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Test Report

VALE CANADA LIMITED
200 BAY STREET, ROYAL BANK PLAZA, SUITE 1600, SOUTH TOWER, P.O. BOX 70, TORONTO, ONTARIO, M5J 2K2, CANADA

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : VALE CANADA LIMITED
Sample Name : VALE CNR Ni S Pellets – UK Origin

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Sample Receiving Date : 12-Jun-2025
Testing Period : 12-Jun-2025 to 26-Jun-2025

Test Requested :

(1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) As specified by client, the sample(s) was/ were tested for 5 PBTs with reference to TSCA section 6 and 40 CFR Part 751. Please refer to result table for testing items.

(3) As specified by client, the sample(s) was/ were tested for 10 high priority chemicals with reference to TSCA section 6 and 40 CFR Part 751. Please refer to result table for testing item(s).

(4) As requested by the client, the risk of specific PFAS in the selected sample is evaluated. The total amounts of evaluated PFAS are 552 items, concluding 147 tested items and 405 listed items (see PFAS Remark).

(5) Please refer to next pages for the other item(s).

Test Results : Please refer to following pages.

Conclusion :

(1) Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

(2) Based on the performed tests on submitted sample(s), the test results of PBTs comply with the limits as set by TSCA section 6 and 40 CFR Part 751.

(3) Based on the performed tests on submitted sample(s), the test results of high priority chemicals comply with the limits as set by TSCA section 6 and 40 CFR Part 751.

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

CHECK REPORT
PIN CODE: 878BB0F4

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Test Part Description

No.1 : SILVER COLORED METAL

Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Cadmium (Cd)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	100
Lead (Pb)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Mercury (Hg)	With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Hexavalent Chromium Cr(VI) (#2)	With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.	μg/cm²	0.1	n.d.	-
Monobromobiphenyl	With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromobiphenyl		mg/kg	5	n.d.	-
Tribromobiphenyl		mg/kg	5	n.d.	-
Tetrabromobiphenyl		mg/kg	5	n.d.	-
Pentabromobiphenyl		mg/kg	5	n.d.	-
Hexabromobiphenyl		mg/kg	5	n.d.	-
Heptabromobiphenyl		mg/kg	5	n.d.	-
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs		mg/kg	-	n.d.	1000
Monobromodiphenyl ether		mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether		mg/kg	5	n.d.	-
Hexabromodiphenyl ether		mg/kg	5	n.d.	-
Heptabromodiphenyl ether		mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Butyl benzyl phthalate (BBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisodecyl phthalate (DIDP) (CAS No.: 26761-40-0, 68515-49-1)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Diisononyl phthalate (DINP) (CAS No.: 28553-12-0, 68515-48-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016 modified, analysis was performed by IC.	mg/kg	20	n.d.	-
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Iodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016, analysis was performed by IC.	mg/kg	50	n.d.	-
Short Chain Chlorinated Paraffins(C10-C13) (SCCP) (CAS No.: 85535-84-8)	With reference to ISO 18219-1: 2021, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
Polyvinyl chloride (PVC)	With reference to ASTM E1252: 2021, analysis was performed by FT-IR and Flame Test.	**	-	Negative	-
Arsenic (As) (CAS No.: 7440-38-2)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result No.1	Limit
Persistent, Bioaccumulative, and Toxic (PBT) Chemicals					
Decabromodiphenyl ether (DecaBDE) (CAS No.: 1163-19-5)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	1000 / N/A(*3)
Phenol, isopropylated, phosphate (3:1) (PIP 3:1) (CAS No.: 68937-41-7)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	1000 / N/A(*1)
2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP) (CAS No.: 732-26-3)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	3000 / N/A(*2)
Pentachlorothiophenol (PCTP) (CAS No.: 133-49-3)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	10000
Hexachlorobutadiene (HCBD) (CAS No.: 87-68-3)	With reference to US EPA 3550C: 2007, analysis was performed by GC/MS.	mg/kg	5	n.d.	Prohibited
High Priority List Chemicals					
Methylene Chloride (CAS No.: 75-09-2)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	1000 / N/A(*4)
1-Bromopropane (CAS No.: 106-94-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α- HBCDD, β- HBCDD, γ- HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.	mg/kg	20	n.d.	-
Asbestos					
Actinolite (CAS No.: 77536-66-4)	With reference to EPA 600/R-93/116: 1993, analysis was performed by Stereo Microscope (SM), Dispersion Staining Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer (XRD).	-	-	Negative	Prohibited / N/A(*5)
Amosite (CAS No.: 12172-73-5)		-	-	Negative	Prohibited / N/A(*5)
Anthophyllite (CAS No.: 77536-67-5)		-	-	Negative	Prohibited / N/A(*5)
Chrysotile (CAS No.: 12001-29-5)		-	-	Negative	Prohibited / N/A(*5)
Crocidolite (CAS No.: 12001-28-4)		-	-	Negative	Prohibited / N/A(*5)
Tremolite (CAS No.: 77536-68-6)		-	-	Negative	Prohibited / N/A(*5)

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Carbon tetrachloride (CAS No.: 56-23-5)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	Prohibited / N/A(*8)
1,4-Dioxane (CAS No.: 123-91-1)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
1-methyl-2-pyrrolidone (CAS No.: 872-50-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
Perchloroethylene (CAS No.: 127-18-4)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	1000 / N/A(*7)
Trichloroethylene (CAS No.: 79-01-6)	With reference to US EPA 5021A: 2014, analysis was performed by GC/MS.	mg/kg	1	n.d.	1000 / N/A(*6)
Pigment Violet 29 (CAS No.: 81-33-4)	With reference to US EPA 3550C: 2007, analysis was performed by LC/DAD.	mg/kg	50	n.d.	-
Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	With reference to RSTS-E&E-121, analysis was performed by LC/MS.	mg/kg	10	n.d.	-
Medium Chain Chlorinated Paraffins(C14-C17) (MCCP) (CAS No.: 85535-85-9)	With reference to ISO 18219-2: 2021, analysis was performed by GC/MS.	mg/kg	50	n.d.	-
PFAS					
PFHxA and its salts					
Perfluorohexane acid and its salts (PFHxA and its salts) (CAS No.: 307-24-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFHxA related compounds					
1H,1H,2H,2H-Perfluoro-1-octanol (6:2FTOH) (CAS No.: 647-42-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorooctylacrylate (6:2FTA) (CAS No.: 17527-29-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMAC) (CAS No.: 2144-53-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
1H,1H,2H,2H-Perfluorooctanesulphonic acid and its salts (6:2 FTS and its salts) (CAS No.: 27619-97-2 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1,1,1,2,2,3,3,4,4,5,5,6,6-tridecafluoro-8-iodooctane (6:2 FTI) (CAS No.: 2043-57-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluorohexyl iodide (PFHxI) (CAS No.: 355-43-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
n-(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl)iodoacetamide (CAS No.: 852527-50-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorooctyl triethoxysilane (POTS) (CAS No.: 51851-37-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorooctyltrichlorosilane (CAS No.: 78560-45-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorooctyltrimethoxysilane (CAS No.: 85857-16-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.				
Mono[2-(perfluorohexyl)ethyl] Phosphate and its salts (6:2 monoPAP and its salts) (CAS No.: 57678-01-0 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
2-Iodo-1H,1H,1H,2H,3H,3H-perfluorononane (CAS No.: 38550-34-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
N-[3-(dimethylamino)propyl]-3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctanesulphonamide N-oxide (CAS No.: 80475-32-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Thiocyanic acid, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl ester (CAS No.: 26650-09-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
2H,2H,3H,3H-Perfluorononanoic acid (6:3 FTCA) (CAS No.: 27854-30-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorooctanethiol (6:2 FTSH) (CAS No.: 34451-26-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
1H,1H,2H,2H-Perfluorooctyldimethylchlorosilane (6:2 FTSiMe2Cl) (CAS No.: 102488-47-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
1-Iodo-1H,1H-Perfluoroheptane (6:1 FTI) (CAS No.: 212563-43-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
3-(Perfluorohexyl)propyl iodide (6:3 FTI) (CAS No.: 89889-20-3)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
1H,1H,2H,2H-Perfluorooctanephosphonic acid and its salts (6:2 FTPA and its salts) (CAS No.: 252237-40-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H-perfluorohexan-1-ol (5:1 FTOH) (CAS No.: 423-46-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.2	n.d.	-
1H,1H-perfluoro-1-heptanol (6:1 FTOH) (CAS No.: 375-82-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.2	n.d.	-
3-(perfluorohexyl)propanol (6:3 FTOH) (CAS No.: 80806-68-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
3,3,4,4,5,5,6,6,7,7,7-undecafluoro-2-heptanol (CAS No.: 914637-05-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.2	n.d.	-
1-(perfluorohexyl)octane (CAS No.: 133331-77-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
1H,1H-Perfluoroheptylamine (6:1 FTNH2) (CAS No.: 423-49-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
Perfluorohexyl ethylene (PFHxE) (CAS No.: 25291-17-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
PFHxS and its salts					
Perfluorohexane sulfonate and its salts (PFHxS and its salts) (CAS No.: 355-46-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFHxS related compounds					
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA) (CAS No.: 68259-15-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorohexane sulfonamide (PFHxSA) (CAS No.: 41997-13-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
N-[3-(dimethylamino)propyl]tridecafluorohexanesulphonamide (N-AP-FHxSA) (CAS No.: 50598-28-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
2-[Methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl acrylate (N-MeFHSEA) (CAS No.: 67584-57-0)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
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 (CAS No.: 67584-61-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
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 (CAS No.: 67906-70-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-N-methyl-(MeFHxSE) (CAS No.: 68555-75-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Glycine, N-ethyl-N-[(1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluorohexyl)sulfonyl] and its salts (EtFHxSAA and its salts) (CAS No.: 68957-32-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFOS and its salts					
Perfluorooctane sulfonates and its salts (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFOS related compounds					
N-ethylperfluoro-1-octanesulfonamide (EtFOSA) (CAS No.: 4151-50-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
N-Methyl-Perfluoroctanesulfonamide (N-Me-FOSA) (CAS No.: 31506-32-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
N-Ethyl-Perfluoroctanesulfonamidoethanol (N-Et-FOSE alcohol) (CAS No.: 1691-99-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
N-Methyl-Perfluoroctanesulfonamidoethanol (N-Me-FOSE alcohol) (CAS No.: 24448-09-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoroctanesulfonamide and its salts (PFOSA and its salts) (CAS No.: 754-91-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result No.1	Limit
PFOA and its salts					
Perfluorooctanoic acid and its salts (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
PFOA related compounds					
Methyl perfluorooctanoate (Me-PFOA) (CAS No.: 376-27-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Ethyl perfluorooctanoate (Et-PFOA) (CAS No.: 3108-24-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluoro-1-iodooctane (PFOI) (CAS No.: 507-63-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
3-Perfluoroheptyl propanoic acid (7:3 FTCA) (CAS No.: 812-70-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Mono-[2-(perfluorooctyl)ethyl]phosphate and its salts (8:2 monoPAP and its salts) (CAS No.: 57678-03-2 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecanesulfonic acid and its salts (8:2 FTS and its salts) (CAS No.: 39108-34-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH) (CAS No.: 678-39-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA) (CAS No.: 27905-45-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA) (CAS No.: 1996-88-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
2H,2H-Perfluorodecane acid and its salts (H2PFDA and its salts) (CAS No.: 27854-31-5 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluorodecyl iodide (8_2 FTI) (CAS No.: 2043-53-0)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyltriethoxysilane (8:2 FTSi(OC2H5)3) (CAS No.: 101947-16-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
2H,2H,3H,3H-Perfluoroundecanoic Acid and its salts (4HPFUnA and its salts) (CAS No.: 34598-33-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H-Heptadecafluoro-1-decene (PFDE) (CAS No.: 21652-58-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Bis(1H,1H,2H,2H-Perfluorodecyl)phosphate and its salts (8_2diPAP and its salts) (CAS No.: 678-41-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
C9-C20 PFCAs its salts and related compounds					
Mono-[2-(perfluorooctyl)ethyl]phosphate and its salts (8:2 monoPAP and its salts) (CAS No.: 57678-03-2 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecanesulfonic acid and its salts (8:2 FTS and its salts) (CAS No.: 39108-34-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH) (CAS No.: 678-39-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.1	n.d.	-

