

Test Report (PFAS)

No.: CANEC24012991405

Date: Jul 01, 2024

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Client Name: KINGBOARD LAMINATES HOLDINGS LIMITED

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

Sample Name: HF-140

Model No.: HF-140

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

SGS Job No.: GZP24-019464

Sample Receiving Date: Jun 17, 2024

Testing Period: Jun 17, 2024 ~ Jun 28, 2024

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

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

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

Summary:

Targeted 310 Perfluoroalkyl and polyfluoroalkyl substances (PFAS) Content	Pass
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Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Allie Chen

Allie Chen
Approved Signatory

scan to see the report



BEB52511



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

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Test Sample:

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	CAN24-0129914-0001.C001	Double-side copper-clad laminate

Targeted 310 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.	A1 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.



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Appendix:

List of PFAS, its salts & derivatives

No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
1	PFOS, its salts & derivatives	Perfluorooctane sulfonic acid (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		Perfluorooctane sulfonate diethanolamine salt (PFOS-NH ₂ (C ₂ H ₄ OH) ₂)	70225-14-8	--
7		Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C ₂ H ₅) ₄)	56773-42-3	--
8		N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluorooctane-1-sulfonate (PFOS-N(C ₁₀ H ₂₁) ₂ (CH ₃) ₂)	251099-16-8	--
9		TetrabutylAmmonium perfluorooctanesulfonate (PFOS-N(C ₄ H ₉) ₄)	111873-33-7	--
10		Perfluorooctane Sulfonyl fluoride (PFOS-F)	307-35-7	--
11		Magnesium bis(heptafluorooctanesulphonate) (PFOS-Mg)	91036-71-4	--
12		Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluorooctanesulfonate	71463-74-6	--
13	--	N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	4151-50-2	0.010
14	--	N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	31506-32-8	0.010
15	--	2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	1691-99-2	0.010
16	--	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	24448-09-7	0.010
17	PFOSA, its salts	Perfluorooctane Sulfonamide (PFOSA)	754-91-6	0.010
18		Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9	--
19		Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8	--
20		Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0	--
21		Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH ₄)	76752-72-2	--
22		Perfluorooctanoic acid (PFOA)	335-67-1	0.010
23		Sodium perfluorooctanoate (PFOA-Na)	335-95-5	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
24	PFOA, its salts & derivatives	Potassium perfluorooctanoate (PFOA-K)	2395-00-8	--
25		Silver perfluorooctanoate (PFOA-Ag)	335-93-3	--
26		Perfluorooctanoyl fluoride (PFOA-F)	335-66-0	--
27		Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	--
28		Lithium perfluorooctanoate (PFOA-Li)	17125-58-5	--
29		Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6	--
30		Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9	--
31		Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, chromium(3+) (PFOA-Cr(3+))	68141-02-6	--
32		Pentadecafluorooctanoic acid--piperazine (2/1)PFOA-NH(C ₄ H ₁₀ N)	423-52-9	--
33		Pentadecafluorooctanoate (anion)	45285-51-6	--
34		Perfluorooctanoic Anhydride	33496-48-9	--
35	8:2 FTS, its salts	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4	0.010
36		Potassium 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2 FTS-K)	438237-73-1	--
37		Ammonium 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2 FTS-NH ₄)	149724-40-3	--
38		Sodium 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2 FTS-Na)	27619-96-1	--
39	--	Methyl perfluorooctanoate (Me-PFOA)	376-27-2	0.100
40	--	Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5	0.100
41	--	1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	0.100
42	--	1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	0.100
43	--	Perfluoro-1-iodooctane (PFOI)	507-63-1	0.100
44	H ₂ PFDA/8:2 FTCA, its salts	2H,2H-Perfluorodecane Acid (H ₂ PFDA/8:2 FTCA)	27854-31-5	0.010
45		Tetrabutylphosphonium 2H,2H-Perfluorodecanoate (8:2 FTCA-P(C ₄ H ₉) ₄)	882489-14-7	--
46	--	1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	0.100
47	--	1-Iodo-1H,1H,2H,2H-perfluorodecane (8:2 FTI)	2043-53-0	0.100
48	--	1H,1H,2H,2H-Perfluorodecyltriethoxysilane (8:2 FTSi(OC ₂ H ₅) ₃)	101947-16-4	0.100
49	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
50		Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-Na)	114519-85-6	--
51	--	2H,2H,3H,3H-Perfluoroundecanoic acid (H ₄ PFUnDA/ 8:3 FTCA)	34598-33-9	0.010



