:2016, 采用 IC 进行分析。

检测项目	单位	MDL	A4
氟 (F)	mg/kg	20	ND
氯 (Cl)	mg/kg	50	ND
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

红磷

检测方法: SGS 内部方法 (SGS-CCL-TOP-215-01), 采用 PY-GC/MS/ ICP-OES / GC-MS 进行分析。

检测项目	CAS No.	单位	MDL	A4
红磷	7723-14-0	mg/kg	500	ND

全氟辛酸(PFOA)及其盐和全氟辛烷磺酸(PFOS)及其衍生物

检测方法: 优化的 EN 17681-1:2022, 采用 LC-MS 或 LC-MS/MS 进行分析。

检测项目	CAS No.	单位	MDL	A4
PFOS 及其盐和相关物质				
全氟辛烷磺酸 (PFOS)	1763-23-1	mg/kg	0.010	ND
N-乙基全氟辛烷磺酰胺 (N-EtFOSA)	4151-50-2	mg/kg	0.010	ND
N-甲基全氟辛烷磺酰胺 (N-MeFOSA)	31506-32-8	mg/kg	0.010	ND
2-(N-乙基全氟辛基磺酰胺)乙醇 (N-EtFOSE)	1691-99-2	mg/kg	0.010	ND
2-(N-甲基全氟辛基磺酰胺)乙醇 (N-MeFOSE)	24448-09-7	mg/kg	0.010	ND
全氟辛基磺酰胺 (PFOSA)	754-91-6	mg/kg	0.010	ND
N-(全氟-1-辛烷磺酰基)甘氨酸 (FOSAA)	2806-24-8	mg/kg	0.010	ND
N-甲基-N-(全氟-1-辛烷磺酰基)甘氨酸 (N-MeFOSAA)	2355-31-9	mg/kg	0.010	ND
N-乙基-N-(全氟-1-辛烷磺酰基)甘氨酸 (N-EtFOSAA)	2991-50-6	mg/kg	0.010	ND

SGS-CSI Standards Technical Services Co., Ltd.
Guangzhou Branch, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663t (86-20) 82155555 www.sgs.com.cn
t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 5 页, 共 24 页

检测项目	CAS No.	单位	MDL	A4
全氟辛烷磺酸 (PFOS)及其衍生物	-	mg/kg	-	ND
PFOA, 及其盐				
全氟辛酸 (PFOA)	335-67-1	mg/kg	0.010	ND

备注:

1. ^物质是指附表中列出的盐/衍生物。

物质名称	CAS No.
PFOS, 及其盐&衍生物	
全氟辛烷磺酸(PFOS)	1763-23-1
全氟辛基磺酸钾(PFOS-K)	2795-39-3
全氟辛基磺酸锂(PFOS-Li)	29457-72-5
全氟辛基磺酸钠(PFOS-Na)	4021-47-0
全氟辛基磺酸铵(PFOS-NH ₄)	29081-56-9
全氟辛基磺酸二乙醇铵(PFOS-NH ₂ (C ₂ H ₄ OH) ₂)	70225-14-8
全氟辛基磺酸四乙基铵(PFOS-N(C ₂ H ₅) ₄)	56773-42-3
全氟辛基磺酸二癸二甲基铵(PFOS-N(C ₁₀ H ₂₁) ₂ (CH ₃) ₂)	251099-16-8
全氟辛基磺酸四丁基铵(PFOS-N(C ₄ H ₉) ₄)	111873-33-7
全氟辛基磺酰氟(PFOS-F)	307-35-7
双[十七氟辛烷磺酸]镁(PFOS-Mg)	91036-71-4
全氟辛烷磺酸哌啶	71463-74-6
全氟辛烷磺酸盐	45298-90-6
全氟辛烷磺酸三乙基铵(PFOS-N(C ₂ H ₅) ₃)	54439-46-2
全氟辛烷磺酸四甲基铵(PFOS-N(CH ₃) ₄)	56773-44-5
N, N,N-三丙基戊烷-1-七氟辛烷-1-磺酸铵(PFOS-N(C ₃ H ₇) ₃ (C ₅ H ₁₁))	56773-56-9
N,N-二丁基-N-甲基丁烷-1-胺十七氟辛烷-1-磺酸酯(PFOS-N(C ₄ H ₉) ₃ (CH ₃))	124472-68-0
双[4-(1,1-二甲基乙基)苯基]-碘鎓与全氟-1-辛烷磺酸的盐(1:1)	213740-80-8
全氟-1-辛烷磺酸二苯基(2,4,6-三甲基苯基)脒	258341-99-0
全氟-1-辛烷磺酸 1-十六烷基吡啶鎓	334529-63-4

SGS-STC Standards Technical Services Co., Ltd.
Guangzhou Branch, China Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 6 页, 共 24 页

N,N,N-三乙基癸-1-胺十七氟辛烷-1-磺酸盐	773895-92-4
全氟辛烷磺酸四丁基磷 (PFOS-P (C ₄ H ₉) ₄)	2185049-59-4
全氟辛基磺酸二乙胺 (PFOS-C ₄ H ₁₁ N)	2205029-08-7
全氟辛基磺酸庚基二甲基-[2-(2-甲基丙-2-烯酰氧基)乙基]胺 (PFOS-C ₁₅ H ₃₀ NO ₂)	1203998-97-3
全氟辛基磺酸酐(PFOSAN)	423-92-7
FOSAA, 及其盐	
N-(全氟-1-辛烷磺酰基)甘氨酸(FOSAA)	2806-24-8
全氟辛烷磺酰氨基乙酸盐 (FOSAA(anion))	909405-47-6
全氟辛烷磺酰氨基乙酸钾 (FOSAA-K)	75260-69-4
全氟辛烷磺酰氨基乙酸钠 (FOSAA-Na)	115716-87-5
N-MeFOSAA, 及其盐	
N-甲基-N-(全氟-1-辛烷磺酰基)甘氨酸 (N-MeFOSAA)	2355-31-9
N-(十七氟辛基磺酰基)-N-甲基甘氨酸盐 (N-Me-FOSAA(anion))	909405-48-7
N-(十七氟辛基磺酰基)-N-甲基甘氨酸钾 (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, 及其盐	
N-乙基-N-(全氟-1-辛烷磺酰基)甘氨酸(N-EtFOSAA)	2991-50-6
N-乙基-N-[(十七烷氟辛基)磺酰基]-甘氨酸钾盐 (N-Et-FOSAA-K)	2991-51-7
N-乙基-N-((十七氟辛基)磺酰基)甘氨酸盐 (N-Et-FOSAA(anion))	909405-49-8
N-乙基-N-((十七氟辛基)磺酰基)甘氨酸铵 (N-Et-FOSAA-NH ₄)	2991-52-8
N-乙基-N-((十七氟辛基)磺酰基)甘氨酸钠 (N-Et-FOSAA-Na)	3871-50-9
PFOSA, 及其盐	
全氟辛基磺酰胺(PFOSA)	754-91-6
全氟辛基磺酰胺锂盐(1:1)(PFOSA-Li)	76752-79-9
全氟辛基磺酰胺钠盐 (1:1) (PFOSA-Na)	76752-78-8
全氟辛基磺酰胺钾盐 (1:1) (PFOSA-K)	76752-70-0
全氟辛基磺酰胺铵盐 (1:1) (PFOSA-NH ₄)	76752-72-2



