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### Perfluoroalkyl and polyfluoroalkyl substances (PFASs) in the environment: terminology, classification, and origins

Buck, R.C.; Franklin, J.; Berger, U.; Conder, J.M.; Cousins, I.T.; de Voogt, P.; Jensen, A.A.; Kannan, K.; Mabury, S.A.; van Leeuwen, S.P.J.

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## SUPPLEMENTAL DATA

### PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFASs) IN THE ENVIRONMENT: TERMINOLOGY, CLASSIFICATION, AND ORIGINS

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## Table of Contents

PART 1 – FAMILIES OF SUBSTANCES (NON-POLYMERS) .....	4
PART 2 – SELECTED INDIVIDUAL COMPOUNDS (NON-POLYMERS) .....	7
Perfluoroalkyl carboxylic acids (and selected salts).....	7
Perfluoroalkyl carboxylate anions.....	8
Perfluoroalkane sulfonic acids (and selected anions and salts) .....	10
Perfluoroalkane sulfinic acids .....	11
Perfluoroalkyl phosphonic acids .....	12
Perfluoroalkyl phosphinic acids .....	12
Perfluoroalkyl iodides .....	12
(n:2) Fluorotelomer iodides .....	13
(n:2) Fluorotelomer olefins .....	13
(n:2) Fluorotelomer alcohols .....	14
(n:2) Fluorotelomer acrylates .....	14
(n:2) Fluorotelomer methacrylates.....	15
Polyfluoroalkyl phosphoric acid monoesters.....	16
Polyfluoroalkyl phosphoric acid diesters .....	16
Semifluorinated n-alkanes .....	17
Semifluorinated n-alkenes .....	17
(n:2) Fluorotelomer (saturated) aldehydes .....	18
(n:2) Fluorotelomer unsaturated aldehydes.....	18
Perfluoroalkyl aldehydes.....	19
Perfluoroalkyl aldehyde hydrates .....	19
(n:2) Fluorotelomer (saturated) carboxylic acids.....	20

(n:2) Fluorotelomer unsaturated carboxylic acids.....	20
Other biotransformation products of n:2 FTOHs.....	21
(n:2) Fluorotelomer sulfonic acids .....	21
(n:2) Fluorotelomer sulfonate anions .....	22
Perfluoroalkane sulfonyl fluorides.....	22
Perfluoroalkane sulfonamides .....	23
N-Methyl perfluoroalkane sulfonamides.....	23
N-Ethyl perfluoroalkane sulfonamides .....	23
N,N-Dialkyl perfluoroalkane sulfonamides .....	24
Perfluoroalkane sulfonamido ethanols.....	24
Perfluoroalkane sulfonamidoacetic acids .....	25
N-Methyl perfluoroalkane sulfonamidoethanols .....	25
N-Ethyl perfluoroalkane sulfonamidoethanols.....	26
N-Methyl perfluoroalkane sulfonamidoacetic acids and salts .....	26
N-Ethyl perfluoroalkane sulfonamidoacetic acids and salts .....	27
N-Methyl perfluoroalkane sulfonamidoethyl acrylates.....	27
N-Ethyl perfluoroalkane sulfonamidoethyl acrylates .....	28
N-Methyl perfluoroalkane sulfonamidoethyl methacrylates .....	28
N-Ethyl perfluoroalkane sulfonamidoethyl methacrylates.....	29
Figure S1. Terminology Decision Flowcharts .....	30
Example #1 8:2 Fluorotelomer alcohol .....	32
Example #2 Perfluorobutane sulfonamide .....	33
Example #3 Perfluorohexyl phosphonic acid .....	34
Example #4 Side-chain Fluorinated Acrylate Polymer (Fluorotelomer origin) .....	35

## PART 1 – FAMILIES OF SUBSTANCES (NON-POLYMERS)

NAME OF FAMILY	FORMULA	ACRONYM
Perfluoroalkyl substances	Generic name: See main paper	PFASs
Perfluoroalkyl acids	Includes perfluoroalkyl carboxylic, sulfonic, sulfinic, phosphonic and phosphinic acids	PFAAs
Perfluoroalkyl carboxylic acids	$C_nF_{2n+1}COOH$	PFCAs
Perfluoroalkane sulfonic acids	$C_nF_{2n+1}SO_3H$	PFSAs
Perfluoroalkane sulfinic acids	$C_nF_{2n+1}SO_2H$	PFSIAs
Perfluoroalkyl phosphonic acids	$O=P(OH)_2C_nF_{2n+1}$	PFPAs
Perfluoroalkyl phosphinic acids	$O=P(OH)(C_nF_{2n+1})(C_mF_{2m+1})$	PFPIAs

