

Test Report No.: CANEC23015607335 **Date**: Dec 14, 2023 Page 1 of 16 **(PFAS)**

Client Name: KINGBOARD LAMINATES HOLDINGS LIMITED

Client Address: 23/F., DELTA HOUSE, NO.3 ON YIU STREET, SHATIN, N.T. HONG KONG.

Sample Name: KB-6165G Model No.: KB-6165G

Client Ref. Information: KB-6165GC, KB-6169GT, PI-515G The above sample(s) and information were provided by the client.

SGS Job No.: GZP23-018754 Sample Receiving Date: Dec 04, 2023

Testing Period: Dec 04, 2023 ~ Dec 13, 2023

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).

Summary:

Total Fluorine Screening for Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Content	See Results
Targeted 233 Perfluoroalkyl and polyfluoroalkyl substances (PFAS) Content	Pass

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

Jany Zhong

Approved Signatory

Jany Zhong







The test results of SVHC over Limit in the articles of the submitted sample summary

1110 100	or recountered to the	TEITHER HE WILLIAM AND	The test results of ever Emilian and articles of the submitted sumple summary					
Test Result ID	Description	Substance Name	CAS No.	Concentration (mg/kg)				
001	Double-side copper-clad laminate	PFAS (expressed as Fluorine)	-	410				





Test Sample:

Sample Description:

Test Part ID	Material Description	Test Part ID	Material Description
A6	Double-side copper-clad laminate	-	-

Testing Group:

Test Result ID	Description	Test Part ID	No. of PFAS Tested	SGS Sample ID
001	Double-side copper-clad laminate	A6	91	CAN23-0156073- 0001.C006

Total Fluorine Screening for Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Content

Test Method: With reference to IEC 62321-3-2:2020.

Test Item(s)	Limit	Unit(s)	MDL	A6
PFAS (expressed as Fluorine)	50	mg/kg	20	410#
Conclusion				See Results

Notes:

- (1) The maximum permissible limit is quoted from the client requirement.
- (2) The result may include inorganic and / or organic fluorine content. There is a possibility that the total fluorine content does not come from PFAS. Retesting on individual PFAS is recommended to determine the compliance to the requirement.
- (3) "#"= Exceeds the limit.

Targeted 233 Perfluoroalkyl and polyfluoroalkyl substances (PFAS) Content

Test Method:

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





Test Results: (Substances in the reporting list of PFAS)

Substance Name	CAS No.	001 Concentration (mg/kg)	MDL (mg/kg)
All tested PFAS in list	-	ND	-

Notes:

- (1) The table above only shows detected PFAS, and PFAS that below MDL are not reported. Please refer to Appendix for the full list of tested PFAS.
- (2) MDL = Method Detection Limit ND = Not detected (lower than MDL)
- (3) The target PFAS is prohibited, and this test requirement is quoted from the client. If PFAS is detected, it is recommended to refer to relevant regulation to confirm the relevant requirements of PFAS.
- (4) ^=Substances refer to its salts/derivative listed in Appendix.

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.





Appendix:

List of PFAS, its salts & derivatives

No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
1		Perfluorooctane sulfonates (PFOS)	1763-23-1	0.010
2		Potassium Perfluorooctanesulfonate (PFOS-K)	2795-39-3	
3		Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5	
4		Sodium perfluorooctanesulfonate (PFOS-Na)	4021-47-0	
5		Ammonium perfluorooctanesulfonate (PFOS-NH ₄)	29081-56-9	
6	DEOC ite	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH ₂ (C ₂ H ₄ OH) ₂)	70225-14-8	
7	PFOS, its salts & derivatives	Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄)	56773-42-3	
8	derivatives	N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane-1-sulfonate (PFOS-N(C ₁₀ H ₂₁) ₂ (CH ₃) ₂)	251099-16-8	
9		Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7	
10		Magnesium bis(heptadecafluorooctanesulphonate) (PFOS-Mg)	91036-71-4	
11		Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6	
12		N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	0.010
13		N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	0.010
14		2-(N-ethylperfluoro-1-octanesulfonamido)- ethanol (N-EtFOSE)	1691-99-2	0.010
15		2-(N-methylperfluoro-1-octanesulfonamido)- ethanol (N-MeFOSE)	24448-09-7	0.010
16	PFOSA, its	Perfluorooctane Sulfonamide (PFOSA)	754-91-6	0.010
17	salts	Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9	
18		Perfluorooctanoic acid (PFOA)	335-67-1	0.010
19		Sodium perfluorooctanoate (PFOA-Na)	335-95-5	
20	PFOA, its	Potassium perfluorooctanoate (PFOA-K)	2395-00-8	
21	salts &	Silver perfluorooctaNote(PFOA-Ag)	335-93-3	
22	derivatives	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0	
23		Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	
24		Lithium perfluorooctanoate(PFOA-Li)	17125-58-5	
25	8:2 FTS, its salts	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	0.010