SGS-CTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 7 页, 共 24 页

全氟辛基磺酰胺三乙胺 (PFOSA-C ₆ H ₁₅ N)	76752-82-4
PFOA, 及其盐&衍生物	
全氟辛酸(PFOA)	335-67-1
全氟辛酸钠(PFOA-Na)	335-95-5
全氟辛酸钾(PFOA-K)	2395-00-8
全氟辛酸银(PFOA-Ag)	335-93-3
全氟辛酰氟(PFOA-F)	335-66-0
全氟辛酸铵(APFO)	3825-26-1
全氟辛酸锂(PFOA-Li)	17125-58-5
全氟辛酸钴(PFOA-Co)	35965-01-6
全氟辛酸铯(PFOA-Cs)	17125-60-9
全氟辛酸铬(3+) (PFOA-Cr(3+))	68141-02-6
全氟辛酸-哌嗪(2:1) (PFOA-NH(C ₄ H ₁₀ N))	423-52-9
全氟辛酸盐	45285-51-6
全氟辛酸酐	33496-48-9
全氟辛酸四乙基胺	98241-25-9
全氟辛酸四甲基胺	32609-65-7
全氟辛酸四丙基胺	277749-00-5
全氟辛酸钾水合物 (PFOA-K(H ₂ O) ₂)	98065-31-7
全氟辛酸乙胺 (PFOA-C ₂ H ₇ N)	1376936-03-6
全氟辛酸吡啶 (PFOA-C ₅ H ₅ N)	95658-47-2
全氟辛酸苯基哌嗪 (PFOA-C ₁₀ H ₁₄ N ₂)	1514-68-7
全氟辛酸辛基三甲基铵 (PFOA-C ₁₁ H ₂₆ N)	927835-01-6

元素分析

检测方法: 参考 US EPA 3050B:1996, 采用 ICP-OES/AAS 进行分析。

SGS-CTC Standards Technical Services Co., Ltd.
Guangzhou Branch/SGS-CTC Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 8 页, 共 24 页

检测项目	单位	MDL	A1
砷(As)	mg/kg	10	ND
铍(Be)	mg/kg	5	ND
磷(P)	mg/kg	20	ND
锑(Sb)	mg/kg	10	ND

检测方法: 参考 US EPA 3052:1996, 采用 ICP-OES/AAS 进行分析。

检测项目	单位	MDL	A4
砷(As)	mg/kg	10	ND
铍(Be)	mg/kg	5	ND
磷(P)	mg/kg	20	24
锑(Sb)	mg/kg	10	ND

欧盟 POPs 法规(EU) 2019/1021 附录 I 及其修正法规

检测方法: SGS 内部方法-采用 GC-MS 或 GC-MS/MS、GC-NCI-MS, GC-ECD 和 HPLC-DAD-MS 或 LC-MS/MS 进行分析。

检测项目	CAS No.	限值	单位	MDL	A2	A3
四溴二苯醚	40088-47-9 和其它	-	mg/kg	5	ND	ND
五溴二苯醚	32534-81-9 和其它	-	mg/kg	5	ND	ND
六溴二苯醚	36483-60-0 和其它	-	mg/kg	5	ND	ND
七溴二苯醚	68928-80-3 和其它	-	mg/kg	5	ND	ND
十溴二苯醚(decaBDE)	1163-19-5	-	mg/kg	5	ND	ND
多溴二苯醚总和*	-	500	mg/kg	-	ND	ND
PFOS 及其盐和相关物质						
全氟辛烷磺酸 (PFOS), 及其盐^	1763-23-1	-	mg/kg	0.010	ND	ND
N-乙基全氟辛烷磺酰胺 (N-EtFOSA)	4151-50-2	-	mg/kg	0.010	ND	ND
N-甲基全氟辛烷磺酰胺 (N-MeFOSA)	31506-32-8	-	mg/kg	0.010	ND	ND
2-(N-乙基全氟辛基磺酰胺)乙醇 (N-EtFOSE)	1691-99-2	-	mg/kg	0.010	ND	ND
2-(N-甲基全氟辛基磺酰胺)乙醇 (N-MeFOSE)	24448-09-7	-	mg/kg	0.010	ND	ND
全氟辛基磺酰胺 (PFOSA), 及其盐^	754-91-6	-	mg/kg	0.010	ND	ND
N-(全氟-1-辛烷磺酰基)甘氨酸 (FOSAA), 及其盐^	2806-24-8	-	mg/kg	0.010	ND	ND
N-甲基-N-(全氟-1-辛烷磺酰基)甘氨酸 (N-MeFOSAA), 及其盐^	2355-31-9	-	mg/kg	0.010	ND	ND



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

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgs.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 9 页, 共 24 页

检测项目	CAS No.	限值	单位	MDL	A2	A3
N-乙基-N-(全氟-1-辛烷磺酰基)甘氨酸 (N-EtFOSAA), 及其盐 [^]	2991-50-6	-	mg/kg	0.010	ND	ND
全氟辛烷磺酸 (PFOS)及其衍生物	-	1000	mg/kg	-	ND	ND
4,4-滴滴涕	50-29-3	禁用	mg/kg	0.05	ND	ND
氯丹	57-74-9	禁用	mg/kg	0.05	ND	ND
六氯环己烷	58-89-9, 319-84-6, 319-85-7, 608-73-1	禁用	mg/kg	0.05	ND	ND
狄氏剂	60-57-1	禁用	mg/kg	0.05	ND	ND
异狄氏剂	72-20-8	禁用	mg/kg	0.05	ND	ND
七氯	76-44-8	禁用	mg/kg	0.05	ND	ND
硫丹	115-29-7, 959-98-8, 33213-65-9	禁用	mg/kg	0.05	ND	ND
六氯苯	118-74-1	10	mg/kg	5	ND	ND
十氯酮	143-50-0	禁用	mg/kg	0.2	ND	ND
艾氏剂	309-00-2	禁用	mg/kg	0.05	ND	ND
五氯苯	608-93-5	禁用	mg/kg	5	ND	ND
多氯联苯 (PCBs)	1336-36-3 和其它	50	mg/kg	5	ND	ND
灭蚁灵	2385-85-5	禁用	mg/kg	0.05	ND	ND
毒杀芬	8001-35-2	禁用	mg/kg	0.2	ND	ND
六溴联苯	36355-01-8	禁用	mg/kg	5	ND	ND
六溴环十二烷(HBCDD) 及其非对映异构体(α -HBCDD, β -HBCDD, γ -HBCDD)	134237-50-6, 134237-51-7, 134237-52-8, 25637-99-4, 3194-55-6	75	mg/kg	20	ND	ND
六氯丁二烯	87-68-3	禁用	mg/kg	5	ND	ND
五氯苯酚(PCP)及其盐和酯	87-86-5 和其它	5	mg/kg	0.5	ND	ND
多氯萘(PCNs)	70776-03-3 和其它	禁用	mg/kg	5	ND	ND
C10-13 氯代烃(短链氯化石蜡) (SCCPs)	85535-84-8 和其它	1500	mg/kg	50	ND	ND
全氟辛酸 (PFOA), 及其盐 [^]	335-67-1	0.025	mg/kg	0.010	ND	ND
PFOA 相关物质						
1H,1H,2H,2H-全氟癸烷磺酸 (8:2 FTS), 及其盐 [^]	39108-34-4	1	mg/kg	0.010	ND	ND
全氟辛酸甲酯 (Me-PFOA)	376-27-2	1	mg/kg	0.200	ND	ND
全氟辛酸乙酯 (Et-PFOA)	3108-24-5	1	mg/kg	0.200	ND	ND
1H,1H,2H,2H-全氟癸基丙烯酸酯 (8:2 FTA)	27905-45-9	1	mg/kg	0.100	ND	ND
1H,1H,2H,2H-甲基丙烯酸全氟癸酯 (8:2 FTMA)	1996-88-9	1	mg/kg	0.100	ND	ND