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200 BAY STREET, ROYAL BANK PLAZA, SUITE 1600, SOUTH TOWER, P.O. BOX 70, TORONTO, ONTARIO, M5J 2K2, CANADA

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA) (CAS No.: 27905-45-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA) (CAS No.: 1996-88-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
2H,2H-Perfluorodecane acid and its salts (H2PFDA and its salts) (CAS No.: 27854-31-5 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluorodecyl iodide (8_2 FTI) (CAS No.: 2043-53-0)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyltriethoxysilane (8:2 FTSi(OC2H5)3) (CAS No.: 101947-16-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
2H,2H,3H,3H-Perfluoroundecanoic Acid and its salts (4HPFUnA and its salts) (CAS No.: 34598-33-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H-Heptadecafluoro-1-decene (PFDE) (CAS No.: 21652-58-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Bis(1H,1H,2H,2H-Perfluorodecyl)phosphate and its salts (8_2diPAP and its salts) (CAS No.: 678-41-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorononan-1-oic acid and its salts (PFNA and its salts) (CAS No.: 375-95-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA) (CAS No.: 172155-07-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-

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200 BAY STREET, ROYAL BANK PLAZA, SUITE 1600, SOUTH TOWER, P.O. BOX 70, TORONTO, ONTARIO, M5J 2K2, CANADA

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Perfluorodecane acid and its salts (PFDA and its salts) (CAS No.: 335-76-2 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoroundecanoic acid and its salts (PFUnDA and its salts) (CAS No.: 2058-94-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorododecanoic acid and its salts (PFDoDA and its salts) (CAS No.: 307-55-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorodecane sulfonate and its salts (PFDS and its salts) (CAS No.: 335-77-3 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Pentacosafluorotridecanoic acid and its salts (PFTrDA and its salts) (CAS No.: 72629-94-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorotetradecanoic acid and its salts (PFTDA and its salts) (CAS No.: 376-06-7 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2FTOH) (CAS No.: 865-86-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorododecylacrylate (10:2FTA) (CAS No.: 17741-60-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA) (CAS No.: 2144-54-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH) (CAS No.: 39239-77-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorododecane sulfonic acid and its salts (10:2 FTS and its salts) (CAS No.: 120226-60-0 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-

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200 BAY STREET, ROYAL BANK PLAZA, SUITE 1600, SOUTH TOWER, P.O. BOX 70, TORONTO, ONTARIO, M5J 2K2, CANADA

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI) (CAS No.: 2043-54-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI) (CAS No.: 30046-31-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluorononane sulfonic acid and its salts (PFNS and its salts) (CAS No.: 68259-12-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoroundecane sulfonic acid and its salts (PFUnDS and its salts) (CAS No.: 749786-16-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorododecane sulfonic acid and its salts (PFDoDS and its salts) (CAS No.: 79780-39-5 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorotridecane sulfonic acid and its salts (PFTrDS and its salts) (CAS No.: 791563-89-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
10:2 Fluortelomerphosphatediester and its salts (10:2 diPAP and its salts) (CAS No.: 1895-26-7 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
Perfluorododecyl iodide (PFDoDI) (CAS No.: 307-60-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluorodecyl iodide (PFDI) (CAS No.: 423-62-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
10:2 Fluortelomerphosphatemonoester (10:2 monoPAP and its salts) (CAS No.: 57678-05-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
Perfluoropentadecanoic acid and its salts (PFPeDA and its salts, C15) (CAS No.: 141074-63-7 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Perfluorohexadecanoic acid and its salts (PFHxDA and its salts, C16) (CAS No.: 67905-19-5 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorooctadecanoic acid and its salts (PFODA and its salts, C18) (CAS No.: 16517-11-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Other PFAS					
Trifluoroacetic acid and its salts (TFA and its salts) (CAS No.: 76-05-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	1	n.d.	-
Perfluorobutane acid and its salts (PFBA and its salts) (CAS No.: 375-22-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorobutane sulfonate and its salts (PFBS and its salts) (CAS No.: 375-73-5 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorobutane sulfon amides (CAS No.: 30334-69-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
1,1,2,2,3,3,4,4,4-nonafluoro-N-(2-hydroxyethyl)-N-methylbutane-1-sulphonamide (PFBS-NC3H8O) (CAS No.: 34454-97-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluorohexyl methacrylate (4:2 FTMA) (CAS No.: 1799-84-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluoropentane acid and its salts (PFPA and its salts) (CAS No.: 2706-90-3 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoroheptane acid and its salts (PFHpA and its salts) (CAS No.: 375-85-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
7H-Dodecanefluoroheptane acid and its salts (HPFHpA and its salts) (CAS No.: 1546-95-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Perfluoroheptane sulfonate and its salts (PFHpS and its salts) (CAS No.: 375-92-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoro-3-methoxypropanoic acid (PFMPA) (CAS No.: 377-73-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoro-4-methoxybutanoic acid (PFMBA) (CAS No.: 863090-89-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) (CAS No.: 151772-58-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
4,8-Dioxa-3H-perfluorononanoic acid and its salts (ADONA and its salts) (CAS No.: 919005-14-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluoro-1-hexanol (4:2FTOH) (CAS No.: 2043-47-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS and LC/MS/MS.	mg/kg	0.4	n.d.	-
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acide and its salts (HFPO-DA and its salts) (CAS No.: 13252-13-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Perfluorohexanesulfonic acid and its salts (4:2 FTS and its salts) (CAS No.: 757124-72-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluorooctane sulfonamidoacetic acid and its salts (FOSAA and its salts) (CAS No.: 2806-24-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
N-methylperfluorooctane sulfonamidoacetic acid and its salts (N-MeFOSAA and its salts) (CAS No.: 2355-31-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
N-ethylperfluorooctane sulfonamidoacetic acid and its salts (N-EtFOSAA and its salts) (CAS No.: 2991-50-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoropentane sulfonic acid and its salts (PFPeS and its salts) (CAS No.: 2706-91-4 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
3-Perfluoropropyl propanoic acid and its salts (3:3 FTCA and its salts) (CAS No.: 356-02-5 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
2-Perfluorohexyl ethanoic acid (6:2 FTCA) (CAS No.: 53826-12-3)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
3-Perfluoropentyl propanoic acid and its salts (5:3 FTCA and its salts) (CAS No.: 914637-49-3 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoro(2-ethoxyethane)sulfonic acid and its salts (PFEESA and its salts) (CAS No.: 113507-82-7 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid and its salts (9Cl-PF3ONS and its salts) (CAS No.: 756426-58-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid and its salts (11Cl-PF3OUdS and its salts) (CAS No.: 763051-92-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
2-(N-ethylperfluorooctanesulfamido)ethyl acrylate (EtFOSAC) (CAS No.: 423-82-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
11H-Perfluoroundecanoic acid and its salts (11H-PFUnDA and its salts) (CAS No.: 1765-48-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Pentafluoropropionate acid and its salts (PFPrA and its salts) (CAS No.: 422-64-0 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyltrichlorosilane (CAS No.: 78560-44-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
1H,1H,2H,2H-Perfluorodecyltrimethoxysilane (CAS No.: 83048-65-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.				
2H-Perfluoro-2-decenoic acid (8:2 FTUCA) (CAS No.: 70887-84-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
2H-Perfluoro-2-octenoic acid (6:2 FTUCA) (CAS No.: 70887-88-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
2H-Perfluoro-2-dodecenoic acid (10:2 FTUCA) (CAS No.: 70887-94-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
2-Perfluorodecyl ethanoic acid (10:2 FTCA) (CAS No.: 53826-13-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
6:6 Perfluorophosphinic acid and its salts (6:6 PFPi and its salts) (CAS No.: 40143-77-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
6:8 Perfluorophosphinic acid (6:8 PFPi) (CAS No.: 610800-34-5)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
8:8 Perfluorophosphinic acid and its salts (8:8 PFPi and its salts) (CAS No.: 40143-79-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H,2H,2H-Heptadecafluorodecyl acetate (8:2 FTOAc) (CAS No.: 37858-04-1)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafluoro-, 1-acetate (10:2 FTOAc) (CAS No.: 37858-05-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluoro-2,5-dimethyl-3,6-dioxanonanoic acid and its salts (HFPO-TA and its salts) (CAS No.: 13252-14-7 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.2	n.d.	-
Pentafluoroethane sulfonic acid and its salts (PFEtS and its salts) (CAS No.: 354-88-1 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Bis[2-(perfluorohexyl)ethyl] Phosphate and its salts (6:2 diPAP and its salts) (CAS No.: 57677-95-9 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Trifluoromethanesulfonimide and its salts (TFSI and its salts) (CAS No.: 82113-65-3 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Trifluoromethane sulfonic acid and its salts (TFMS and its salts) (CAS No.: 1493-13-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Perfluoropropate sulfonic acid and its salts (PFPrS and its salts) (CAS No.: 423-41-6 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1-pefluoroheptyl ethanol (7:2 secondary) (7:2s FTOH) (CAS No.: 24015-83-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
4:2 Fluorotelomer iodide (4:2 FTI) (CAS No.: 2043-55-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
Perfluoroheptane-1-sulfinic acid and its salts (PFHpSi and its salts) (CAS No.: 769067-51-8 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Perfluorooctylphosphoic acid and its salts (PFOPA and its salts) (CAS No.: 40143-78-0 and its salts)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
1H,1H-Perfluorooctylamine (CAS No.: 307-29-9)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
Perfluoroheptanamide (CAS No.: 2358-22-7)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-
Perfluorobutyramide (CAS No.: 662-50-0)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
1H,1H,2H,2H-Nonafluorohexyl acrylate (4:2 FTA) (CAS No.: 52591-27-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.2	n.d.	-
N-methylperfluoro-1-butanesulfonamide (CAS No.: 68298-12-4)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
N-Ethyl-1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-1-hexanesulfonamide (CAS No.: 34455-03-3)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.	-
Ethyl perfluoroisobutyl ether and its isomers (CAS No.: 163702-05-4 and others)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	10	n.d.	-
1,1,1,2,2,3,4,5,5,5,-decafluoro-Pentane (CAS No.: 138495-42-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	10	n.d.	-
Trifluorotoluene (CAS No.: 98-08-8)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	1	n.d.	-
1-Chloro-4 (Trifluoromethyl)Benzene (CAS No.: 98-56-6)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	1	n.d.	-