NAME OF FAMILY	FORMULA	ACRONYM
Perfluoroalkyl iodides	$C_nF_{2n+1}I$	PFAls
(n:2) Fluorotelomer iodides	$C_nF_{2n+1}CH_2CH_2I$	(n:2) FTIs
(n:2) Fluorotelomer olefins	$C_nF_{2n+1}CH=CH_2$	(n:2) FTOs
(n:2) Fluorotelomer alcohols	$C_nF_{2n+1}CH_2CH_2OH$	(n:2) FTOHs
(n:2) Fluorotelomer acrylates	$C_nF_{2n+1}CH_2CH_2OC(O)CH=CH_2$	(n:2) FTACs
(n:2) Fluorotelomer methacrylates	$C_nF_{2n+1}CH_2CH_2OC(O)C(CH_3)=CH_2$	(n:2) FTMACs

Polyfluoroalkyl phosphoric acid esters / Polyfluoroalkyl phosphates / (n:2) Fluorotelomer phosphates	$(\text{O})\text{P}(\text{OH})_{3-x}(\text{OCH}_2\text{CH}_2\text{C}_n\text{F}_{2n+1})_x$	PAPs
Polyfluoroalkyl phosphoric acid monoesters	$(\text{O})\text{P}(\text{OH})_2(\text{OCH}_2\text{CH}_2\text{C}_n\text{F}_{2n+1})$	monoPAPs
Polyfluoroalkyl phosphoric acid diesters	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_n\text{F}_{2n+1})(\text{OCH}_2\text{CH}_2\text{C}_m\text{F}_{2m+1})$	diPAPs
Semi-fluorinated <i>n</i> -alkanes	$\text{F}(\text{CF}_2)_n(\text{CH}_2)_m\text{H}$	SFAs
Semi-fluorinated <i>n</i> -alkenes	$\text{F}(\text{CF}_2)_n\text{CH}=\text{CH}(\text{CH}_2)_{m-2}\text{H}$	SFAenes
(n:2) Fluorotelomer (saturated) aldehydes	$\text{C}_n\text{F}_{2n+1}\text{CH}_2\text{CHO}$	(n:2) FTALs
(n:2) Fluorotelomer unsaturated aldehydes	$\text{C}_{n-1}\text{F}_{2n-1}\text{CF}=\text{CHCHO}$	(n:2) FTUALs
Perfluoroalkyl aldehydes	$\text{C}_n\text{F}_{2n+1}\text{CHO}$	PFALs
Perfluoroalkyl aldehyde hydrates	$\text{C}_n\text{F}_{2n+1}\text{CH}(\text{OH})_2$	PFAL.H <sub>2</sub> O <sub>s</sub>
(n:2) Fluorotelomer (saturated) carboxylic acids	$\text{C}_n\text{F}_{2n+1}\text{CH}_2\text{COOH}$	(n:2) FTCAs
(n:2) Fluorotelomer unsaturated carboxylic acids	$\text{C}_{n-1}\text{F}_{2n-1}\text{CF}=\text{CHCOOH}$	(n:2) FTUCAs
[Biotransformation product of (n+1):2 FTOH]	$\text{C}_n\text{F}_{2n+1}\text{CH}_2\text{CH}_2\text{COOH}$	n:3 Acid
[Biotransformation product of (n+1):2 FTOH]	$\text{C}_n\text{F}_{2n+1}\text{CH}=\text{CHCOOH}$	n:3 UAcid
(n:2) Fluorotelomer sulfonic acids	$\text{C}_n\text{F}_{2n+1}\text{CH}_2\text{CH}_2\text{SO}_3\text{H}$	(n:2) FTSAs

<b>NAME OF FAMILY</b>	<b>FORMULA</b>	<b>ACRONYM</b>
Perfluoroalkane sulfonyl fluorides	$C_nF_{2n+1}SO_2F$	PASFs
Perfluoroalkane sulfonamides	$C_nF_{2n+1}SO_2NH_2$	FASAs
<i>N</i> -Methyl perfluoroalkane sulfonamides	$C_nF_{2n+1}SO_2NH(CH_3)$	MeFASAs
<i>N</i> -Ethyl perfluoroalkane sulfonamides	$C_nF_{2n+1}SO_2NH(C_2H_5)$	EtFASAs
<i>N,N</i> -Dialkyl perfluoroalkane sulfonamides	$C_nF_{2n+1}SO_2N(C_mH_{2m+1})(C_pH_{2p+1})$ , with $m, p = 1$ or $2$	Me <sub>2</sub> FASAs, Et <sub>2</sub> FASAs, MeEtFASAs
Perfluoroalkane sulfonamidoethanols	$C_nF_{2n+1}SO_2NHCH_2CH_2OH$	FASEs
Perfluoroalkane sulfonamidoacetic acids	$C_nF_{2n+1}SO_2NHCH_2COOH$	FASAAs
<i>N</i> -Methyl perfluoroalkane sulfonamidoethanols	$C_nF_{2n+1}SO_2N(CH_3)CH_2CH_2OH$	MeFASEs
<i>N</i> -Ethyl perfluoroalkane sulfonamidoethanols	$C_nF_{2n+1}SO_2N(C_2H_5)CH_2CH_2OH$	EtFASEs
<i>N</i> -Methyl perfluoroalkane sulfonamidoacetic acids	$C_nF_{2n+1}SO_2N(CH_3)CH_2COOH$	MeFASAAs
<i>N</i> -Ethyl perfluoroalkane sulfonamidoacetic acids	$C_nF_{2n+1}SO_2N(C_2H_5)CH_2COOH$	EtFASAAs
<i>N</i> -Methyl perfluoroalkane sulfonamidoethyl acrylates	$C_nF_{2n+1}SO_2N(CH_3)CH_2CH_2OC(O)CH=CH_2$	MeFASACs
<i>N</i> -Ethyl perfluoroalkane sulfonamidoethyl acrylates	$C_nF_{2n+1}SO_2N(C_2H_5)CH_2CH_2OC(O)CH=CH_2$	EtFASACs
<i>N</i> -Methyl perfluoroalkane sulfonamidoethyl methacrylates	$C_nF_{2n+1}SO_2N(CH_3)CH_2CH_2OC(O)C(CH_3)=CH_2$	MeFASMACs
<i>N</i> -Ethyl perfluoroalkane sulfonamidoethyl methacrylates	$C_nF_{2n+1}SO_2N(C_2H_5)CH_2CH_2OC(O)C(CH_3)=CH_2$	EtFASMACs