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgs.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 10 页, 共 24 页

检测项目	CAS No.	限值	单位	MDL	A2	A3
全氟辛基碘烷 (PFOI)	507-63-1	1	mg/kg	0.200	ND	ND
2H, 2H-全氟癸酸 (8:2 FTCA), 及其盐^	27854-31-5	1	mg/kg	0.010	ND	ND
1H,1H,2H,2H-全氟-1-癸醇 (8:2 FTOH)	678-39-7	1	mg/kg	0.100	ND	ND
1-碘-1H,1H,2H,2H-全氟癸烷 (8:2 FTI)	2043-53-0	1	mg/kg	0.100	ND	ND
1H,1H,2H,2H-全氟癸基三乙氧基硅烷 (8:2 FTSi(OC ₂ H ₅) ₃)	101947-16-4	1	mg/kg	0.100	ND	ND
双[2-(全氟辛基)]乙基磷酸酯 (8:2diPAP), 及其盐^	678-41-1	1	mg/kg	0.010	ND	ND
2H, 2H, 3H, 3H-全氟十一烷酸 (8:3 FTCA), 及其盐^	34598-33-9	1	mg/kg	0.010	ND	ND
全氟辛基乙烯 (PFDE)	21652-58-4	1	mg/kg	0.100	ND	ND
3-全氟庚基丙酸 (7:3 FTCA)	812-70-4	1	mg/kg	0.010	ND	ND
1H,1H,2H,2H-全氟癸基三氯硅烷 (8:2 FTSiCl ₃)/ 1H,1H,2H,2H-全氟癸基三甲氧基硅烷 (8:2 FTSi(OCH ₃) ₃)	78560-44-8 /83048-65-1	1	mg/kg	0.100	ND	ND
2H-全氟-2-癸烯酸 (8:2 FTUCA)	70887-84-2	1	mg/kg	0.010	ND	ND
6:8 全氟次磷酸 (6:8 PFPI)	610800-34-5	1	mg/kg	0.010	ND	ND
8:8 全氟次磷酸 (8:8 PFPI, 及其盐^)	40143-79-1	1	mg/kg	0.010	ND	ND
1H,1H,2H,2H-全氟十二烷基乙酸酯 (8:2 FTOAc)	37858-04-1	1	mg/kg	0.100	ND	ND
单[2-(全氟辛基)乙基]磷酸盐 (8:2 monoPAP), 及其盐^	57678-03-2	1	mg/kg	0.100	ND	ND
PFOA 相关化合物总和	-	1	mg/kg	-	ND	ND
三氯杀螨醇	115-32-2	禁用	mg/kg	0.05	ND	ND
全氟己基磺酸 (PFHxS), 及其盐^	355-46-4	0.025	mg/kg	0.010	ND	ND
PFHxS 相关化合物						
N-甲基全氟-1-己磺酰胺 (N-Me-PFHxSA)	68259-15-4	1	mg/kg	0.010	ND	ND
全氟己烷磺酰胺 (PFHxSA)	41997-13-1	1	mg/kg	0.010	ND	ND
N-[3-(二甲基氨基)丙基]十三氟己烷磺酰胺 (N-AP-FHxSA)	50598-28-2	1	mg/kg	0.010	ND	ND
2-[甲基[(十三氟己基)磺酰基]氨基]乙基丙烯酸酯 (N-MeFHSEA)	67584-57-0	1	mg/kg	0.200	ND	ND
2-[甲基[(十三氟己基)磺酰基]氨基]乙基甲基丙烯酸酯	67584-61-6	1	mg/kg	0.200	ND	ND
2-[乙基[(十三氟己基)磺酰基]氨基]乙基甲基丙烯酸酯	67906-70-1	1	mg/kg	0.200	ND	ND
十三氟-N-(2-羟基乙基)-N-甲基己烷磺酰胺 (MeFHxSE)	68555-75-9	1	mg/kg	0.010	ND	ND



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 11 页, 共 24 页

检测项目	CAS No.	限值	单位	MDL	A2	A3
N-乙基-N-[(十三氟己基)磺酰基]甘氨酸(EtFHxSAA), 及其盐 [^]	68957-32-4	1	mg/kg	0.010	ND	ND
PFHxS 相关化合物总和	-	1	mg/kg	-	ND	ND
甲氧滴滴涕	72-43-5 和其它	0.01	mg/kg	0.01	ND	ND
结论					符合	符合

备注:

- (1) 欧盟POPs法规(EU) 2019/1021, 附录I 中的物质禁用在混合物及物品中使用, 除非法规有特殊豁免。
- (2) 豁免: 四溴二苯醚、五溴二苯醚、六溴二苯醚、七溴二苯醚和十溴二苯醚在物质中的法规限值是10 mg/kg, 混合物和物品中四溴、五溴、六溴、七溴和十溴二苯醚的总和不得超过500 mg/kg, 该限制应在2021年7月16日之前由委员会审查和评估。
- (3) 豁免: RoHS指令(2011/65/EU)定义的电器电子产品中四溴二苯醚、五溴二苯醚、六溴二苯醚、七溴二苯醚和十溴二苯醚豁免于POPs法规。
- (4) 豁免: C10-13 氯代烃(短链氯化石蜡)在混合物中的法规限值是1.0% (w/w),在物品中的法规限值为0.15% (w/w)。
- (5) 豁免: 全氟辛烷磺酸 (PFOS)及其衍生物在混合物中的法规限值是10mg/kg, 在物品中的法规限值是0.1% (w/w), 在纺织品和涂层材料中的限值是1µg/m²。
- (6) 豁免: HBCDD 做为无意添加的微量污染物, 在物质, 混合物, 物品或者物品的阻燃剂中不能超出75mg/kg, 委员会应在2026年1月1日前审查和评估规定的豁免。
- (7) 多溴二苯醚总和*是指四溴二苯醚、五溴二苯醚、六溴二苯醚、七溴二苯醚和十溴二苯醚的总和。
- (8) [^]=物质是指下表PFOS, PFOA和PFOA相关化合物列出的盐/衍生物。