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Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
1H,1H,2H,2H-Perfluorodecylmethyldichlorosilane (CAS No.: 3102-79-2)	Modified EN 17681-1: 2022 & EN 17681-2: 2022, analysis was performed by GC/MS.	mg/kg	0.1	n.d.	-

Note :

1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected (Less than MDL)
4. "-" = Not Regulated
5. **= Qualitative analysis (No Unit)
6. Negative = Undetectable ; Positive = Detectable
7. Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".
8. 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. According to this rule, the judgement of conformity is based on the comparing test results with limits.
9. Detail explanation of the regulation is available at the following link. https://www.ecfr.gov/current/title-40/chapter-I/subchapter-R/part-751?toc=1
10. N/A(*1) : The submitted sample is exempted from the regulated scope if it is anyone of the following :
    - Hydraulic fluids for aviation or military
    - Lubricants and grease
    - New and replacement parts for motor and aerospace vehicles
    - Manufacture of cyanoacrylate adhesives in closed systems
    - Specialized engine air filters for locomotive and marine applications
    - Plastic for recycling from PIP (3:1)-containing products or articles
    - Finished products or articles made of plastic recycled from PIP (3:1)-containing products or articles
    - Distribution in commerce of PIP (3:1)-containing articles before October 31, 2026
    - Circuit boards and wire harnesses, including but not limited to terminal and fuse covers, cable sleeves, casings, connectors, and tapes
    - Articles that contain PIP (3:1), and where PIP (3:1) has not been newly added, for the purpose of repair or maintenance
    - New manufacturing equipment, including in the semiconductor industry, for new heating, ventilation, air-conditioning, refrigeration, and water-heating equipment, new power generating equipment, new laboratory equipment, new commercial electronic equipment

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11. N/A(*2) : The submitted sample is exempted from the regulated scope if it is not oil and lubricant additives.
12. N/A(*3) : The submitted sample is exempted from the regulated scope if it is anyone of the following : Exempts processing and distribution for recycling of DecaBDE-containing plastic from products or articles and DecaBDE-containing products or articles made from such recycled plastic.
13. N/A(*4) : The limit only applies to chemical or mixture other than consumer paint and coating removal, not applies to article.
14. N/A(*5) : The limit only applies to chrysotile asbestos diaphragms in the chlor-alkali industry, sheet gaskets for chemical production, automotive brakes and linings, and other gaskets
15. N/A(*6) : The limit applies to industrial or consumer products, not applies to article.
16. N/A(*7) : The limit applies to industrial or consumer products, not applies to article.
17. N/A(*8) : The limit does not apply to trace quantities of unintentionally present residue.
18. (#2) =
    a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm². The sample coating is considered to contain Cr(VI).
    b. The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 µg/cm²). The coating is considered a non-Cr(VI) based coating
    c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.

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PFAS Remark：

The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.)

Group Name	Substance Name	CAS No.
TFA, its salts	Trifluoroacetic acid (TFA)	76-05-1
	Sodium trifluoroacetate (TFA-Na)	2923-18-4
	Thallium(III) trifluoroacetate (TFA-Tl)	23586-53-0
	Lithium Trifluoroacetate (TFA-Li)	2923-17-3
	Silver trifluoroacetate (TFA-Ag)	2966-50-9
	Cesium Trifluoroacetate (TFA-Cs)	21907-50-6
	Potassium trifluoroacetate (TFA-K)	2923-16-2
	Ammoniumtrifluoroacetate (TFA-NH4)	3336-58-1
	Mercury(II) trifluoroacetate (TFA-Hg)	13257-51-7
	Palladium(II) trifluoroacetate (TFA-Pd)	42196-31-6
	Trifluoroacetate / Trifluoroacetic acid anion (TFA anion)	14477-72-6
	Dimethyl[(trifluoroacetyl)oxy]sulfanium trifluoroacetate	57738-66-6
	Aluminium tris(trifluoroacetate) (TFA-Al)	36554-89-9
	Barium bis(trifluoroacetate) (TFA-Ba)	60884-92-6
	Erbium tris(trifluoroacetate) (TFA-Er)	70236-99-6
	Indium trifluoroacetate (TFA-In)	36554-90-2
	Lanthanum tris(trifluoroacetate) (TFA-La)	70236-92-9
	Nickel(2+) trifluoroacetate (TFA-Ni)	16083-14-0
	Lead(II) trifluoroacetate (TFA-Pb)	4146-73-0
	Acetic acid, trifluoro-, rhodium(2+) salt (TFA-Rh)	72654-51-4
	Thulium tris(trifluoroacetate) (TFA-Tm)	70237-00-2
	Ytterbium(3+) tris(trifluoroacetate) (TFA-Yb)	87863-62-5
	Zinc bis(trifluoroacetate) (TFA-Zn)	21907-47-1
	Ruthenium(II) 2,2,2-trifluoroacetate (TFA-Ru)	61612-84-8
	Magnesium 2,2,2-trifluoroacetate (TFA-Mg)	123333-72-2
	Copper(2+) trifluoroacetate (TFA-Cu)	123333-88-0
PFBA, its salts	Perfluorobutane acid (PFBA)	375-22-4
	Ammonium perfluorobutanoate (PFBA-NH_4)	10495-86-0
	Sodium perfluorobutanoate (PFBA-Na)	2218-54-4

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Group Name	Substance Name	CAS No.
PFBA, its salts	Potassium heptafluorobutanoate (PFBA-K)	2966-54-3
	Silver perfluorobutanoate (PFBA-Ag)	3794-64-7
	Lithium perfluorobutanoate (PFBA-Li)	4146-76-3
	Heptafluorobutanoic acid-piperazine (1:1)	375-04-2
	Perfluorobutanoate (anion)	45048-62-2
PFBS, its salts & derivatives	Perfluorobutane sulfonate (PFBS)	375-73-5
	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, sodium salt (1:1) (PFBS-Na)	60453-92-1
	Lithium perfluorobutanesulfonate (PFBS-Li)	131651-65-5
	Magnesium perfluorobutanesulfonate (PFBS-Mg)	507453-86-3
	Perfluorobutane Sulfonate K-salt (PFBS-K)	29420-49-3
	Perfluorobutane sulfonyl fluoride (PFBS-F)	375-72-4
	Tetraethylammonium perfluorobutanesulfonate (PFBS-$N(CH_3CH_2)_4$)	25628-08-4
	Triphenylsulfanium perfluorobutane sulfonate (TPS-PFBS)	144317-44-2
	Dimethyl(phenyl)sulfanium perfluorobutane sulfonate	220133-51-7
	Tetrabutyl-phosphonium nonafluoro-butane-1-sulfonate	220689-12-3
	Morpholinium perfluorobutanesulfonate	503155-89-3
	Ammonium 1,1,2,2,3,3,4,4,4-nonafluorobutane-1-sulphonate (PFBS-NH_4)	68259-10-9
	NonafluorobutanesulfonicacidHydrate	59933-66-3
	Nonafluoro-1-butanesulfonyl chloride (PFBS-Cl)	2991-84-6
	Bis(4-tert-butylphenyl)iodonium perfluoro-1-butanesulfonate (PFBS-$I(C_6H_4)_2(C_4H_9)_2$)	194999-85-4
	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
	1-(4-butoxy-1-naphthyl)tetrahydrothiophenium nonafluorobutane-1-sulfonate (PFBS-$SC_{18}H_{23}O$)	209482-18-8
	Tetrabutylammonium nonafluorobutanesulfonate ((PFBS-$N(C_4H_9)_4$))	108427-52-7
	Diphenyliodanium nonafluorobutane-1-sulfonate((PFBS-$I(C_6H_5)_2$))	194999-82-1
	Sulfonium, tris[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	241806-75-7
	Sulfonium, (4-cyclohexylphenyl)diphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	425670-64-0

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Group Name	Substance Name	CAS No.
PFBS, its salts & derivatives	Thiophenium, tetrahydro-1-(1-methyl-1H-indol-3-yl)-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	867373-18-0
	Pyridinium, 1-ethyl-3-methyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	1015420-87-7
	1H-Imidazolium, 1-methyl-3-octyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	905972-83-0
	1H-Imidazolium, 3-hexyl-1-methyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	1001557-05-6
	2-Propanaminium, N,N-dimethyl-N-(1-methylethyl)-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	374571-81-0
	Sulfonium, [4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]phenyl]diphenyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	857285-80-4
	1-Butanaminium, N,N-dibutyl-N-methyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	124472-66-8
	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, zinc salt (2:1) (PFBS-Zn)	502457-69-4
	1-Pentanaminium, N,N,N-tripropyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	56773-55-8
	Perfluorobutanesulfonic acid tetramethylammonium salt (PFBS-$N(CH_3)_4$)	25628-17-5
	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, 1,1'-anhydride	36913-91-4
	Perfluorobutane sulfonate (anion)	45187-15-3
	1-(4-butoxy-1-naphthalenyl)tetrahydrothiophenium - 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate	EC No. 468-770-4
	1-Butanesulfonic acid, 1,1,2,2,3,3,4,4,4-nonafluoro-, compd. with N,N-diethylethanamine (1:1)	182059-38-7
	1-Octanaminium, N-(2-hydroxyethyl)-N,N-dimethyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	334529-55-4
	Pyridinium, 1-hexadecyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	334529-62-3
	Pyridinium, 1-butyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	334529-64-5
	1-Octanaminium, N-methyl-N,N-dioctyl-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	495417-51-1
	Sulfonium, tris(4-methylphenyl)-, 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonate (1:1)	722538-68-3

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Group Name	Substance Name	CAS No.
PFPA, its salts	Perfluoropentane acid (PFPA)	2706-90-3
	Sodium perfluoropentanoate (PFPA-Na)	2706-89-0
	Potasium perfluoropentanoate (PFPA-K)	336-23-2
	Ammonium perfluoropentanoate (PFPA-NH_4)	68259-11-0
	Lithium perfluoropentanoate (PFPA-Li)	198482-22-3
	Silver perfluoropentanoate (PFPA-Ag)	2795-30-4
	Perfluoropentanoate (anion)	45167-47-3
	Pentanoic acid, 2,2,3,3,4,4,5,5,5-nonafluoro-, compd. with phenylmethyl carbamimidothioate (1:1) (PFPeA-$C_8H_{10}N_2S$)	64808-55-5
	Nonafluoropentanoic anhydrid (PFPeAA)	308-28-1
PFHxA, its salts & derivatives	Perfluorohexane acid (PFHxA)	307-24-4
	Ammonium perfluorohexanoate (PFHxA-NH_4)	21615-47-4
	Sodium perfluorohexanoate (PFHxA-Na)	2923-26-4
	Potassium perfluorohexanoate (PFHxA-K)	3109-94-2
	Perfluorohexanoyl fluoride (PFHxA-F)	355-38-4
	Silver perfluorohexanoate (PFHxA-Ag)	336-02-7
	Lithium perfluorohexanoate (PFHxA-Li)	90430-61-8
	Perfluorohexanoic anhydride	308-13-4
	Hexanoic acid, undecafluoro-, compd. with piperazine (2:1) (8Cl,9Cl)	423-47-2
	Perfluorohexanoate (anion)	92612-52-7
	Perfluorohexanoyl chloride (PFHxA-Cl)	335-53-5
	Hexanoic acid, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-, compd. with 1-hexanamine (1:1) (PFHxA-$C_6H_{15}N$)	565225-91-4
	Hexanoic acid, 2,2,3,3,4,4,5,5,6,6,6-undecafluoro-, compd. with 1-phenylpiperazine (1:1) (PFHxA-$C_{10}H_{14}N_2$)	985-60-4
6:2 FTS, its salts	1H,1H,2H,2H-Perfluorooctanesulphonic acid (6:2 FTS)	27619-97-2
	Sodium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-Na)	27619-94-9
	Potassium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-K)	59587-38-1
	Ammonium 1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS-NH_4)	59587-39-2
	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
	3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctane-1-sulfonate (6:2 FTS(anion))	425670-75-3