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
52	H ₄ PFUnDA/ 8:3 FTCA, its salts	Potassium 2H,2H,3H,3H-Perfluoroundecanoate (H ₄ PFUnDA-K)	83310-58-1	--
53	--	1H,1H,2H-Heptadecafluoro-1-decene (PFDE)	21652-58-4	0.100
54	--	3-Perfluoroheptyl propanoic acid (7:3 FTCA)	812-70-4	0.010
55	PFNA, its salts	Perfluorononane Acid (PFNA)	375-95-1	0.010
56		Perfluorononanoate Na-Salt (PFNA-Na)	21049-39-8	--
57		Nonanoic acid, heptadecafluoro-, ammonium salt (PFNA-NH ₄)	4149-60-4	--
58		Potassium perfluorononanoate (PFNA-K)	21049-38-7	--
59		Perfluorononanoate Li-Salt (PFNA-Li)	60871-92-3	--
60		Silver perfluorononanoate (PFNA-Ag)	7358-16-9	--
61		Methanaminium perfluorononanoate (PFNA-NH ₃ (CH ₃))	77032-23-6	--
62		Nonanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-, compd. with N-ethylethanamine (1:1) PFNA-NH ₂ (C ₂ H ₅) ₂	77032-27-0	--
63		Nonanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-, compd. with N-methylmethanamine (1:1) (PFNA-NH ₂ (CH ₃) ₂)	77032-24-7	--
64		Nonanoic acid, heptadecafluoro-, compd. with N,N-diethylethanamine (1:1) (9CI) (PFNA-NH(C ₂ H ₅) ₃)	327176-80-7	--
65		Nonanoic acid, heptadecafluoro-, compd. with piperidine (1:1) (9CI) (PFNA-NH ₂ (C ₅ H ₁₀))	95682-66-9	--
66		Nonanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-, compd. with benzenamine (1:1) (PFNA-NH ₃ (C ₆ H ₅))	95682-67-0	--
67		Nonanoic acid, heptadecafluoro-, compd. with cyclohexanamine (1:1) (9CI) (PFNA-NH ₃ (C ₆ H ₁₁))	328531-06-2	--
68		Perfluorononanoate (anion)	72007-68-2	--
69	PFDA, its salts	Perfluorodecane Acid (PFDA)	335-76-2	0.010
70		Sodium perfluorodecanoate (PFDA-Na)	3830-45-3	--
71		Perfluorodecanoate ammonium salt (PFDA-NH ₄)	3108-42-7	--
72		Potassium perfluorodecanoate (PFDA-K)	51604-85-4	--
73		Silver perfluorodecanoate (PFDA-Ag)	5784-82-7	--
74		Lithium perfluorodecanoate (PFDA-Li)	84743-32-8	--
75		Perfluorodecanoate (anion)	73829-36-4	--
76	PFUnDA, its salts	Perfluoroundecanoic Acid (PFUnDA)	2058-94-8	0.010
77		Perfluoroundecanoic acid sodium salt (PFUnDA-Na)	60871-96-7	--