物质名称	CAS No.
PFOS, 及其盐&衍生物	
全氟辛烷磺酸(PFOS)	1763-23-1
全氟辛基磺酸钾(PFOS-K)	2795-39-3
全氟辛基磺酸锂(PFOS-Li)	29457-72-5
全氟辛基磺酸钠(PFOS-Na)	4021-47-0
全氟辛基磺酸铵(PFOS-NH ₄)	29081-56-9
全氟辛基磺酸二乙醇铵(PFOS-NH ₂ (C ₂ H ₄ OH) ₂)	70225-14-8
全氟辛基磺酸四乙基铵(PFOS-N(C ₂ H ₅) ₄)	56773-42-3
全氟辛基磺酸二癸二甲基铵(PFOS-N(C ₁₀ H ₂₁) ₂ (CH ₃) ₂)	251099-16-8
全氟辛基磺酸四丁基铵(PFOS-N(C ₄ H ₉) ₄)	111873-33-7
全氟辛基磺酰氟(PFOS-F)	307-35-7
双[十七氟辛烷磺酸]镁(PFOS-Mg)	91036-71-4
全氟辛烷磺酸吡啶	71463-74-6
全氟辛烷磺酸盐	45298-90-6
全氟辛烷磺酸三乙基铵(PFOS-N(C ₂ H ₅) ₃)	54439-46-2
全氟辛烷磺酸四甲基铵(PFOS-N(CH ₃) ₄)	56773-44-5



SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch: Standards Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 12 页, 共 24 页

N, N,N-三丙基戊烷-1-七氟辛烷-1-磺酸铵(PFOS-N(C ₃ H ₇) ₃ (C ₅ H ₁₁))	56773-56-9
N,N-二丁基-N-甲基丁烷-1-胺十七氟辛烷-1-磺酸酯(PFOS-N(C ₄ H ₉) ₃ (CH ₃))	124472-68-0
双[4-(1,1-二甲基乙基)苯基]-碘鎓与全氟-1-辛烷磺酸的盐(1:1)	213740-80-8
全氟-1-辛烷磺酸二苯基(2,4,6-三甲基苯基)鎓	258341-99-0
全氟-1-辛烷磺酸1-十六烷基吡啶鎓	334529-63-4
N,N,N-三乙基癸-1-胺十七氟辛烷-1-磺酸盐	773895-92-4
全氟辛烷磺酸四丁基鎓 (PFOS-P (C ₄ H ₉) ₄)	2185049-59-4
全氟辛基磺酸二乙胺 (PFOS-C ₄ H ₁₁ N)	2205029-08-7
全氟辛基磺酸庚基二甲基-[2-(2-甲基丙-2-烯酰氧基)乙基]胺 (PFOS-C ₁₅ H ₃₀ NO ₂)	1203998-97-3
全氟辛基磺酸酐(PFOSAN)	423-92-7
FOSAA, 及其盐	
N-(全氟-1-辛烷磺酰基)甘氨酸(FOSAA)	2806-24-8
全氟辛烷磺酰氨基乙酸盐 (FOSAA(anion))	909405-47-6
全氟辛烷磺酰氨基乙酸钾 (FOSAA-K)	75260-69-4
全氟辛烷磺酰氨基乙酸钠 (FOSAA-Na)	115716-87-5
N-MeFOSAA, 及其盐	
N-甲基-N-(全氟-1-辛烷磺酰基)甘氨酸 (N-MeFOSAA)	2355-31-9
N-(十七氟辛基磺酰基)-N-甲基甘氨酸盐 (N-Me-FOSAA(anion))	909405-48-7
N-(十七氟辛基磺酰基)-N-甲基甘氨酸钾 (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, 及其盐	
N-乙基-N-(全氟-1-辛烷磺酰基)甘氨酸(N-EtFOSAA)	2991-50-6
N-乙基-N-[(十七烷氟辛基)磺酰基]-甘氨酸钾盐 (N-Et-FOSAA-K)	2991-51-7
N-乙基-N-[(十七氟辛基)磺酰基]甘氨酸盐 (N-Et-FOSAA(anion))	909405-49-8
N-乙基-N-[(十七氟辛基)磺酰基]甘氨酸铵 (N-Et-FOSAA-NH ₄)	2991-52-8
N-乙基-N-[(十七氟辛基)磺酰基]甘氨酸钠 (N-Et-FOSAA-Na)	3871-50-9
PFOSA, 及其盐	
全氟辛基磺酰胺(PFOSA)	754-91-6
全氟辛基磺酰胺锂盐(1:1)(PFOSA-Li)	76752-79-9
全氟辛基磺酰胺钠盐 (1:1) (PFOSA-Na)	76752-78-8
全氟辛基磺酰胺钾盐 (1:1) (PFOSA-K)	76752-70-0
全氟辛基磺酰胺铵盐 (1:1) (PFOSA-NH ₄)	76752-72-2
全氟辛基磺酰胺三乙胺 (PFOSA-C ₆ H ₁₅ N)	76752-82-4
PFOA, 及其盐&衍生物	
全氟辛酸(PFOA)	335-67-1
全氟辛酸钠(PFOA-Na)	335-95-5
全氟辛酸钾(PFOA-K)	2395-00-8
全氟辛酸银(PFOA-Ag)	335-93-3
全氟辛酰氟(PFOA-F)	335-66-0
全氟辛酸铵(APFO)	3825-26-1
全氟辛酸锂(PFOA-Li)	17125-58-5
全氟辛酸钴(PFOA-Co)	35965-01-6
全氟辛酸铯(PFOA-Cs)	17125-60-9