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Group Name	Substance Name	CAS No.
6:2 monoPAP, its salts	Mono[2-(perfluorohexyl)ethyl] Phosphate (6:2 monoPAP)	57678-01-0
	Diammonium 6:2 fluorotelomer phosphate monoester (6:2 monoPAP-NH_4NH_4)	1000852-37-8
6:2 FTPA, its salts	1H,1H,2H,2H-Perfluorooctanephosphonic acid (6:2 FTPA)	252237-40-4
	Sodium hydrogen ((perfluorohexyl)ethyl)phosphonate (Cheminox FHP 2OH-Na(PFHEPA-Na))	1189052-95-6
PFHxS, its salts & derivatives	Perfluorohexane sulfonate (PFHxS)	355-46-4
	Perfluorohexanesulfonate Na-salt (PFHxS-Na)	82382-12-5
	Perfluorohexanesulfonate K-salt (PFHxS-K)	3871-99-6
	Ammonium perfluorohexanesulfonate (PFHxS-NH_4)	68259-08-5
	Perfluorohexanesulfonate Li-salt (PFHxS-Li)	55120-77-9
	Perfluorohexanesulfonate Zn-salt (PFHxS-Zn)	70136-72-0
	Perflurohexane sulphonyl fluoride (PFHxS-F)	423-50-7
	Phosphonium, triphenyl(phenylmethyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1)	1000597-52-3
	N,N,N-tributylbutan-1-aminium tridecafluorohexane-1-sulfonate	108427-54-9
	N,N,N-triethylethanaminium tridecafluorohexane-1-sulfonate (1:1)	108427-55-0
	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. With pyrrolidine (1:1)	1187817-57-7
	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)	1310480-24-0
	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)	1310480-27-3
	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)	1310480-28-4
	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)	1329995-45-0
	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)	1329995-69-8
	Sulfonium, triphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1)	144116-10-9

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Group Name	Substance Name	CAS No.
PFHxS, its salts & derivatives	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)	1462414-59-0
	Iodonium, diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1)	153443-35-7
	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)	189274-31-5
	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)	202189-84-2
	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)	213740-81-9
	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, gallium salt (9CI)	341035-71-0
	Sulfonium, bis(4-methylphenyl)phenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1)	341548-85-4
	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
	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
	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
	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)	421555-73-9
	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 acid	421555-74-0
	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)	425670-70-8
	Tridecafluorohexanesulphonic acid, compound with 2,2'-iminodiethanol (1:1)	70225-16-0
	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with N,N-diethylethanamine (1:1)	72033-41-1

Group Name	Substance Name	CAS No.
PFHxS, its salts & derivatives	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)	866621-50-3
	Sulfonium, (4-methylphenyl)diphenyl-, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-1-hexanesulfonate (1:1)	910606-39-2
	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)	911027-68-4
	1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, cesium salt (1:1) (PFHxS-CsH)	92011-17-1
	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)	928049-42-7
	Perfluorohexylsulfonyl chloride (PFHxS-Cl)	55591-23-6
	Sulfonium, [4-[(2-methyl-1-oxo-2-propenyl)oxy]phenyl]diphenyl-, salt with1,1,2,2,3,3,4,4,5,5,6,6,6-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	911027-69-5
	Perfluorohexane sulfonate (anion)	108427-53-8
	Tetrabutylphosphonium tridecafluorohexane-1-sulfonate (PFHxS-P (C4H9)4))	2310194-12-6
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
	Potassium N-ethyl-n-[(tridecafluorohexyl)sulfonyl]glycinate (EtFHxSAA-K)	67584-53-6
	Sodium N-ethyl-N-((tridecafluorohexyl)sulphonyl)glycinate (EtFHxSAA-Na)	68555-70-4
PFHpA, its salts	Perfluoroheptane acid (PFHpA)	375-85-9
	Sodium perfluoroheptanoate (PFHpA-Na)	20109-59-5
	Potassium perfluoroheptanoate (PFHpA-K)	21049-36-5
	Ammonium perfluoroheptanoate (PFHpA-NH_4)	6130-43-4
	Cesium perfluoroheptanoate (PFHpA-Cs)	171198-24-6
	Silver perfluoroheptanoate (PFHpA-Ag)	424-05-5
	Lithium perfluoroheptanoate (PFHpA-Li)	60871-90-1
	Perflluoroheptanoate (anion)	120885-29-2

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Group Name	Substance Name	CAS No.
HPFHpA, its salts	7H-Dodecanefluoroheptane acid (HPFHpA)	1546-95-8
	Sodium 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptanoate (HPFHpA-Na)	2264-25-7
	Ammonium 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptanoate (HPFHpA-NH_4)	376-34-1
	7H-Perfluoroheptanoate (HPFHpA(anion))	69681-35-2
PFHpS, its salts	Perfluoroheptane sulfonate (PFHpS)	375-92-8
	Perfluoroheptanesulfonate Na-salt (PFHpS-Na)	21934-50-9
	Potassium perfluoroheptanesulfonate (PFHpS-K)	60270-55-5
	Ammonium perfluoroheptanesulfonate (PFHpS-NH_4)	68259-07-4
	Lithium perfluoroheptanesulfonate (PFHpS-Li)	117806-54-9
	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
	Perfluoroheptane sulfonate (anion)	146689-46-5
	Triethylammonium perfluoroheptane sulfonate	72033-40-0
	Tetraethylammonium perfluoroheptane sulfonate	439863-97-5
	1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, anhydride (9CI) (PFHpSA)	140429-92-1
PFOS, its salts & derivatives	Perfluorooctane sulfonates (PFOS)	1763-23-1
	Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH_4)	29081-56-9
	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(C2H4OH)2)	70225-14-8
	Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-$N(C_2H_5)_4$)	56773-42-3
	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-DDA)	251099-16-8
	TetrabutylAmmonium perfluorooctanesulfonate (PFOS-$N(C_4H_9)_4$)	111873-33-7
	Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
	Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctanesulfonate	71463-74-6

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Group Name	Substance Name	CAS No.
PFOS, its salts & derivatives	Perfluorooctanesulfonate (anion)	45298-90-6
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with N,N-diethylethanamine (1:1) (PFOS-N(C_2H_5)$_3$)	54439-46-2
	Methanaminium, N,N,N-trimethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1) (PFOS-N(CH_3)$_4$)	56773-44-5
	1-Pentanaminium, N,N,N-tripropyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1) (PFOS-N(C_3H_7)$_3$(C_5H_{11}))	56773-56-9
	1-Butanaminium, N,N-dibutyl-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1) (PFOS-N(C_4H_9)$_3$(CH_3))	124472-68-0
	Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	213740-80-8
	Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	258341-99-0
	Pyridinium, 1-hexadecyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	334529-63-4
	1-Decanaminium, N,N,N-triethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	773895-92-4
	Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P(C_4H_9)$_4$))	2185049-59-4
	Perfluorooctanesulfonic acid diethylamine salt (PFOS-$C_4H_{11}N$)	2205029-08-7
	Heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl}azanium perfluorooctanesulfonate (PFOS-$C_{15}H_{30}NO_2$)	1203998-97-3
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, 1,1'-anhydride (PFOSAN)	423-92-7
PFOSA, its salts	Perfluorooctanesulfonamide (PFOSA)	754-91-6
	Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
	Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
	Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
	Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH_4)	76752-72-2

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Group Name	Substance Name	CAS No.
PFOSA, its salts	heptadecafluorooctane-1-sulphonamide, compound with triethylamine(1:1) (PFOSA-$C_6H_{15}N$)	76752-82-4
PFOA, its salts & derivatives	Perfluorooctanoic acid (PFOA)	335-67-1
	Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	Silver perfluorooctanote (PFOA-Ag)	335-93-3
	Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
	Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
	Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
	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
	Pentadecafluorooctanoic acid--piperazine (2/1)PFOA-$NH(C_4H_{10}N)$	423-52-9
	Pentadecafluorooctanoate (anion)	45285-51-6
	Perfluorooctanoic Anhydride	33496-48-9
	Ethanaminium, N,N,N-triethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)	98241-25-9
	Tetramethylammoniumperfluoroctanoat	32609-65-7
	1-Propanaminium, N,N,N-tripropyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)	277749-00-5
	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, potassium salt, hydrate (1:1:2) (PFOA-$K(H_2O)_2$)	98065-31-7
	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, compd. with ethanamine (1:1) (PFOA-C_2H_7N)	1376936-03-6
	Octanoic acid, pentadecafluoro-, compd. with pyridine (1:1) (9CI) (PFOA-C_5H_5N)	95658-47-2
	Pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA-$C_{10}H_{14}N_2$)	1514-68-7
	1-Octanaminium, N,N,N-trimethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1) (PFOA- $C_{11}H_{26}N$)	927835-01-6
8:2 monoPAP, its salts	Mono-[2-(perfluorooctyl)ethyl]phosphate (8:2 monoPAP)	57678-03-2
	8:2 Fluorotelomer diammonium phosphate	93857-44-4
	Disodium 1H,1H,2H,2H-perfluorodecylphosphate	438237-75-3
	Ammonium bis[2-(perfluorohexyl)ethyl] phosphate	1764-95-0

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Group Name	Substance Name	CAS No.
8:2 monoPAP, its salts	3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooctanol phosphate ammonium salt	92401-44-0
	Sodium 1H,1H,2H,2H-perfluorooctylphosphate	144965-22-0
	Monopotassium monoperfluorohexyl ethylphosphate	150033-28-6
	Ammonium 2-(perfluorohexyl)ethyl hydrogen phosphate	2353-52-8
8:2 FTS, its salts	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4
	1H,1H,2H,2H-Perfluorodencane sulfonate acid Potassium salt (8:2 FTS-K)	438237-73-1
	1H,1H,2H,2H-Perfluorodencane sulfonate acid Ammonium salt (8:2 FTS-NH_4)	149724-40-3
	1H,1H,2H,2H-Perfluorodencane sulfonate acid Sodium salt (8:2 FTS-Na)	27619-96-1
	8: 2 Fluorotelomer sulfonate (anion) (8:2 FTS(anion))	481071-78-7
H2PFDA, its salts	2H,2H-Perfluorodecane acid (H2PFDA)	27854-31-5
	Tetrabutylphosphonium 2H,2H-Perfluorodecanoate	882489-14-7
4HPFUnA, its salts	2H,2H,3H,3H-Perfluoroundecanoic Acid (4HPFUnA)	34598-33-9
	Potassium 2H,2H,3H,3H-Perfluoroundecanoate (H4PFUnA-K)	83310-58-1
	Lithium 3-(perfluorooctyl)propanoate (H4PFUnA-Li)	67304-23-8
8:2diPAP, its salts	Bis(1H,1H,2H,2H-Perfluorodecyl)phosphate (8:2diPAP)	678-41-1
	Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-Na)	114519-85-6
	Bis(2-hydroxyethyl)ammonium bis((perfluorooctyl)ethyl) hydrogen phosphate	57677-97-1
	Bis[2-(perfluorooctyl)ethyl] phosphate ammonium salt (8:2diPAP-NH_4)	93776-20-6
	8:2 Fluorotelomer phosphate diester ion	1411713-91-1
PFNA, its salts	Perfluorononan-1-oic acid (PFNA)	375-95-1
	Perfluorononanoate Na-salt (PFNA-Na)	21049-39-8
	Perfluorononanoate ammounium salt (APFN)	4149-60-4
	Potassium perfluorononanoate (PFNA-K)	21049-38-7
	Perfluorononanoate Li-Salt (PFNA-Li)	60871-92-3
	Silver perfluorononanoate (PFNA-Ag)	7358-16-9
	Methanaminium perfluorononanoate (PFNA-$NH_3(CH_3)$)	77032-23-6
	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-$NH_2(C_2H_5)_2$)	77032-27-0