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78		Ammonium perfluoroundecanoate (PFUnDA-NH ₄)	4234-23-5	--
79		Potassium perfluoroundecanoate (PFUnDA-K)	30377-53-8	--
80		Calcium perfluoroundecanoate (PFUnDA-Ca)	97163-17-2	--
81		Perfluoroundecanoate (anion)	196859-54-8	--
82	PFDoDA, its salts	Perfluorododecanoic Acid (PFDoDA)	307-55-1	0.010
83		Ammonium tricosfluorododecanoate (PFDoDA-NH ₄)	3793-74-6	--
84		Sodium perfluorododecanoate (PFDoDA-Na)	60872-01-7	--
85		Perfluorododecanoate (anion)	171978-95-3	--
86	PFTTrDA, its salts	Perfluorotridecanoic Acid (PFTTrDA)	72629-94-8	0.010
87		Ammonium perfluorotridecanoate (PFTTrDA-NH ₄)	4288-72-6	--
88		Perfluorotridecanoate (anion)	862374-87-6	--
89	PFTDA, its salts	Perfluorotetradecanoic Acid (PFTDA)	376-06-7	0.010
90		Perfluorotetradecanoate (anion)	365971-87-5	--
91	--	Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6	0.010
92	PFDS, its salts	Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.010
93		Sodium perfluorodecanesulfonate (PFDS-Na)	2806-15-7	--
94		Potassium perfluorodecanesulfonate (PFDS-K)	2806-16-8	--
95		Ammonium perfluorodecanesulfonate (PFDS-NH ₄)	67906-42-7	--
96		Perfluorodecane sulfonate (anion)	126105-34-8	--
97	--	1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1	0.100
98	--	1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5	0.100
99	--	1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)	2144-54-9	0.100
100	--	1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5	0.100
101	--	1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0	0.010
102	--	1,1,2,2-Tetrahydroperfluorododecyl iodide (10:2 FTI)	2043-54-1	0.100
103	--	1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)	30046-31-2	0.100
104	PFNS, its salts	Perfluoro nonane sulfonic acid (PFNS)	68259-12-1	0.010
105		Sodium perfluoro-1-nonanesulfonate (PFNS-Na)	98789-57-2	--
106		ammonium nonadecafluorononanesulphonate (PFNS-NH ₄)	17202-41-4	--
107		Potassium perfluorononanesulfonate (PFNS-K)	29359-39-5	--