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch / 广州分公司

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 13 页, 共 24 页

全氟辛酸铬(3+) (PFOA-Cr(3+))	68141-02-6
全氟辛酸-哌嗪(2:1) (PFOA-NH(C ₄ H ₁₀ N))	423-52-9
全氟辛酸盐	45285-51-6
全氟辛酸酐	33496-48-9
全氟辛酸四乙基胺	98241-25-9
全氟辛酸四甲基胺	32609-65-7
全氟辛酸四丙基胺	277749-00-5
全氟辛酸钾水合物 (PFOA-K(H ₂ O) ₂)	98065-31-7
全氟辛酸乙胺 (PFOA-C ₂ H ₇ N)	1376936-03-6
全氟辛酸吡啶 (PFOA-C ₅ H ₅ N)	95658-47-2
全氟辛酸苯基哌嗪 (PFOA-C ₁₀ H ₁₄ N ₂)	1514-68-7
全氟辛酸辛基三甲基铵 (PFOA-C ₁₁ H ₂₆ N)	927835-01-6
8:2 FTS, 及其盐	
1H,1H,2H,2H-全氟癸烷磺酸(8:2 FTS)	39108-34-4
1H,1H,2H,2H-全氟癸磺酸钾(8:2 FTS-K)	438237-73-1
1H,1H,2H,2H-全氟癸磺酸铵(8:2 FTS-NH ₄)	149724-40-3
1H,1H,2H,2H-全氟癸磺酸钠(8:2 FTS-Na)	27619-96-1
1H,1H,2H,2H-全氟癸磺酸盐 (8:2 FTS(anion))	481071-78-7
8:2 FTCA, 及其盐	
2H,2H-全氟癸酸(8:2 FTCA)	27854-31-5
四丁基磷2H,2H-全氟癸酸酯(8:2 FTCA-P(C ₄ H ₉) ₄)	882489-14-7
8:2diPAP, 及其盐	
双[2-(全氟辛基)]乙基磷酸酯(8:2diPAP)	678-41-1
双[2-(全氟辛基)]乙基磷酸酯钠(8:2diPAP-Na)	114519-85-6
双(2-羟乙基)铵双(全氟辛基)乙基磷酸氢	57677-97-1
双[2-(全氟辛基)]乙基磷酸酯铵盐(8:2 diPAP-NH ₄)	93776-20-6
8:2氟调聚物磷酸二酯离子	1411713-91-1
8:3 FTCA, 及其盐	
2H,2H,3H,3H-全氟十一烷酸(8:3 FTCA)	34598-33-9
2H,2H,3H,3H-全氟十一烷酸钾(8:3 FTCA-K)	83310-58-1
2H,2H,3H,3H-全氟十一酸锂(8:3 FTCA-Li)	67304-23-8
8:8 PFPI,及其盐	
8:8全氟次膦酸 (8:8 PFPI)	40143-79-1
8:8 全氟次膦酸钠盐 (8:8 PFPI-Na)	500776-69-2
8:8 全氟次膦酸铟(3+)盐 (8:8 PFPI-Er)	500776-70-5
8:8 全氟次膦酸镱(3+)盐 (8:8 PFPI-Yb)	500776-71-6
8:2 monoPAP, 及其盐	
单[2-(全氟辛基)乙基]磷酸盐 (8:2 monoPAP)	57678-03-2
8:2氟调聚物磷酸二铵盐	93857-44-4
8:2氟调聚物磷酸钠盐	438237-75-3
双[2-(全氟辛基)乙基]磷酸铵盐	1764-95-0
单[2-(全氟辛基)乙基]磷酸铵盐	92401-44-0
单[2-(全氟辛基)乙基]磷酸单钠盐	144965-22-0



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

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 14 页, 共 24 页

单[2-(全氟辛基)乙基]磷酸单钾盐	150033-28-6
单[2-(全氟辛基)乙基]磷酸氢铵盐	2353-52-8

(9) 全氟己烷磺酸(PFHxS)及其盐和相关化合物

- (a). 2023年8月8日, 欧盟委员会于欧盟官方公报发布 (EU)2023/1608法规, 修订了2023年5月30日发布的法规 (EU)2019/1021附件I中关于全氟己烷磺酸 (PFHxS)、其盐和PFHxS相关化合物清单。

物质	范围	中间用途或其他规范的特殊豁免
PFHxS 及其盐	物质或混合物, 物品	≤ 0.025 mg/kg
PFHxS相关物质	物质或混合物, 物品	≤ 1 mg/kg (单项或PFHxS相关物质总和)
PFHxS 及其盐和 PFHxS相关化合物	浓缩消防泡沫混合物	≤ 0.1 mg/kg (3年内进行审查以降低限值)

- (b). 本报告中检测的全氟己烷磺酸(PFHxS)及其盐类和PFHxS相关化合物来自欧洲化学品管理局的“持久性有机污染物官方清单”, 请通过以下网络链接查找更多信息

List of substances proposed as POPs - ECHA (europa.eu)

- (c). ^=物质是指下表PFHxS列出的盐/衍生物。

物质名称	CAS No.
PFHxS, 及其盐&衍生物	
全氟己基磺酸(PFHxS)	355-46-4
全氟己基磺酸钠(PFHxS-Na)	82382-12-5
全氟己基磺酸钾(PFHxS-K)	3871-99-6
全氟己基磺酸锂(1:1)(PFHxS-Li)	55120-77-9
全氟己基磺酸铵(PFHxS-NH ₄)	68259-08-5
全氟己基磺酸三苯基(苯基甲基)-磷鎓盐(PFHxS-BTPP)	1000597-52-3
N,N,N-三丁基丁烷-1-胺全氟己基磺酸盐(PFHxS-N(C ₄ H ₉) ₄)	108427-54-9
N,N,N-三乙基乙胺全氟己基磺酸盐(PFHxS-N(C ₂ H ₅) ₄)	108427-55-0
全氟己基磺酸与四氢吡咯络合物(PFHxS-NC ₄ H ₉)	1187817-57-7
全氟-1-己基磺酸-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-乙铵盐(PFHxS-(NC ₁₀ H ₁₄) ₃ C ₅ H ₄)	1310480-24-0
全氟-1-己基磺酸-N-[4-[[4-(二甲氨基)苯基][4-(乙氨基)-1-萘基]亚甲基]-2,5-环己二烯-1-亚基]-N-甲基-甲基铵盐(PFHxS-(NC ₈ H ₁₀) ₂ C ₁₃ H ₁₂)	1310480-27-3
全氟-1-己基磺酸-N-[4-[[4-(二甲氨基)苯基][4-(苯基氨基)-1-萘基]亚甲基]-2,5-环己二烯-1-亚基]-N-甲基-甲基铵盐(PFHxS-(NC ₈ H ₁₀) ₂ C ₁₇ H ₁₂)	1310480-28-4
全氟己基磺酸与β-环糊精络合物(PFHxS-C ₄₂ H ₇₀ O ₃₅)	1329995-45-0
全氟己基磺酸与γ-环糊精络合物(PFHxS-C ₄₈ H ₈₀ O ₄₀)	1329995-69-8
全氟己基磺酸三苯基硫鎓盐(TPS-PFHxS)	144116-10-9
全氟己基磺酸喹啉, 1-(羧甲基)-4-[2-[4-[4-(2,2-二苯基噻吩基)苯基]-1,2,3a,4,8b-六氢环戊并[b]呋喃-7-基]乙烯基]盐(PFHxS-C ₄₄ H ₃₇ N ₂ O ₂)	1462414-59-0
全氟己基磺酸二苯基碘鎓盐(PFHxS-I(C ₆ H ₅) ₂)	153443-35-7



SGS-CST Standards Technical Services Co., Ltd.
Guangzhou Branch: Standards Technical Services Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 15 页, 共 24 页