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Group Name	Substance Name	CAS No.
PFNA, its salts	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
	Nonanoic acid, heptadecafluoro-, compd. with N,N-diethylethanamine (1:1) (9CI) (PFNA-$NH(C_2H_5)_3$)	327176-80-7
	Nonanoic acid, heptadecafluoro-, compd. with piperidine (1:1) (9CI) (PFNA-$NH_2(C_5H_{10})$)	95682-66-9
	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-$NH_3(C_6H_5)$)	95682-67-0
	Nonanoic acid, heptadecafluoro-, compd. with cyclohexanamine (1:1) (9CI) (PFNA-$NH_3(C_6H_{11})$)	328531-06-2
	Perfluorononanoate (anion)	72007-68-2
	4-[(6-Methoxy-3-pyridazinyl)sulfamoyl]anilinium heptadecafluorononanoate (PFNA-$C_{11}H_{12}N_4O_3S$)	298703-33-0
	Perfluorononanoic anhydride (PFNAA)	228407-54-3
PFDA, its salts	Perfluorodecane acid (PFDA)	335-76-2
	Perfluorodecanoate Na-salt (PFDA-Na)	3830-45-3
	Perfluorodecanoate ammonium salt (APFDA)	3108-42-7
	Potassium perfluorodecanoate (PFDA-K*)	51604-85-4
	Silver perfluorodecanoate (PFDA-Ag)	5784-82-7
	Lithium perfluorodecanoate (PFDA-Li)	84743-32-8
	Perfluorodecanoate (anion)	73829-36-4
	Perfluorodecanoic anhydride (PFDAA)	942199-24-8
PFUnDA, its salts	Perfluoroundecanoic acid (PFUnDA)	2058-94-8
	Ammonium perfluoroundecanoate (PFUnDA-NH_4)	4234-23-5
	Perfluoroundecanoic acid sodium salt (PFUnDA-Na)	60871-96-7
	Potassium perfluoroundecanoate (PFUnDA-K)	30377-53-8
	Calcium perfluoroundecanoate (PFUnDA-Ca)	97163-17-2
	Perfluoroundecanoate (anion)	196859-54-8
PFDoDA, its salts	Perfluorododecanoic acid (PFDoDA)	307-55-1
	Ammonium perfluorododecanoate (APFDoDA)	3793-74-6
	Perfluorododecanoate (anion)	171978-95-3
PFDS, its salts	Perfluorodecane sulfonate (PFDS)	335-77-3
	Perfluorodecanesulfonate Na-salt (PFDS-Na)	2806-15-7
	Perfluorodecanesulfonate K-salt (PFDS-K)	2806-16-8
	Perfluoroaliphatic dean-sulfonate salt of NH_4 (PFDS-NH_4)	67906-42-7
	Perfluorodecane sulfonate (anion)	126105-34-8
	Perfluorodecane sulfonic anhydride (PFDSA)	51667-62-0

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Group Name	Substance Name	CAS No.
PFTrDA, its salts	Pentacosafluorotridecanoic acid (PFTrDA)	72629-94-8
	Ammonium perfluorotridecanoate (PFTrDA-NH_4)	4288-72-6
	Sodium perfluorotridecanoate (PFTrDA-Na)	60872-01-7
	Perfluorotridecanoate (anion)	862374-87-6
PFTDA, its salts	Perfluorotetradecanoic acid (PFTDA)	376-06-7
	Perfluorotetradecanoate (anion)	365971-87-5
10:2 FTS, its salts	1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2 FTS)	120226-60-0
	1H,1H,2H,2H-Perfluorododecane sulfonic acid Sodium Salt (10:2 FTS-Na)	108026-35-3
PFNS, its salts	Perfluorononane sulfonic acid (PFNS)	68259-12-1
	Sodium perfluoro-1-nonanesulfonate (PFNS-Na*)	98789-57-2
	Ammonium nonadecafluorononanesulphonate (PFNS-NH_4)	17202-41-4
	Potassium perfluorononanesulfonate (PFNS-K*)	29359-39-5
	Perfluorononane sulfonate (anion)	474511-07-4
PFUnDS, its salts	Perfluoroundecane sulfonic acid (PFUnDS)	749786-16-1
	Perfluoroundecanesulfonate (anion)	441296-91-9
PFDoDS, its salts	Perfluorododecane sulfonic acid (PFDoDS)	79780-39-5
	Sodium perfluoro-1-dodecanesulfonate (PFDoDS-Na*)	1260224-54-1
	Potassium perfluorododecanesulfonate (PFDoDS-K)	85187-17-3
	Perfluorododecane sulfonate (anion)	343629-43-6
PFTrDS, its salts	Perfluorotridecane sulfonic acid (PFTrDS)	791563-89-8
	Sodium perfluoro-1-tridecanesulfonate (PFTrDS-Na*)	174675-49-1
10:2 diPAP, its salts	10:2 Fluortelomerphosphatediester (10:2 diPAP)	1895-26-7
	bis[3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-henicosafluorododecyl] hydrogen phosphate, compound with 2,2'-iminodiethanol (1:1) (10:2 diPAP-$C_4H_{11}O_2$)	57677-98-2
10:2 monoPAP, its salts	10:2 Fluortelomerphosphatemonoester (10:2 monoPAP)	57678-05-4
	10:2 Fluorotelomer diammonium dihydrogen phosphate	93857-45-5
PFPeDA, its salts	Perfluoropentadecanoic acid (PFPeDA, C15)	141074-63-7
	Nonacosafluoropentadecanoate (PFPeDA (anion))	1214264-29-5
PFHxDA, its salts	Perfluorohexadecanoic acid (PFHxDA, C16)	67905-19-5
	Hentriacontafluorohexadecanoate anion (PFHxDA (anion))	1214264-30-8
PFODA, its salts	Perfluorooctadecanoic acid (PFODA, C18))	16517-11-6
	Perfluorooctadecanoate anion (PFODA (anion))	798556-82-8

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Group Name	Substance Name	CAS No.
ADONA, its salts	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4
	Ammonium 4,8-dioxa-3H-perfluorononanoate (ADONA-NH_4)	958445-44-8
	Sodium 4,8-dioxa-3H-perfluorononanoate (ADONA-Na)	2250081-67-3
HFPO-DA, its salts & derivatives	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acide (HFPO-DA)	13252-13-6
	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-(2R)-	75579-39-4
	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-(2S)-	75579-40-7
	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionicacid, K-salts	67118-55-2
	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionicacid, ammonium salts	62037-80-3
	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-, sodium salt (1:1)	67963-75-1
	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-, ion(1-)	122499-17-6
	Propanoic acid, 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-, compd. with N-propyl-1-propanamine (1:1)	165951-17-7
	Propanoic acid, 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)-, compd. with N,N-diethylethanamine (1:1) (9CI)	165951-18-8
	4-[(6-Methoxy-3-pyridazinyl)sulfamoyl]anilinium 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propanoate	298703-31-8
	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy) propionicacid, its acyl halides	2062-98-8
	Benzoic acid, 2,3,6-triiodo-, (1-methyl-3-piperidinyl)methyl ester, compd. with 2,3,3,3-tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoro propoxy)propanoate (1:1) (HFPO-$C_{14}H_{16}I_3NO_2$)	2412106-69-3
4:2 FTS, its salts	1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	757124-72-4
	1H,1H,2H,2H-perfluorohexane sulfonate acid sodium salt	27619-93-8
	4: 2 Fluorotelomer sulfonate (4:2FTS(anion))	414911-30-1
FOSAA, its salts	Perfluorooctane sulfonamidoacetic acid (FOSAA)	2806-24-8
	N-[(Perfluorooctyl)sulfonyl]glycinate (FOSAA(anion))	909405-47-6
	N-[(Perfluorooctyl)sulfonyl]glycine potassium salt (1:1) (FOSAA-K)	75260-69-4

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Group Name	Substance Name	CAS No.
FOSAA, its salts	N-[(Perfluorooctyl)sulfonyl]glycine sodium salt (1:1) (FOSAA-Na)	115716-87-5
N-MeFOSAA, its salts	N-methylperfluorooctane sulfonamidoacetic acid (N-MeFOSAA)	2355-31-9
	2-(N-Methylperfluorooctanesulfonamido)acetate (N-Me-FOSAA(anion))	909405-48-7
	Potassium N-((heptadecafluorooctyl)sulphonyl)-N-methylglycinate (N-Me-FOSAA-K)	70281-93-5
N-EtFOSAA, its salts	N-ethylperfluorooctane sulfonamidoacetic (N-EtFOSAA)	2991-50-6
	Potassium N-ethyl-N-((heptadecafluorooctyl)sulphonyl)glycinate (N-Et-FOSAA-K)	2991-51-7
	2-(N-Ethyl-perfluorooctanesulfonamido)acetate (N-Et-FOSAA(anion))	909405-49-8
	Ammonium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-NH4)	2991-52-8
	Sodium 2-(N-ethylperfluorooctanesulfonamido)acetate (N-Et-FOSAA-Na)	3871-50-9
PFPeS, its salts	Perfluoropentane sulfonic acid (PFPeS)	2706-91-4
	Sodium perfluoro-1-pentanesulfonate (PFPeS-Na*)	630402-22-1
	Potassium perfluoropentane-1-sulphonate (PFPeS-K)	3872-25-1
	Ammonium perfluoropentanesulfonate (PFPeS-NH_4*)	68259-09-6
	Bis(2-hydroxyethyl) ammonium 1,1,2,2,3,3,4,4,5,5,5-undecafluoropentane-1-sulphonate	70225-17-1
	Undecafluoropentane-1-sulfonic acid lithium salt (PFPeS-Li)	1046864-81-6
	Perfluoropentane sulfonate (anion)	175905-36-9
	Triethylammonium perfluoropentane sulfonate	72033-42-2
	Perfluoropentane sulfonic anhydride (PFPeSA)	161877-72-1
3:3 FTCA, its salts	3-Perfluoropropyl propanoic acid (3:3 FTCA)	356-02-5
	4,4,5,5,6,6,6-Heptafluorohexanoate (3:3 FTCA(anion))	1169706-83-5
5:3 FTCA, its salts	3-Perfluoropentyl propanoic acid (5:3 FTCA)	914637-49-3
	2H,2H,3H,3H-Perfluorooctanoate (5:3 FTCA(anion))	1799325-94-2
PFEESA, its salts	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	113507-82-7
	Potassium perfluoro(2-ethoxyethane) sulfonate (PFEESA-K)	117205-07-9
	Sodium perfluoro(2-ethoxyethane) sulfonate (PFEESA-Na)	113507-87-2