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@gs.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



,				
26		Potassium 1H,1H,2H,2H-Perfluorodencane sulfonate (8:2 FTS-K)	438237-73-1	
27		Ammonium 1H,1H,2H,2H-Perfluorodencane sulfonate (8:2 FTS-NH ₄)	149724-40-3	
28		Sodium 1H,1H,2H,2H-Perfluorodencane sulfonate (8:2 FTS-Na)	27619-96-1	
29		Methyl perfluorooctanoate (Me-PFOA)	376-27-2	0.100
30		Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5	0.100
31		1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	0.100
32		1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	0.100
33		Perfluoro-1-iodooctane (PFOI)	507-63-1	0.100
34	H ₂ PFDA/8:2	2H,2H-Perfluorodecane Acid (H₂PFDA/8:2 FTCA)	27854-31-5	0.010
35	FTCA , its salts	Tetrabutylphosphonium 2H,2H- Perfluorodecanoate (8:2 FTCA-P(C ₄ H ₉) ₄)	882489-14-7	
36		1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	0.100
37		1-lodo-1H,1H,2H,2H-perfluorodecane (8:2 FTI)	2043-53-0	0.100
38		1H,1H,2H,2H-Perfluorodecyltriethoxysilane (8:2 FTSi(OC ₂ H ₅) ₃)	101947-16-4	0.100
39	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	0.010
40	แร รสแร	Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-Na)	114519-85-6	
41	H₄PFUnDA/ 8:3 FTCA ,	2H,2H,3H,3H-Perfluoroundecanoic acid (H ₄ PFUnDA/ 8:3 FTCA)	34598-33-9	0.010
42	its salts	Potassium 2H,2H,3H,3H-Perfluoroundecanoate (H4PFUnDA-K)	83310-58-1	
43		1H,1H,2H-Heptadecafluoro-1-decene (PFDE)	21652-58-4	0.100
44		3-Perfluoroheptyl propanoic acid (7:3 FTCA)	812-70-4	0.010
45		Perfluorononane Acid (PFNA)	375-95-1	0.010
46		Perfluorononanoate Na-Salt (PFNA-Na)	21049-39-8	
47	PFNA, its	Nonanoic acid, heptadecafluoro-, ammonium salt (PFNA-NH ₄)	4149-60-4	
48	saits	Potassium perfluorononanoate (PFNA-K)	21049-38-7	
49		Perfluorononanoate Li-Salt (PFNA-Li)	60871-92-3	
50		Silver perfluorononanoate (PFNA-Ag)	7358-16-9	
51		Perfluorodecane Acid (PFDA)	335-76-2	0.010
52		Sodium perfluorodecanoate (PFDA-Na)	3830-45-3	
53	PFDA, its	Perfluorodecanoate ammonium salt (PFDA-NH ₄)	3108-42-7	
54	salts	Potassium perfluorodecanoate (PFDA-K)	51604-85-4	
55		Silver perfluorodecanoate (PFDA-Ag)	5784-82-7	
56		Lithium perfluorodecanoate (PFDA-Li)	84743-32-8	
57		Perfluoroundecanoic Acid (PFUnDA)	2058-94-8	0.010
		Inless otherwise agreed in writing, this document is issued by the Company subject to its Ge	oneral Conditions of Service	printed overleaf



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@gs.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