N,N,N-三甲基-全氟己基磺酸甲铵盐(PFHxS-TMA)	189274-31-5
全氟己基磺酸与2-甲基-2-丙胺络合物(1:1)(PFHxS-NH ₂ (CH ₃) ₃)	202189-84-2
全氟己基磺酸双[4-(1,1-二甲基乙基)苯基]碘鎓盐(PFHxS-I(C ₆ H ₄) ₂ (C ₄ H ₉) ₂)	213740-81-9
全氟己基磺酸镓(9Cl)(PFHxS-Ga)	341035-71-0
全氟己基磺酸双(4-甲基苯基)苯基硫鎓盐(1:1)(PFHxS-S(C ₇ H ₇) ₂ C ₆ H ₅)	341548-85-4
全氟己基磺酸钪(PFHxS-Sc)	350836-93-0
全氟己基磺酸钕(PFHxS-Nd)	41184-65-0
全氟己基磺酸钇(PFHxS-Y)	41242-12-0
全氟己基磺酸(硫代二-4,1-亚苯基)双[二苯基]硫鎓盐(PFHxS-S ₃ (C ₆ H ₅) ₄ (C ₆ H ₄) ₂)	421555-73-9
全氟己基磺酸双[4-(1,1-二甲基丙基)苯基]碘鎓盐(PFHxS-I(C ₆ H ₄) ₂ (C ₅ H ₁₁) ₂)	421555-74-0
全氟己基磺酰氟(PFHxS-F)	423-50-7
全氟己基磺酸三[4-(1,1-二甲基乙基)苯基]硫鎓盐(PFHxS-S(C ₆ H ₄) ₃ (C ₄ H ₉) ₃)	425670-70-8
全氟己基磺酸锌(PFHxS-Zn)	70136-72-0
全氟己基磺酸与2,2'-亚氨基二乙醇络合物(PFHxS-NH(C ₂ H ₅ O) ₂)	70225-16-0
全氟己基磺酸与三乙胺络合物(1:1)(PFHxS-N(C ₂ H ₅) ₃)	72033-41-1
全氟己基磺酸双[(1,1-二甲基乙基)苯基]碘鎓盐(PFHxS-I(C ₆ H ₄) ₂ (C ₄ H ₉) ₂)	866621-50-3
全氟己基磺酸(4-甲基苯基)二苯硫鎓盐(PFHxS-S(C ₆ H ₅) ₂ C ₇ H ₇)	910606-39-2
全氟己基磺酸[4-[(2-甲基-1-氧代-2-丙烯酰)氧基]苯基]二苯基硫鎓盐(PFHxS-S(C ₆ H ₅) ₂ C ₁₀ H ₉ O ₂)	911027-68-4
全氟己基磺酸铯(1:1)(PFHxS-Cs)	92011-17-1
二苯并[k,n][1,4,7,13]四氧杂硫环戊二烯,19-[4-(1,1-二甲基乙基)苯基]-6,7,9,10,12,13-六氢-,全氟己基磺酸盐(PFHxS-SC ₂₈ H ₃₁ O ₄)	928049-42-7
全氟己基磺酰氯(PFHxS-Cl)	55591-23-6
PFHxS-磺酸酯聚合物	911027-69-5
全氟己基磺酸盐	108427-53-8
全氟己基磺酸四丁基磷(PFHxS-P(C ₄ H ₉) ₄)	2310194-12-6
EtFHxSAA, 及其盐	
N-乙基-N-[(十三氟己基)磺酰基]甘氨酸(EtFHxSAA)	68957-32-4
N-乙基-N-[(十三氟己基)磺酰基]甘氨酸钾(EtFHxSAA-K)	67584-53-6
N-乙基-N-[(十三氟己基)磺酰基]甘氨酸钠(EtFHxSAA-Na)	68555-70-4

(10)对POPs物质的分析检测是基于现有的技术, 根据客户要求进行检测。

(11)结论仅针对报告上的物质清单。

备注: 样品 A4 的检测是基于申请人要求混合检测, 报告中的混合检测结果不代表其中个别单一材质的含量, 该检测数据仅供参考。

除非另有说明, 参照 ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。

除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



SGS-CSI Standards Technical Service Co., Ltd.
Guangzhou Branch, SGS-CSI Technical Laboratory

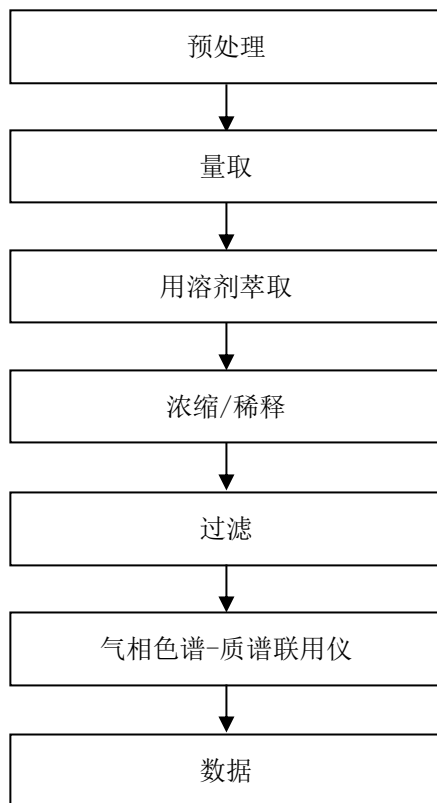
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

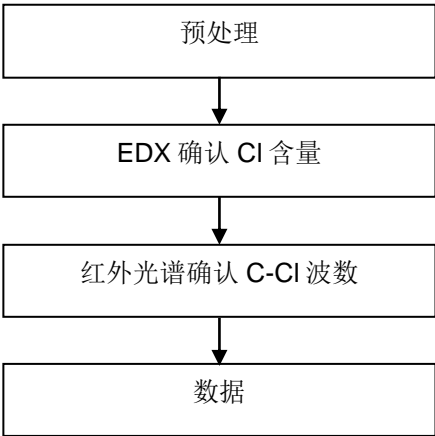
t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)