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108		Perfluorononane sulfonate (anion)	474511-07-4	--
109	PFUnDS, its salts	Perfluoroundecane sulfonic acid (PFUnDS)	749786-16-1	0.010
110		Perfluoroundecanesulfonate (anion)	441296-91-9	--
111	PFD0DS, its salts	Perfluorododecanesulfonic acid (PFD0DS)	79780-39-5	0.010
112		Sodium perfluoro-1-dodecanesulfonate (PFD0DS-Na)	1260224-54-1	--
113		Potassium perfluorododecanesulfonate (PFD0DS-K)	85187-17-3	--
114		Perfluorododecane sulfonate (anion)	343629-43-6	--
115	PFTrDS, its salts	Perfluorotridecane sulfonic acid (PFTrDS)	791563-89-8	0.010
116		Sodium perfluoro-1-tridecanesulfonate (PFTrDS-Na)	174675-49-1	--
117	--	10:2 Fluortelomerphosphatediester (10:2 diPAP)	1895-26-7	0.100
118	--	Perfluorodecyl iodide (PFDI)	423-62-1	0.100
119	--	Perfluorodecyl iodide (PFD0DI)	307-60-8	0.100
120	PFHxS, its salts & derivatives	Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.010
121		Perfluorohexanesulfonate Na-salt (PFHxS-Na)	82382-12-5	--
122		Perfluorohexanesulfonate K-salt (PFHxS-K)	3871-99-6	--
123		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	--
124		Ammonium perfluorohexane-1-sulphonate (PFHxS-NH ₄)	68259-08-5	--
125		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	--
126		N,N,N-tributylbutan-1-aminium tridecafluorohexane-1-sulfonate(PFHxS-N(C ₄ H ₉) ₄)	108427-54-9	--
127		N,N,N-triethylethanaminium tridecafluorohexane-1-sulfonate(PFHxS-N(C ₂ H ₅) ₄)	108427-55-0	--
128		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	--
129		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	--
130		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-	1310480-27-3	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
		tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-(NC ₈ H ₁₀) ₂ C ₁₃ H ₁₂)		
131		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	--
132		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	--
133		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	--
134		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	--
135		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	--
136		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	--
137		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	--
138		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	--
139		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	--
140		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	--
141		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	--
142		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	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
143		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	--
144		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	--
145		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	--
146		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))	421555-74-0	--
147		Perfluorohexane sulphonyl fluoride(PFHxS-F)	423-50-7	--
148		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	--
149		1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, zinc salt (PFHxS-Zn)	70136-72-0	--
150		Tridecafluorohexanesulphonic acid, compound with 2,2'-iminodiethanol (1:1)(PFHxS-NH(C ₂ H ₅ O) ₂)	70225-16-0	--
151		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	--
152		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	--
153		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	--
154		Sulfonium, [4-[(2-methyl-1-oxo-2-propen-1-yl)oxy]phenyl]diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6,6,6,6,6-tridecafluoro-1-hexanesulfonate (1:1) (PFHxS-S(C ₆ H ₅) ₂ 8 ₁₀ H ₉ O ₂)	911027-68-4	--
155		1-Hexanesulfonic acid, 9,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, cesium salt (1:1) (PFHxS-Cs) (PFHxS-Cs)	92011-17-1	--
156		Dibenzo[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	--
157		Perfluorohexylsulfonyl chloride (PFHxS-Cl)	55591-23-6	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
158		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 (PFHxS-Sulfonium, propenoate polymer)	911027-69-5	--
159		Perfluorohexane sulfonate (anion)	108427-53-8	--
160	--	N-Methylperfluoro-1-hexanesulfonamide (N-Me-PFHxSA)	68259-15-4	0.010
161	--	Perfluorohexane sulfonamide (PFHxSA)	41997-13-1	0.010
162	--	N-[3-(dimethylamino)propyl] tridecafluorohexanesulphonamide (N-AP-FHxSA)	50598-28-2	0.010
163	--	2-[methyl[(tridecafluorohexyl) sulphonyl]amino]ethyl acrylate)) (N-MeFHSEA)	67584-57-0	0.500
164	--	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
165	--	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
166	--	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
167	EtFHxSAA, its salts	Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl] (EtFHxSAA)	68957-32-4	0.010
168		Potassium N-ethyl-n-[(tridecafluorohexyl)sulfonyl]glycinate (EtFHxSAA-K)	67584-53-6	--
169		Sodium N-ethyl-N-((tridecafluorohexyl)sulphonyl)glycinate (EtFHxSAA-Na)	68555-70-4	--
170	PFHxA, its salts & derivatives	Perfluorohexane Acid (PFHxA)	307-24-4	0.010
171		Ammonium perfluorohexanoate (APFHx)	21615-47-4	--
172		Sodium perfluorohexanoate (PFHxA-Na)	2923-26-4	--
173		Potassium perfluorohexanoate (PFHxA-K)	3109-94-2	--
174		Perfluorohexanoyl fluoride (PFHxA-F)	355-38-4	--
175		Silver perfluorohexanoate (PFHxA-Ag)	336-02-7	--
176		Lithium perfluorohexanoate (PFHxA-Li)	90430-61-8	--
177		Perfluorohexanoic anhydride	308-13-4	--
178		Hexanoic acid, undecafluoro-, compd. with piperazine (2:1) (8Cl,9Cl)	423-47-2	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
179		Perfluorohexanoate (anion)	92612-52-7	--
180	PFBA, its salts	Perfluorobutane Acid (PFBA)	375-22-4	0.010
181		Ammonium perfluorobutanoate (PFBA-NH ₄)	10495-86-0	--
182		Sodium perfluorobutanoate (PFBA-Na)	2218-54-4	--
183		Potassium heptafluorobutanoate (PFBA-K)	2966-54-3	--
184		Silver perfluorobutanoate (PFBA-Ag)	3794-64-7	--
185		Lithium perfluorobutanoate (PFBA-Li)	4146-76-3	--
186		Heptafluorobutanoic acid-piperazine (1:1)	375-04-2	--
187		Perfluorobutanoate (anion)	45048-62-2	--
188	PFBS, its salts & derivatives	Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.010
189		Perfluorobutanesulfonate K-salt (PFBS-K)	29420-49-3	--
190		Perfluorobutanesulfonic Acid Hydrate (PFBS-H ₂ O)	59933-66-3	--
191		lithium perfluorobutanesulfonate (PFBS-Li)	131651-65-5	--
192		Triphenyl Sulfonium Perfluorobutane Sulfonate (TPS-PFBS)	144317-44-2	--
193		Dimethyl(phenyl)sulfonium perfluorobutanesulfonate (PFBS-S(CH ₃) ₂ C ₆ H ₅)	220133-51-7	--
194		Tetrabutyl-phosphonium nonafluoro-butane-1-sulfonate (PFBS-P(C ₄ H ₉) ₄)	220689-12-3	--
195		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	--
196		Nonafluorobutanesulfonyl fluoride (PFBS-F)	375-72-4	--
197		Morpholinium perfluorobutanesulfonate (PFBS-NC ₄ H ₉ O)	503155-89-3	--
198		Magnesium perfluorobutanesulfonate (PFBS-Mg)	507453-86-3	--
199		Ammonium 1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulphonate (PFBS-NH ₄)	68259-10-9	--
200		1-(4-butoxy-1-naphthyl)tetrahydrothiophenium nonafluorobutane-1-sulfonate (PFBS-SC ₁₈ H ₂₃ O)	209482-18-8	--
201		1,1,2,2,3,3,4,4,4-Nonafluorobutane-1-sulfonyl chloride (PFBS-Cl)	2991-84-6	--
202		Sodium perfluorobutanesulfonate (PFBS-Na)	60453-92-1	--
203		Bis(4-tert-butylphenyl)iodonium perfluoro-1-butanesulfonate (PFBS-I(C ₆ H ₄) ₂ (C ₄ H ₉) ₂)	194999-85-4	--
204		1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulphonic acid, compound with 2,2'-iminodiethanol (1:1) (PFBS-NH(C ₂ H ₅ O) ₂)	70225-18-2	--
205		Tetrabutylammonium nonafluorobutanesulfonate ((PFBS-N(C ₄ H ₉) ₄))	108427-52-7	--
206		Diphenyliodonium nonafluorobutane-1-sulfonate((PFBS-I(C ₆ H ₅) ₂))	194999-82-1	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
207		Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	241806-75-7	--
208		Sulfonium, (4-cyclohexylphenyl)diphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	425670-64-0	--
209		Thiophenium, tetrahydro-1-(1-methyl-1H-indol-3-yl)-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	867373-18-0	--
210		Pyridinium, 1-ethyl-3-methyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	1015420-87-7	--
211		1H-Imidazolium, 1-methyl-3-octyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	905972-83-0	--
212		1H-Imidazolium, 3-hexyl-1-methyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	1001557-05-6	--
213		2-Propanaminium, N,N-dimethyl-N-(1-methylethyl)-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	374571-81-0	--
214		Sulfonium, [4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]diphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	857285-80-4	--
215		1-Butanaminium, N,N-dibutyl-N-methyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	124472-66-8	--
216		1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, zinc salt (2:1) (PFBS-Zn)	502457-69-4	--
217		1-Pentanaminium, N,N,N-tripropyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanefulfonate (1:1)	56773-55-8	--
218		Perfluorobutanefulfonic acid tetramethylammonium salt (PFBS-N(CH ₃) ₄)	25628-17-5	--
219		1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, 1,1'-anhydride	36913-91-4	--
220		Perfluorobutane sulfonate (anion)	45187-15-3	--
221	PFPeA, its salts	Perfluoropentane Acid (PFPeA)	2706-90-3	0.010
222		Sodium perfluoropentanoate(PFPeA-Na)	2706-89-0	--
223		Potassium perfluoropentanoate(PFPeA-K)	336-23-2	--
224		Lithium perfluoropentanoate (PFPeA-Li)	198482-22-3	--
225		Silver perfluoropentanoate (PFPeA-Ag)	2795-30-4	--
226		Ammonium perfluoropentanoate(PFPeA-NH ₄)	68259-11-0	--
227		Perfluoropentanoate (anion)	45167-47-3	--
228		7H-Dodecanefluoroheptane Acid (HPFHpA)	1546-95-8	0.010