- /				
58		Perfluoroundecanoic acid sodium salt (PFUnDA-Na)	60871-96-7	
59	PFUnDA, its salts	Ammonium perfluoroundecanoate (PFUnDA-NH ₄)	4234-23-5	
60	แร รสเร	Potassium perfluoroundecanoate (PFUnDA-K)	30377-53-8	
61		Calcium perfluoroundecanoate (PFUnDA-Ca)	97163-17-2	
62		Perfluorododecanoic Acid (PFDoDA)	307-55-1	0.010
63	PFDoDA, its salts	Ammonium tricosafluorododecanoate (PFDoDA-NH ₄)	3793-74-6	
64		Sodium perfluorododecanoate (PFDoDA-Na)	60872-01-7	
65	PFTrDA, its	Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.010
66	salts	Ammonium perfluorotridecanoate (PFTrDA-NH ₄)	4288-72-6	
67		Perfluorotetradecanoic Acid (PFTDA)	376-06-7	0.010
68		Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6	0.010
69		Perfluorodecane Sulfonate (PFDS)	335-77-3	0.010
70	PFDS, its	Perfluorodecanesulfonate Na-salt (PFDS-Na)	2806-15-7	-
71	salts	Perfluorodecanesulfonate K-salt (PFDS-K)	2806-16-8	
72		Perfluorodecanesulfonic acid ammonium salt (PFDS-NH ₄)	67906-42-7	
73		1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1	0.100
74		1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5	0.100
75		1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)	2144-54-9	0.100
76		1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5	0.100
77		1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	0.010
78		1,1,2,2-Tetrahydroperfluorododecyl iodide (10:2 FTI)	2043-54-1	0.100
79		1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)	30046-31-2	0.100
80		Perfluoro nonane sulfonic acid (PFNS)	68259-12-1	0.010
81	PFNS, its	Sodium perfluoro-1-nonanesulfonate (PFNS-Na)	98789-57-2	
82	salts	ammonium nonadecafluorononanesulphonate (PFNS-NH ₄)	17202-41-4	
83		PotassiuM perfluorononanesulfonate (PFNS-K)	29359-39-5	
84		Perfluoroundecane sulfonic acid (PFUnDS)	749786-16-1/ 441296-91-9 (anion)	0.010
85	DEDODS	Perfluorododecanesulfonic acid (PFDoDS)	79780-39-5	0.010
86	PFDoDS, its salts	Sodium perfluoro-1-dodecanesulfonate (PFDoDS-Na)	1260224-54- 1	
87		Perfluorotridecane sulfonic acid (PFTrDS)	791563-89-8	0.010



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@gs.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



.0,				
88	PFTrDS, its salts	Sodium perfluoro-1-tridecanesulfonate (PFTrDS-Na)	174675-49-1	
89		10:2 Fluortelomerphosphatediester (10:2 diPAP)	1895-26-7	0.100
90		Perfluorodecyl iodide (PFDI)	423-62-1	0.100
91		Perfluorododecyl iodide (PFDoDI)	307-60-8	0.100
92		Perfluorohexane Sulfonate (PFHxS)	355-46-4	0.010
93		Perfluorohexanesulfonate Na-salt (PFHxS-Na)	82382-12-5	
94		Perfluorohexanesulfonate K-salt (PFHxS-K)	3871-99-6	
95		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	
96		Ammonium perfluorohexane-1-sulphonate (PFHxS-NH ₄)	68259-08-5	
97		Phosphonium, triphenyl(phenylmethyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1- hexanesulfonate (1:1) (PFHxS-BTPP)	1000597-52- 3	
98		N,N,N-tributylbutan-1-aminium tridecafluorohexane-1-sulfonate(PFHxS- N(C ₄ H ₉) ₄)	108427-54-9	
99		N,N,N-triethylethanaminium tridecafluorohexane- 1-sulfonate(PFHxS-N(C ₂ H ₅) ₄)	108427-55-0	
100		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	
101	PFHxS, its salts & derivatives	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) (Calculated in terms of PFHxS) (PFHxS-(NC ₁₀ H ₁₄) ₃ C ₅ H ₄)	1310480-24- 0	
102		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	
103		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-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-(NC ₈ H ₁₀) ₂ C ₁₇ H ₁₂)	1310480-28- 4	
104		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	
105		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	
	la da tra	Inless otherwise agreed in writing, this document is issued by the Company subject to its G	eneral Conditions of Service	printed overleaf.