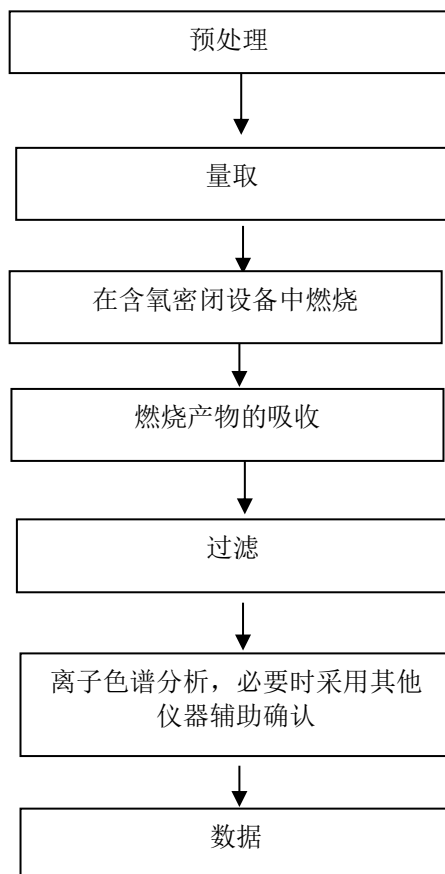
PAHs 检测流程图



PVC 检测流程图

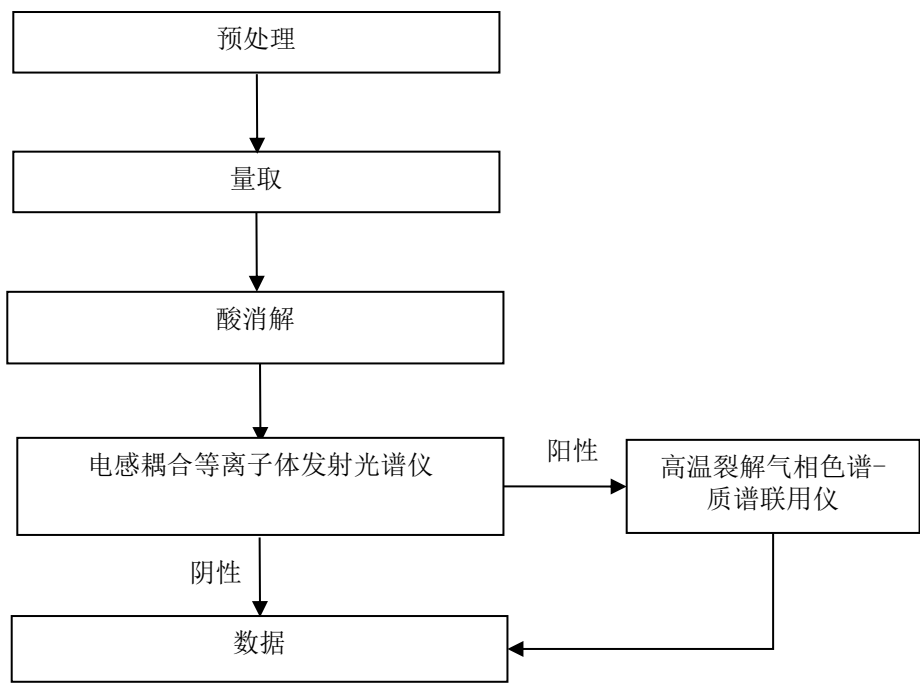


卤素检测流程图



附件

红磷检测流程图



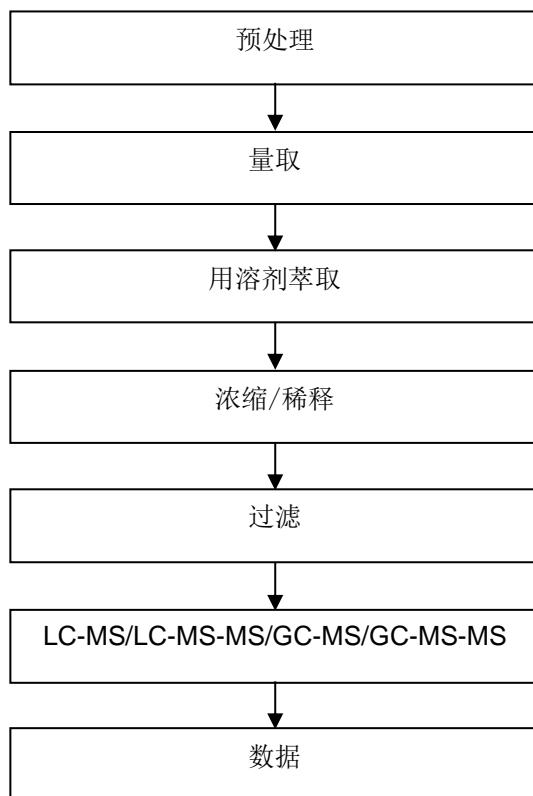
SGS-CSI Standards Technical Services Co., Ltd.
Guangzhou Branch

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

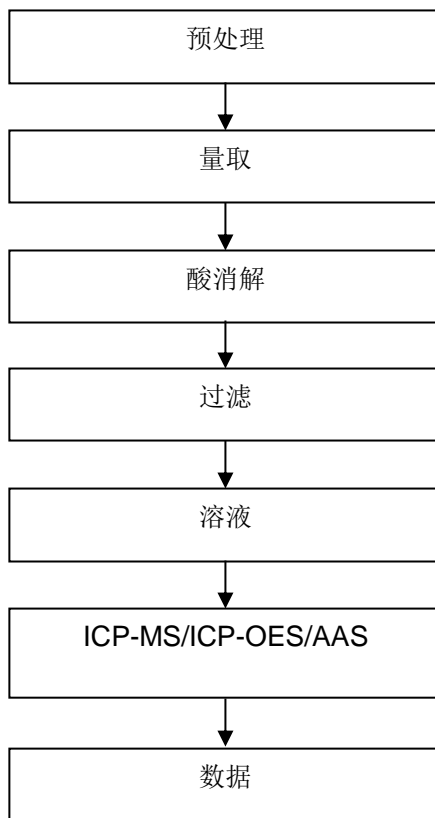
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