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
229	HPFHpA, its salts	Sodium 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptanoate (HPFHpA-Na)	2264-25-7	--
230		Ammonium 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptanoate (HPFHpA-NH ₄)	376-34-1	--
231	PFHpS, its salts	Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	0.010
232		Perfluoroheptanesulfonate Na-salt (PFHpS-Na)	21934-50-9	--
233		Potassium Perfluoroheptanesulfonate (PFHpS-K)	60270-55-5	--
234		Ammonium perfluoroheptanesulfonate (PFHpS-NH ₄)	68259-07-4	--
235		Lithium perfluoroheptanesulfonate (PFHpS-Li)	117806-54-9	--
236		1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)	70225-15-9	--
237		Perfluoroheptane sulfonate (anion)	146689-46-5	--
238	PFHpA, its salts	Perfluoroheptane Acid (PFHpA)	375-85-9	0.010
239		Sodium perfluoroheptanoate (PFHpA-Na)	20109-59-5	--
240		Potassium perfluoroheptanoate (PFHpA-K)	21049-36-5	--
241		Ammonium perfluoroheptanoate (PFHpA-NH ₄)	6130-43-4	--
242		Cesium perfluoroheptanoate (PFHpA-Cs)	171198-24-6	--
243		Silver perfluoroheptanoate (PFHpA-Ag)	424-05-5	--
244		Lithium perfluoroheptanoate (PFHpA-Li)	60871-90-1	--
245		Perfluoroheptanoate (anion)	120885-29-2	--
246	6:2 FTS, its salts	1H,1H,2H,2H-Perfluorooctanesulphonic acid (6:2 FTS)	27619-97-2	0.010
247		Sodium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-Na)	27619-94-9	--
248		Potassium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-K)	59587-38-1	--
249		Ammonium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-NH ₄)	59587-39-2	--
250		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	--
251	--	1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)	17527-29-6	0.100
252	--	1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)	2043-47-2	0.100
253	--	1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH)	647-42-7	0.100
254	HFPO-DA, its salts & derivatives	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid (HFPO-DA)	13252-13-6	0.010
255		2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, ammonium salts (HFPO-DA-NH ₄)	62037-80-3	--
256		2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, K- salts (HFPO-DA-K)	67118-55-2	--