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@gs.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



. – ,			
106	Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (TPS-PFHxS)	144116-10-9	
107	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	
108	Iodonium, diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS- $I(C_6H_5)_2$)	153443-35-7	
109	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-TMA)	189274-31-5	
110	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	
111	lodonium, 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	
112	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, gallium salt (9CI)(PFHxS-Ga)	341035-71-0	
113	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	
114	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	-
115	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	
116	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	
117	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	
118	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(PFHxS-I(C ₆ H ₄) ₂ (C ₅ H ₁₁) ₂)	421555-74-0	
119	Perflurohexane sulphonyl fluoride(PFHxS-F)	423-50-7	
120	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_6H_4) ₃ (C_4H_9) ₃)	425670-70-8	
121	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, zinc salt (PFHxS-Zn)	70136-72-0	
122	Tridecafluorohexanesulphonic acid, compound with 2,2'-iminodiethanol (1:1)(PFHxS-NH(C ₂ H ₅ O) ₂)	70225-16-0	
	Unless otherwise agreed in writing, this document is issued by the Company subject to its C	Seneral Conditions of Service p	rinted overleaf.



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 proport 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@gs.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



, ,			
123	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	
124	lodonium, 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	
125	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	
126	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	
127	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, cesium salt (1:1) (PFHxS-Cs) (PFHxS-Cs)	92011-17-1	
128	Dibenzo[k,n][1,4,7,10,13]tetraoxathiacyclopentad ecinium, 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	
129	Perfluorohexylsulfonyl chloride (PFHxS-CI)	55591-23-6	
130	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[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (PFHxS-Sulfonium, propenoate polymer)	911027-69-5	
131	 N-Methylperfluoro-1-hexanesulfonamide (N-Me-PFHxSA)	68259-15-4	0.010
132	 Perfluorohexane sulfonamide (PFHxSA)	41997-13-1	0.010
133	 N-[3-(dimethylamino)propyl] tridecafluorohexanesulphonamide (N-AP- FHxSA)	50598-28-2	0.010
134	 2-[methyl[(tridecafluorohexyl) sulphonyl]amino]ethyl acrylate)) (N-MeFHSEA)	67584-57-0	0.500
135	 2-Propenoic acid, 2-methyl-, 2- [methyl[(1,1,2,2,3,3,4,4,5,5,6,6,6- tridecafluorohexyl)sulfonyl]amino]ethyl ester	67584-61-6	0.100
136	 2-Propenoic acid, 2-methyl-, 2- [ethyl[(1,1,2,2,3,3,4,4,5,5,6,6,6- tridecafluorohexyl)sulfonyl]amino]ethyl ester	67906-70-1	0.100
137	 1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-N-methyl-(MeFHxSE)	68555-75-9	0.010



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@gs.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