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Group Name	Substance Name	CAS No.
9Cl-PF_3ONS, its salts	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF_3ONS)	756426-58-1
	Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF_3ONS-K)	73606-19-6
	Ammonium perfluoro-2-[(6-chlorohexyl)oxy]ethane-1-sulfonate (9Cl-PF_3ONS-NH_4)	1383434-28-3
11Cl-PF_3OUdS, its salts	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF_3OUdS)	763051-92-9
	Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate (11Cl-PF_3OUdS-K)	83329-89-9
11H-PFUnDA, its salts	11H-Perfluoroundecanoic acid (11H-PFUnDA)	1765-48-6
	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
	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
	11-H-Perfluoroundecanoate (11H-PFUnDA(anion))	69681-37-4
PFPrA, its salts	Pentafluoropropionate acid (PFPrA)	422-64-0
	Sodium pentafluoropropionate (PFPrA-Na)	378-77-8
	Silver pentafluoropropionate (PFPrA-Ag)	509-09-1
	Potassium pentafluoropropionate (PFPrA-K)	378-76-7
	Ammonium pentafluoropropionate (PFPrA-NH_4)	2730-58-7
6:6 PFPi, its salts	6:6 Perfluorophosphinic acid (6:6 PFPi)	40143-77-9
	Sodium bis(perfluorohexyl)phosphinate (6:6 PFPi-Na)	70609-44-8
	Bis(perfluorohexyl) phosphinic acid ytterbium(3+) salt (6:6 PFPi-Yb)	500776-72-7
	Bis(perfluorohexyl) phosphinic acid erbium(3+) salt (6:6 PFPi-Er)	500776-73-8
8:8 PFPi, its salts	8:8 Perfluorophosphinic acid (8:8 PFPi)	40143-79-1
	Sodium bis(perfluorooctyl)phosphinate (8:8 PFPi-Na)	500776-69-2
	Bis(perfluorooctyl) phosphinic acid erbium(3+) salt (8:8 PFPi-Er)	500776-70-5
	Bis(perfluorooctyl) phosphinic acid ytterbium(3+) salt (8:8 PFPi-Yb)	500776-71-6
HFPO-TA, its salts	Perfluoro-2,5-dimethyl-3,6-dioxanonanoic acid (HFPO-TA)	13252-14-7
	Potassium perfluoro(2-(2-propoxypropoxy)propanoate) (HFPO-TA-K)	67118-57-4

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Group Name	Substance Name	CAS No.
HFPO-TA, its salts	Perfluoro-2,5-dimethyl-3,6-dioxanonanoic acid, sodium salt (HFPO-TA-Na)	67963-76-2
	2,3,3,3-Tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]propanoic acid--ammonia (HFPO-TA-NH_4)	13043-05-5
	Hexafluoropropene oxide trimer (HFPO-TA-F)	2641-34-1
PFEtS, its salts	Pentafluoroethane sulfonic acid (PFEtS)	354-88-1
	Pentafluoroethanesulfonate (PFEtS (anion))	108410-37-3
	Potassium pentafluoroethane-1-sulfonate (PFEtS-K)	2837-92-5
6:2 diPAP, its salts	Bis[2-(perfluorohexyl)ethyl] Phosphate (6:2 diPAP)	57677-95-9
	Sodium bis[2-(perfluorohexyl)ethyl] phosphate (6:2 diPAP-Na)	407582-79-0
	Bis(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl) phosphate ion (6:2 diPAP(anion))	667465-18-1
TFSI, its salts	Trifluoromethanesulfonimide (TFSI)	82113-65-3
	Pyrrolidinium, 1-butyl-1-methyl-, salt with 1,1,1-trifluoro-N-[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1)	223437-11-4
	Tributylmethyl Ammonium Bis(trifluoromethanesulfonyl) Imide	405514-94-5
	Lithium bis((trifluoromethyl)sulfonyl)azanide (TFSI-Li)	90076-65-6
	1-Decyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide	433337-23-6
TFMS, its salts	Trifluoromethane sulfonic acid (TFMS)	1493-13-6
	Trifluoromethane sulfonic acid Sodium salt (TFMS-Na)	2926-30-9
	Silver trifluoromethanesulfonate (TFMS-Ag)	2923-28-6
	Zinc trifluoromethanesulfonate (TFMS-Zn)	54010-75-2
	Scandium trifluoromethanesulfonate (TFMS-Sc)	144026-79-9
	Trifluoromethanesulfonic anhydride	358-23-6
	Lithium trifluoromethanesulfonate (TFMS-Li)	33454-82-9
	Copper(II) trifluoromethanesulfonate (TFMS-Cu)	34946-82-2
	Barium trifluoromethanesulfonate (TFMS-Ba)	2794-60-7
	Cerium(IV) trifluoromethanesulfonate (TFMS-Ce)	107792-63-2
	Magnesium trifluoromethanesulfonate (TFMS-Mg)	60871-83-2
	Potassium trifluoromethanesulfonate (TFMS-K)	2926-27-4
	Nickel(II) Trifluoromethanesulfonate (TFMS-Ni)	60871-84-3
	Tin(II) trifluoromethanesulfonate (TFMS-Sn)	62086-04-8
	Yttrium(III) trifluoromethanesulfonate (TFMS-Y)	52093-30-8
	Iron(III) trifluoromethanesulfonate (TFMS-Fe)	63295-48-7

Group Name	Substance Name	CAS No.
TFMS, its salts	Cerium(III) Trifluoromethanesulfonate (TFMS-Ce)	76089-77-5
	Tetrabutylammonium trifluoromethanesulfonate	35895-70-6
	Methyltrioctylammonium trifluoromethanesulfonate	121107-18-4
	Imidazole trifluoromethanesulfonate	29727-06-8
	Trifluoroacetyl Trifluoromethanesulfonate	68602-57-3
	Lanthanum(III) trifluoromethanesulfonate (TFMS-La)	52093-26-2
	Indium(III) trifluoromethanesulfonate (TFMS-In)	128008-30-0
	Samarium(III) trifluoromethanesulfonate (TFMS-Sm)	52093-28-4
	Ytterbium(III) trifluoromethanesulfonate (TFMS-Yb)	54761-04-5
	Thulium(III) trifluoromethanesulfonate (TFMS-Tm)	141478-68-4
	Tetraethylammonium trifluoromethanesulfonate	35895-69-3
	1-Fluoro-3,5-dichloropyridinium triflate	107264-06-2
	Triethylamine salt of trifluoromethanesulfonic acid	646-58-2
	Triphenylphosphonium anhydride triflate	72450-51-2
	N,N-Diethyl-6-(diethylamino)-9-(2-(methoxycarbonyl)phenyl)-3H-xanthene-3-ylideneammonium trifluoromethanesulfonate	120611-30-5
	Diphenylammonium Trifluoromethanesulfonate	164411-06-7
	1-(3-aminoazetidin-1-yl)prop-2-en-1-one, trifluoromethanesulfonic acid	2060047-56-3
	Guanidine trifluoromethanesulfonic acid	153756-25-3
	Trifluoromethanesulfonic acid--1-ethyl-1H-imidazole (1/1)	501693-46-5
	Ruthenium(3+), (OC-6-22)-, salt with trifluoromethanesulfonic acid (1:3)	74468-24-9
	O-Pivaloylhydroxylamine trifluoromethanesulfonate	1293990-73-4
	Trifluoromethanesulfonyl chloride	421-83-0
	(2-Pyridylmethyl)sulfonyl chloride triflate	882564-09-2
	Trifluoromethanesulfonyl bromide	15458-53-4
	Mercury(II) trifluoromethanesulfonate (TFMS-Hg)	49540-00-3
	Dysprosium(III) tris(trifluoromethanesulfonate) (TFMS-Dy)	139177-62-1
	Manganese bis(trifluoromethanesulfonate) (TFMS-Mn)	55120-76-8
	Pentaammine(trifluoromethanesulfonato)osmium(III) triflate	83781-30-0
	Lutetium(III) trifluoromethanesulfonate (TFMS-Lu)	126857-69-0
	Terbium(III) trifluoromethanesulfonate (TFMS-Tb)	148980-31-8
	Neodymium(III) trifluoromethanesulfonate (TFMS-Nd)	34622-08-7
	Ammonium trifluoromethanesulfonate (TFMS-NH4)	38542-94-8

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Group Name	Substance Name	CAS No.
TFMS, its salts	Holmium(III) trifluoromethanesulfonate (TFMS-Ho)	139177-63-2
	Trifluoromethanesulfonate	37181-39-8
	Praseodymium(III) trifluoromethanesulfonate (TFMS-Pr)	52093-27-3
	Bismuth(III) trifluoromethanesulfonate (TFMS-Bi)	88189-03-1
	Europium(III) trifluoromethanesulfonate (TFMS-Eu)	52093-25-1
	Erbium(III) trifluoromethanesulfonate (TFMS-Er)	139177-64-3
	Gallium(III) trifluoromethanesulfonate (TFMS-Ga)	74974-60-0
	N,N,N-Triethyl-2,2,2-trifluoroethan-1-aminium trifluoromethanesulfonate	380230-73-9
	Methanesulfonic acid, trifluoro-, calcium salt (TFMS-Ga)	55120-75-7
	Thallium(1+) trifluoromethanesulfonate (TFMS-Tl)	73491-36-8
	Hafnium(IV) Trifluoromethanesulfonate (TFMS-Hf)	161337-67-3
PFPrS, its salts	Perfluoropropate sulfonic acid (PFPrS)	423-41-6
	Perfluoropropanesulfonic acid sodium salt (PFPrS-Na)	359868-82-9
PFHpSi, its salts	Perfluoroheptane-1-sulfinic acid (PFHpSi)	769067-51-8
	1-heptanesulfinic Acid Sodium Salt (PFHpSi-Na)	68555-66-8
PFOPA, its salts	Perfluorooctylphosphoic acid (PFOPA)	40143-78-0
	(Heptadecafluorooctyl)phosphonic acid--4-methylaniline (1/1)	1263361-03-0
Ethyl perfluoroisobutyl ether and its isomers	Ethyl perfluoroisobutyl ether and its isomers	163702-05-4
	Perfluoroisobutyl ethyl ether	163702-06-5