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
257		2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, its acyl halides (HFPO-DA-F)	2062-98-8	--
258	4:2 FTS, its salts	1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	757124-72-4	0.010
259		1H,1H,2H,2H-perfluorohexane sulfonate acid sodium salt	27619-93-8	--
260	--	Perfluorooctane sulfonamidoacetic Acid (FOSAA)	2806-24-8	0.010
261	--	N-Methylperfluoro-1-octanesulfonamidoacetic Acid (N-MeFOSAA)	2355-31-9	0.010
262	--	N-Ethylperfluorooctane sulfonamidoacetic Acid (N-EtFOSAA)	2991-50-6	0.010
263	PFPeS, its salts	Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.010
264		Sodium perfluoro-1-pentanesulfonate (PFPeS-Na)	630402-22-1	--
265		Potassium perfluoropentane-1-sulphonate (PFPeS-K)	3872-25-1	--
266		Ammonium perfluoropentanesulfonate (PFPeS-NH ₄)	68259-09-6	--
267		Bis(2-hydroxyethyl) ammonium 1,1,2,2,3,3,4,4,5,5,5-undecafluoropentane-1-sulphonate	70225-17-1	--
268		Undecafluoropentane-1-sulfonic acid lithium salt (PFPeS-Li)	1046864-81-6	--
269		Perfluoropentane sulfonate (anion)	175905-36-9	--
270	--	2-Perfluorohexyl ethanoic acid (6:2 FTCA)	53826-12-3	0.010
271	--	3-Perfluoropentyl propanoic acid (5:3 FTCA)	914637-49-3	0.010
272	--	Perfluorohexadecanoic Acid (PFHxDA)	67905-19-5	0.010
273	--	Perfluorooctadecanoic Acid (PFODA)	16517-11-6	0.010
274	--	1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMA)	2144-53-8	0.100
275	ADONA, its salts	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	0.010
276		Ammonium 4,8-dioxa-3H-perfluorononanoate (ADONA-NH ₄)	958445-44-8	--
277		Sodium 4,8-dioxa-3H-perfluorononanoate (ADONA-Na)	2250081-67-3	--
278	--	Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	0.010
279	--	Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	0.010
280	--	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	0.010
281	--	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	0.010
282	--	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	0.010
283	--	Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	113507-82-7	0.010