- /				
138		Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl]-	68957-32-4	0.010
139	PFHxA, its salts & derivatives	Perfluorohexane Acid (PFHxA)	307-24-4	0.010
140		Ammonium perfluorohexanoate (APFHx)	21615-47-4	
141		Sodium perfluorohexanoate (PFHxA-Na)	2923-26-4	
142		Potassium perfluorohexanoate(PFHxA-K)	3109-94-2	
143		Perfluorohexanoyl fluoride (PFHxA-F)	355-38-4	
144		Silver perfluorohexanoate (PFHxA-Ag)	336-02-7	
145	1	Lithium perfluorohexanoate (PFHxA-Li)	90430-61-8	
146		Perfluorobutane Acid (PFBA)	375-22-4	0.010
147		Ammonium perfluorobutanoate (PFBA-NH ₄)	10495-86-0	
148	PFBA, its	Sodium perfluorobutanoate (PFBA-Na)	2218-54-4	
149	salts	Potassium heptafluorobutanoate (PFBA-K)	2966-54-3	
150		Silver perfluorobutanoate (PFBA-Ag)	3794-64-7	
151		Lithium perfluorobutanoate (PFBA-Li)	4146-76-3	
152		Perfluorobutane Sulfonate (PFBS)	375-73-5	0.010
153		Perfluorobutanesulfonate K-salt (PFBS-K)	29420-49-3	
154		Perfluorobutanesulfonic Acid Hydrate (PFBS-H ₂ O)	59933-66-3	
155		lithium perfluorobutanesulfonate (PFBS-Li)	131651-65-5	
156		Triphenyl Sulfonium Perfluorobutane Sulfonate (TPS-PFBS)	144317-44-2	
157		Dimethyl(phenyl)sulfanium perfluorobutanesulfonate (PFBS-S(CH ₃) ₂ C ₆ H ₅)	220133-51-7	
158		Tetrabutyl-phosphonium nonafluoro-butane-1-sulfonate (PFBS-P(C ₄ H ₉) ₄)	220689-12-3	
159		N,N,N,-triethylethanaminium 1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulfonate(PFBS-N(C ₂ H ₅) ₄)	25628-08-4	
160	PFBS, its	Nonafluorobutanesulfonyl fluoride (PFBS-F)	375-72-4	
161	salts & derivatives	Morpholinium perfluorobutanesulfonate (PFBS-NC ₄ H ₉ O)	503155-89-3	
162	3.	Magnesium perfluorobutanesulfonate (PFBS-Mg)	507453-86-3	
163		Ammonium 1,1,2,2,3,3,4,4,4-nonafluorobutane- 1-sulphonate (PFBS-NH ₄)	68259-10-9	
164		1-(4-butoxy-1-naphthyl)tetrahydrothiophenium nonafluorobutane-1-sulfonate (PFBS-SC ₁₈ H ₂₃ O)	209482-18-8	
165		1,1,2,2,3,3,4,4,4-Nonafluorobutane-1-sulfonyl chloride (PFBS-CI)	2991-84-6	
166		Sodium perfluorobutanesulfonate (PFBS-Na)	60453-92-1	
167		Bis(4-tert-butylphenyl)iodonium perfluoro-1-butanesulfonate (PFBS-I(C ₆ H ₄) ₂ (C ₄ H ₉) ₂)	194999-85-4	
168		1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulphonic acid, compound with 2,2'-iminodiethanol (1:1) (PFBS-NH(C_2H_5O) ₂)	70225-18-2	



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@gs.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



Page 12 of 16

Date: Dec 14, 2023

No.: CANEC23015607335

169		Perfluoropentane Acid (PFPeA)	2706-90-3	0.010
170		Sodium perfluoropentanoate(PFPeA-Na)	2706-89-0	
171	PFPeA, its	Potasium perfluoropentanoate(PFPeA-K)	336-23-2	
172	salts	Lithium perfluoropentanoate (PFPeA-Li)	198482-22-3	
173		Silver perfluoropentanoate (PFPeA-Ag)	2795-30-4	
174		Ammonium perfluoropentanoate(PFPeA-NH ₄)	68259-11-0	
175	HPFHpA, its salts	7H-Dodecanefluoroheptane Acid (HPFHpA)	1546-95-8	0.010
176		Sodium 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptanoate (HPFHpA-Na)	2264-25-7	
177		Ammonium 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptanoate (HPFHpA-NH ₄)	376-34-1	
178		Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	0.010
179		Perfluoroheptanesulfonate Na-salt (PFHpS-Na)	21934-50-9	
180	PFHpS, its salts	Potassium Perfluoroheptanesulfonate (PFHpS-K)	60270-55-5	
181	Julio	Ammonium perfluoroheptanesulfonate (PFHpS-NH ₄)	68259-07-4	
182		Lithium perfluoroheptanesulfonate (PFHpS-Li)	117806-54-9	
183		Perfluoroheptane Acid (PFHpA)	375-85-9	0.010
184		Sodium perfluoroheptanoate (PFHpA-Na)	20109-59-5	
185	DELL 4 11	Potassium perfluoroheptanoate (PFHpA-K)	21049-36-5	
186	PFHpA, its salts	Ammonium perfluoroheptanoate (PFHpA-NH ₄)	6130-43-4	
187	Saits	Cesium perfluoroheptanoate (PFHpA-Cs)	171198-24-6	
188		Silver perfluoroheptanoate (PFHpA-Ag)	424-05-5	
189		Lithium perfluoroheptanoate (PFHpA-Li)	60871-90-1	
190		1H,1H,2H,2H-Perfluorooctanesulphonic acid (6:2 FTS)	27619-97-2	0.010
191		Sodium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-Na)	27619-94-9	
192	6:2 FTS, its salts	Potassium 1H,1H,2H,2H- Perfluorooctanesulfonate (6:2 FTS-K)	59587-38-1	
193		Ammonium 1H,1H,2H,2H- Perfluorooctanesulfonate (6:2 FTS-NH ₄)	59587-39-2	
194		1-Octanesulfonic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-, barium salt (2:1) (6:2 FTS-Ba)	1807944-82- 6	
195		1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)	17527-29-6	0.100
196		1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)	2043-47-2	0.100
197		1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH)	647-42-7	0.100
198	HFPO-DA, its salts & derivatives	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid (HFPO-DA)	13252-13-6	0.010
199		2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, ammonium salts (HFPO-DA-NH ₄)	62037-80-3	
200		2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, K- salts (HFPO-DA-K)	67118-55-2	