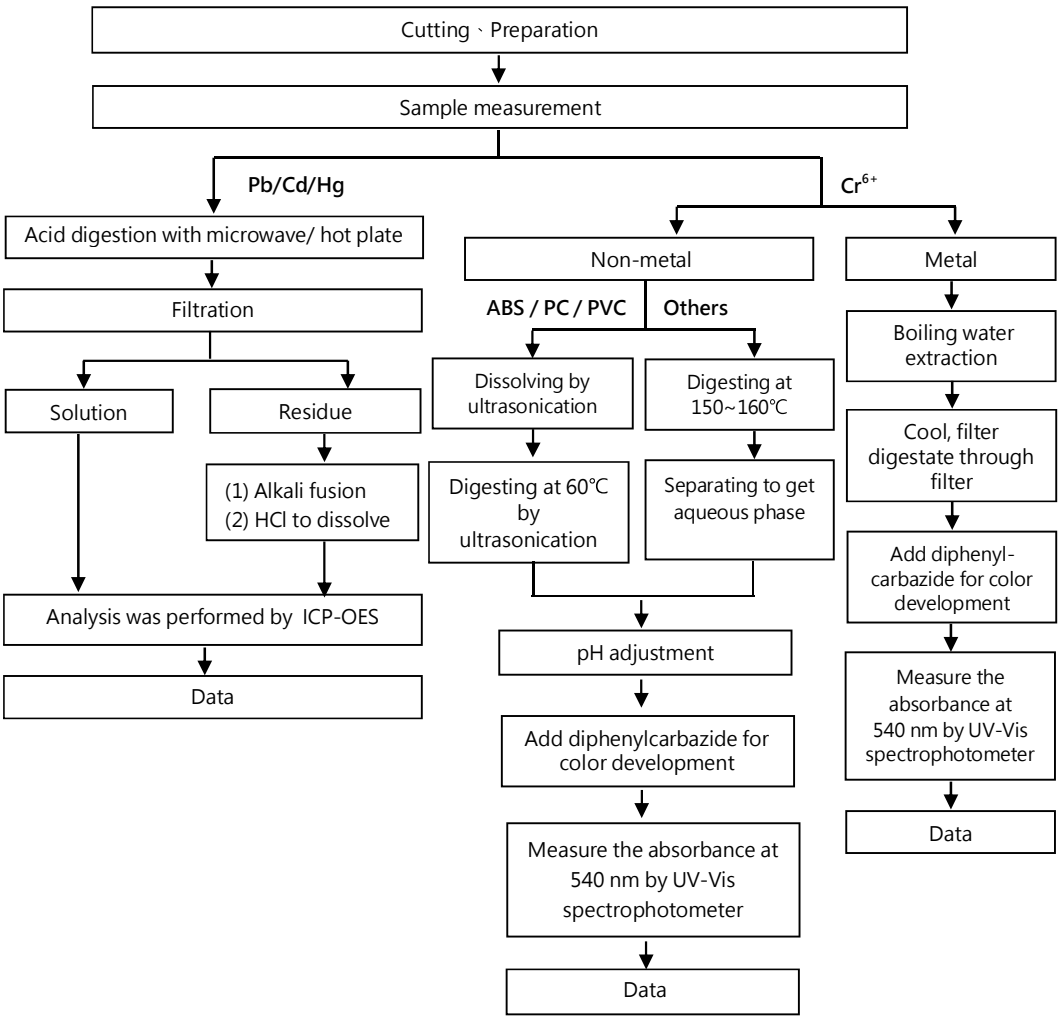
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Analytical flow chart of heavy metal

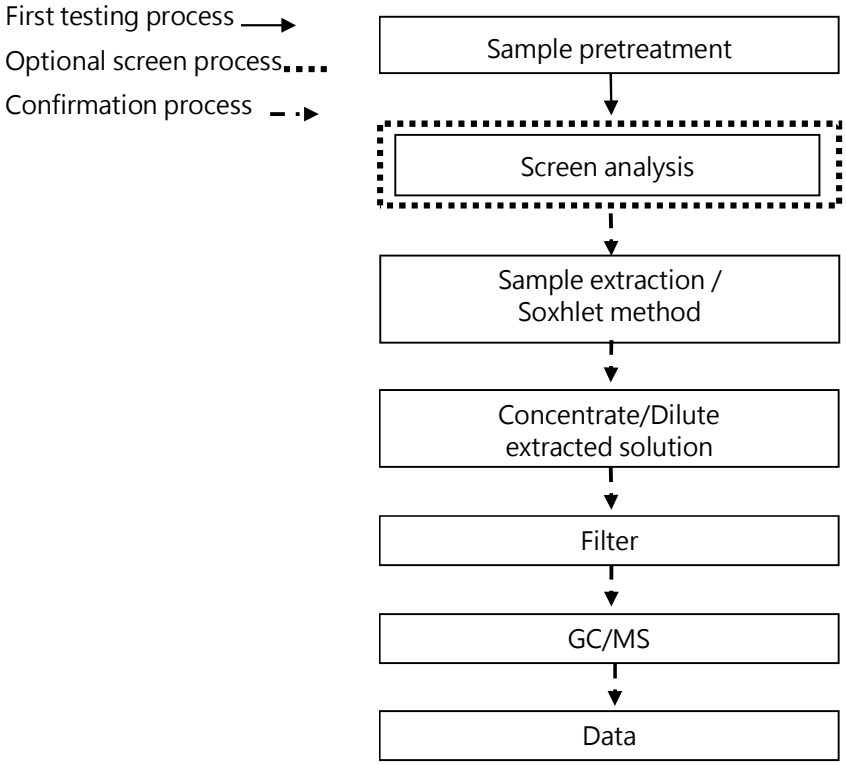
These samples were dissolved totally by pre-conditioning method according to below flow chart.

(Cr^{6+} test method excluded)



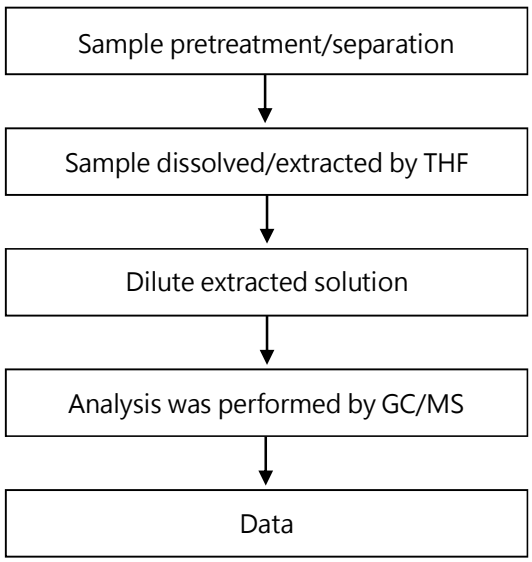
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200 BAY STREET, ROYAL BANK PLAZA, SUITE 1600, SOUTH TOWER, P.O. BOX 70, TORONTO, ONTARIO, M5J 2K2, CANADA

Analytical flow chart – PBBs / PBDEs



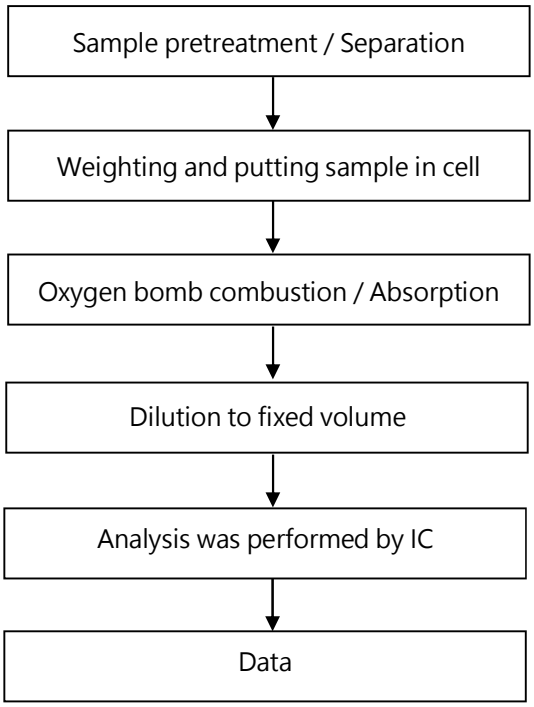
Analytical flow chart - Phthalate

【Test method: IEC 62321-8】



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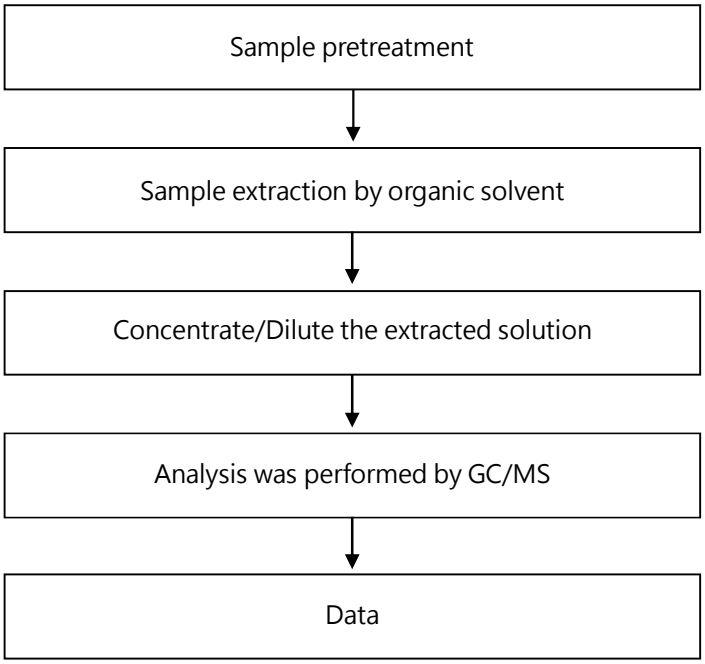
Analytical flow chart - Halogen



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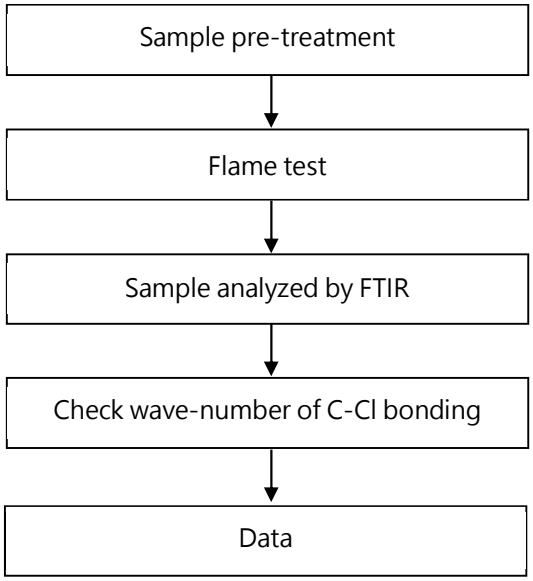
Analytical flow chart

* Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT



VALE CANADA LIMITED
200 BAY STREET, ROYAL BANK PLAZA, SUITE 1600, SOUTH TOWER, P.O. BOX 70, TORONTO, ONTARIO, M5J 2K2, CANADA