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No.	Group Name	Substance Name	CAS No.	MDL (mg/kg)
284	--	3-Perfluoropropyl propanoic acid (3:3 FTCA)	356-02-5	0.010
285	--	Perfluoropentadecanoic Acid (PFPeDA)	141074-63-7	0.100
286	--	1H,1H,2H,2H-Perfluorohexyl methacrylate (4:2 FTMA)	1799-84-4	0.100
287	--	2-(N-ethylperfluorooctanesulfamido) ethyl acrylate (EtFOSAC)	423-82-5	0.100
288	--	Perfluorooctyl triethoxysilane (POTS)	51851-37-7	0.100
289	--	1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-8-iodooctane (6:2 FTI)	2043-57-4	0.100
290	--	Perfluorobutane sulfon amides	30334-69-1	0.100
291	--	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
292	11H-PFUnDA, its salts	11H-Perfluoroundecanoic acid (11H-PFUnDA)	1765-48-6	0.100
293		Potassium 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-icosafuoroundecanoate (11H-PFUnDA-K)	307-71-1	--
294		Ammonium 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-icosafuoroundecanoate (11H-PFUnDA-NH ₄)	5081-02-7	--
295	PFPrA, its salts	Pentafluoropropionic acid (PFPrA)	422-64-0	0.100
296		Sodium pentafluoropropionate (PFPrA-Na)	378-77-8	--
297		Silver pentafluoropropionate (PFPrA-Ag)	509-09-1	--
298		Potassium pentafluoropropionate (PFPrA-K)	378-76-7	--
299		Ammonium pentafluoropropionate (PFPrA-NH ₄)	2730-58-7	--
300	--	1H,1H,2H,2H-Perfluorodecyltrichlorosilane	78560-44-8	0.100
301	--	1H,1H,2H,2H-Perfluorodecyltrimethoxysilane	83048-65-1	
302	--	1H,1H,2H,2H-Perfluorooctyltrichlorosilane	78560-45-9	0.100
303	--	1H,1H,2H,2H-Perfluorodecylmethyldichlorosilane	3102-79-2	0.100
304	--	2H-Perfluoro-2-decenoic acid (8:2 FTUCA)	70887-84-2	0.010
305	--	2H-Perfluoro-2-octenoic acid (6:2 FTUCA)	70887-88-6	0.010
306	--	2H-Perfluoro-2-dodecenoic acid (10:2 FTUCA)	70887-94-4	0.010
307	--	2-Perfluorodecyl ethanoic acid (10:2 FTCA)	53826-13-4	0.010
308	--	6:6 Perfluorophosphinic acid (6:6 PFPI)	40143-77-9	0.010
309	--	6:8 Perfluorophosphinic acid (6:8 PFPI)	610800-34-5	0.010
310	--	8:8 Perfluorophosphinic acid (8:8 PFPI)	40143-79-1	0.010