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@gs.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



Page 13 of 16

,				
201		2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, its acyl halides (HFPO-DA-F)	2062-98-8	
202		1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	757124-72-4	0.010
203		1H,1H,2H,2H-perfluorohexane sulfonate acid sodium salt	27619-93-8	
204	4:2 FTS, its salts	Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8	0.010
205		N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9	0.010
206]	N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6	0.010
207		Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.010
208	PFPeS, its	Sodium perfluoro-1-pentanesulfonate (PFPeS-Na)	630402-22-1	
209	salts	Potassium perfluoropentane-1-sulphonate (PFPeS-K)	3872-25-1	
210		Ammonium perfluoropentanesulfonate (PFPeS-NH ₄)	68259-09-6	
211		2-Perfluorohexyl ethanoic acid (6:2 FTCA)	53826-12-3	0.010
212		3-Perfluoropentyl propanoic acid (5:3 FTCA)	914637-49-3	0.010
213		Perfluorohexadecanoic Acid (PFHxDA)	67905-19-5	0.010
214		Perfluorooctadecanoic Acid (PFODA)	16517-11-6	0.010
215		1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMA)	2144-53-8	0.100
216		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.010
217		Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	0.010
218		Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	0.010
219		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	0.010
220		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	756426-58-1	0.010
221		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.010
222		Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	113507-82-7	0.010
223		3-Perfluoropropyl propanoic acid (3:3 FTCA)	356-02-5	0.010
224		Perfluoropentadecanoic Acid (PFPeDA)	141074-63-7	0.100
225		1H,1H,2H,2H-Perfluorohexyl methacrylate (4:2 FTMA)	1799-84-4	0.100
226		2-(N-ethylperfluorooctanesulfamido) ethyl acrylate (EtFOSAC)	423-82-5	0.100
227		Perfluorooctyl triethoxysilane (POTS)	51851-37-7	0.100
228		1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-8- iodooctane (6:2 FTI)	2043-57-4	0.100
229		Perfluorobutane sulfon amides	30334-69-1	0.100



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@gs.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



Test Report No.: CANEC23015607335 **Date:** Dec 14, 2023

Page 14 of 16

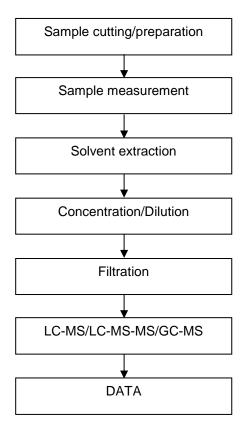
230		1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methylbutane-1-sulphonamide (PFBS-NC ₃ H ₈ O)	34454-97-2	0.010
231	11H- PFUnDA, its salts	11H-Perfluoroundecanoic acid (11H-PFUnDA)	1765-48-6	0.100
232		Potassium 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-icosafluoroundecanoate (11H-PFUnDA-K)	307-71-1	
233		Ammonium 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11- icosafluoroundecanoate (11H-PFUnDA-NH ₄)	5081-02-7	





Test Report (PFAS) ATTACHMENTS

PFASs/ PFOS/PFOA Testing Flow Chart





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.

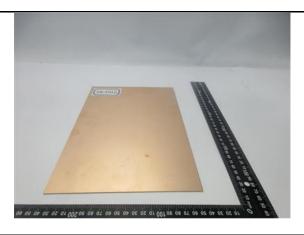
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@gs.com

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



te: Dec 14, 2023 Page 16 of 16

Sample photos:



SGS authenticate the photo on original report only

*** End of Report ***