Analysis flow chart - PVC



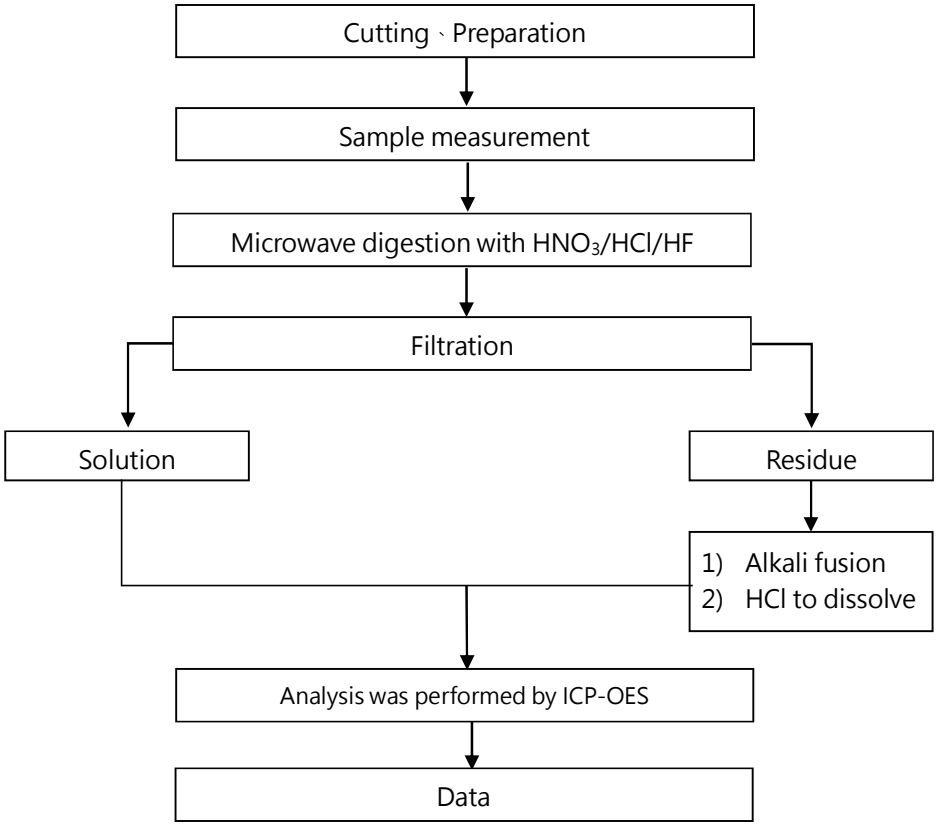
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Analytical flow chart of elements (Heavy metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

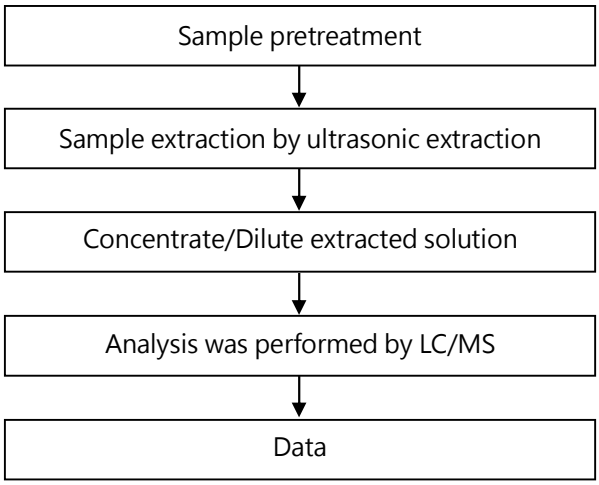
【Reference method：US EPA 3051A、US EPA 3052】



* US EPA 3051A method does not add HF.

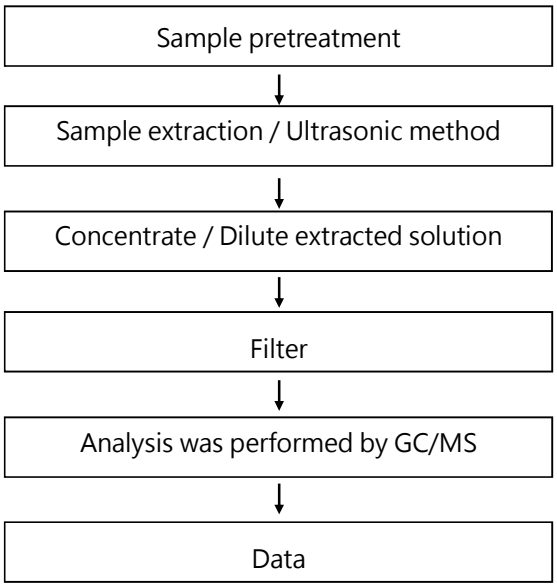
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Analytical flow chart - TBBP-A



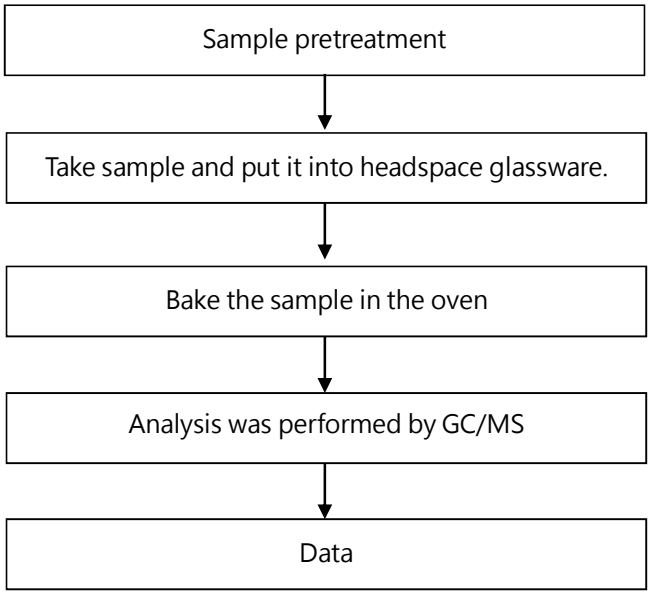
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Analytical flow chart - Persistent, Bioaccumulative, Toxic (PBTs)



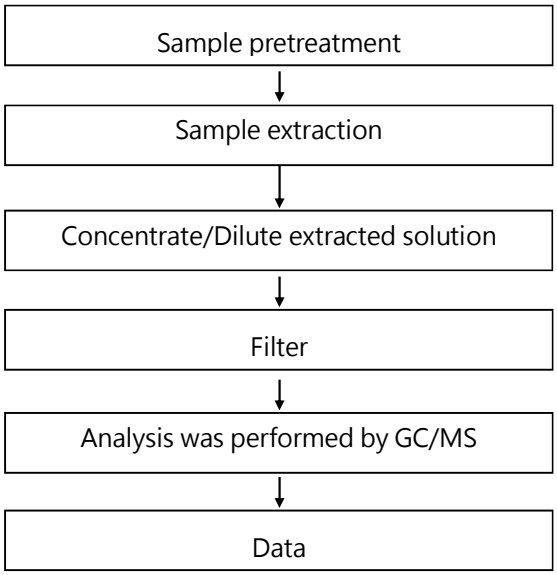
Analytical flow chart of volatile organic compounds (VOCs)

【Reference method：US EPA 5021A】



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Analytical flow chart - HBCDD

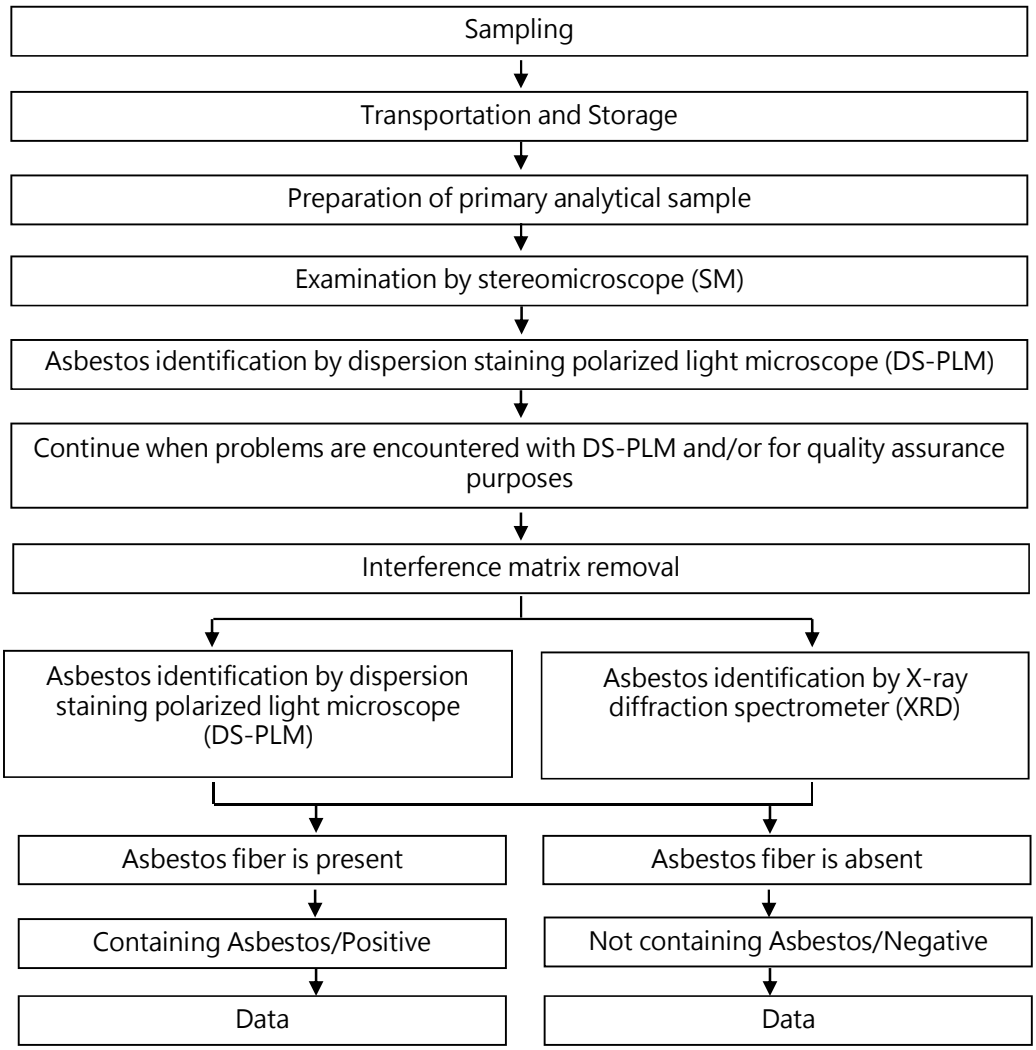


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Analysis flow chart for determination of Asbestos

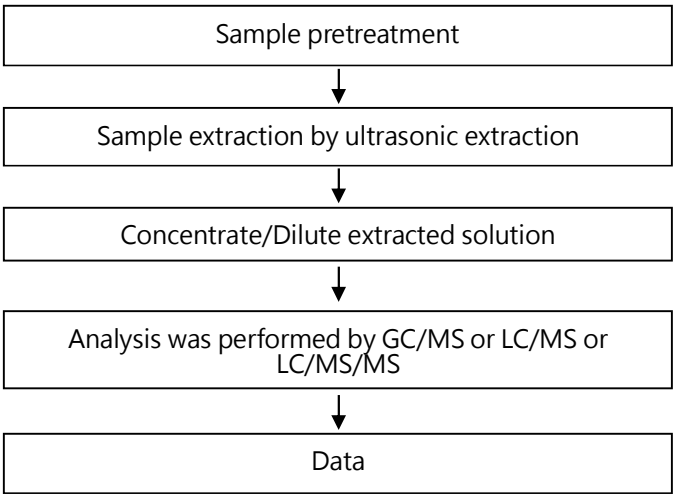
【Reference method: EPA 600/R-93/116】



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Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



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*** The tested sample / part is marked by an arrow if it's shown on the photo. ***

ETR25602359



** End of Report **