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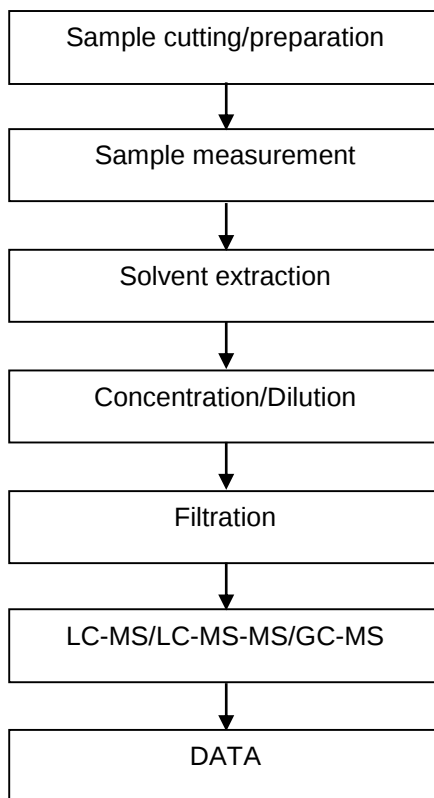
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ATTACHMENTS

PFASs/ PFOS/PFOA Testing Flow Chart



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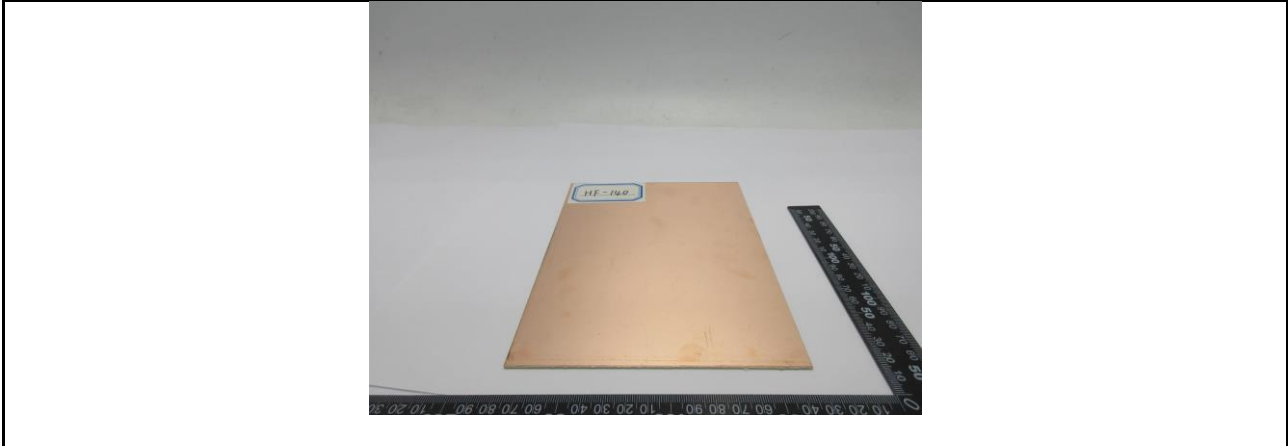
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