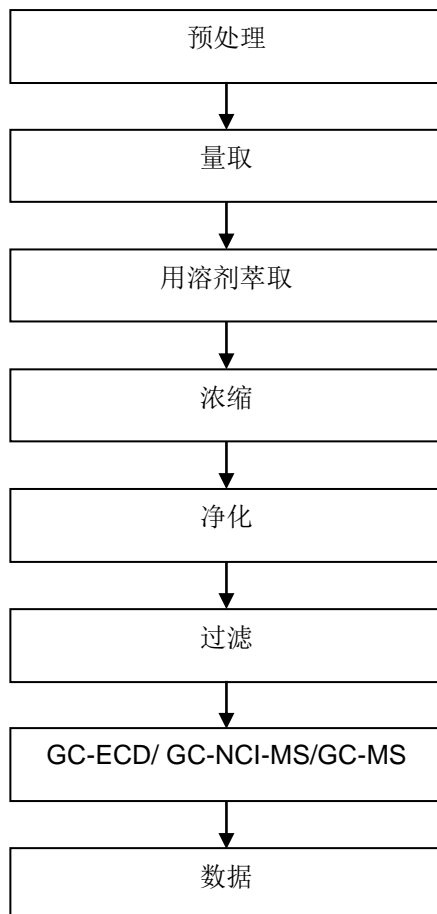
PFASs/ PFOS/PFOA 检测流程图



元素检测流程图



氯化石蜡检测流程图



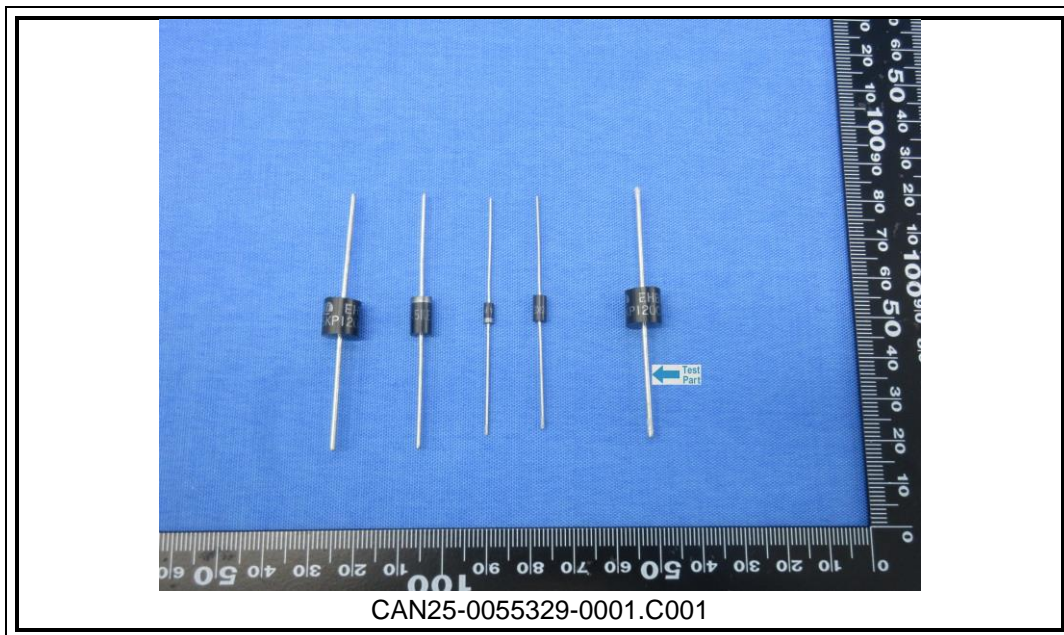
检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 23 页, 共 24 页

样品照片:



SGS-CTC Standards Technical Services Co., Ltd.
Guangzhou Branch Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgs.com.cn
t (86-20) 82155555 sgs.china@sgs.com

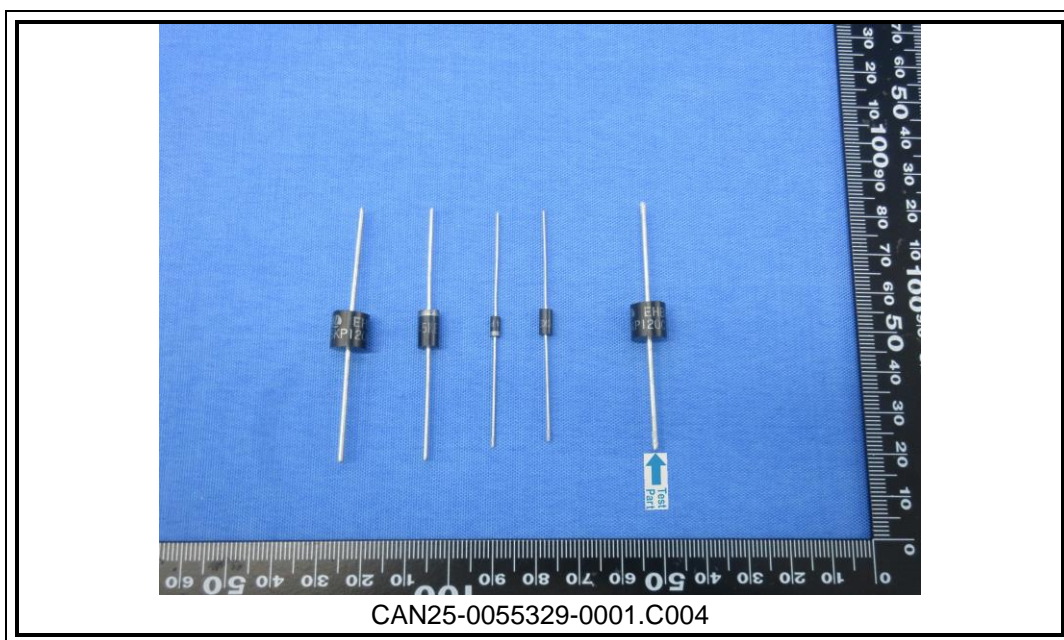
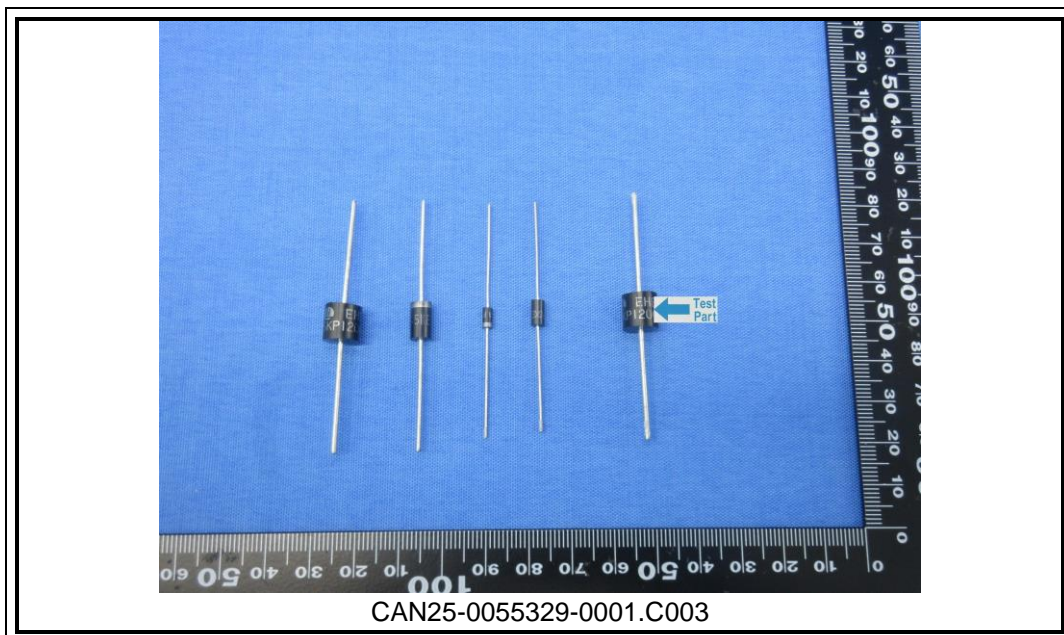
Member of the SGS Group (SGS SA)

检测报告

编号: CANEC25005532906

日期: 2025 年 03 月 25 日

第 24 页, 共 24 页



此照片仅限于随 SGS 正本报告使用
报告结束



SGS-CTC Standards Technical Services Co., Ltd.
Guangzhou Branch Technical Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn
t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)