## PART 2 – SELECTED INDIVIDUAL COMPOUNDS (NON-POLYMERS)

Perfluoroalkyl carboxylic acids (and selected salts)	FORMULA	CAS REGISTRY NUMBER	ACRONYM
Trifluoroacetic acid	CF <sub>3</sub> COOH	76-05-1	TFAA
Perfluoropropanoic acid	C <sub>2</sub> F <sub>5</sub> COOH	422-64-0	PFPrA
Perfluorobutanoic acid	C <sub>3</sub> F <sub>7</sub> COOH	375-22-4	PFBA
Ammonium perfluorobutanoate	NH <sub>4</sub> <sup>+</sup> C <sub>3</sub> F <sub>7</sub> COO <sup>-</sup>	10495-86-0	NH <sub>4</sub> -PFBA
Sodium perfluorobutanoate	Na <sup>+</sup> C <sub>3</sub> F <sub>7</sub> COO <sup>-</sup>	2218-54-4	Na-PFBA
Perfluoropentanoic acid	C <sub>4</sub> F <sub>9</sub> COOH	2706-90-3	PFPeA
Ammonium perfluoropentanoate	NH <sub>4</sub> <sup>+</sup> C <sub>4</sub> F <sub>9</sub> COO <sup>-</sup>	68259-11-0	NH <sub>4</sub> -PFPeA
Perfluorohexanoic acid	C <sub>5</sub> F <sub>11</sub> COOH	307-24-4	PFHxA
Ammonium perfluorohexanoate	NH <sub>4</sub> <sup>+</sup> C <sub>5</sub> F <sub>11</sub> COO <sup>-</sup>	21615-47-4	NH <sub>4</sub> -PFHxA
Sodium perfluorohexanoate	Na <sup>+</sup> C <sub>5</sub> F <sub>11</sub> COO <sup>-</sup>	2923-26-4	Na-PFHxA
Perfluoroheptanoic acid	C <sub>6</sub> F <sub>13</sub> COOH	375-85-9	PFHpA
Ammonium perfluoroheptanoate	NH <sub>4</sub> <sup>+</sup> C <sub>6</sub> F <sub>13</sub> COO <sup>-</sup>	6130-43-4	NH <sub>4</sub> -PFHpA
Sodium perfluoroheptanoate	Na <sup>+</sup> C <sub>6</sub> F <sub>13</sub> COO <sup>-</sup>	20109-59-5	Na-PFHpA
Perfluorooctanoic acid	C <sub>7</sub> F <sub>15</sub> COOH	335-67-1	PFOA
Ammonium perfluorooctanoate	NH <sub>4</sub> <sup>+</sup> C <sub>7</sub> F <sub>15</sub> COO <sup>-</sup>	3825-26-1	APFO (or NH <sub>4</sub> -PFOA)



Sodium perfluorooctanoate	$^{222}\text{Na}^+ \text{C}_7\text{F}_{15}\text{COO}^-$	335-95-5	Na-PFOA
Potassium perfluorooctanoate	$\text{K}^+ \text{C}_7\text{F}_{15}\text{COO}^-$	2395-00-8	K-PFOA
Perfluorononanoic acid	$\text{C}_8\text{F}_{17}\text{COOH}$	375-95-1	PFNA
Ammonium perfluorononanoate	$\text{NH}_4^+ \text{C}_8\text{F}_{17}\text{COO}^-$	4149-60-4	APFN (or $\text{NH}_4$ -PFNA)
Sodium perfluorononanoate	$\text{Na}^+ \text{C}_8\text{F}_{17}\text{COO}^-$	21049-39-8	Na-PFNA
Perfluorodecanoic acid	$\text{C}_9\text{F}_{19}\text{COOH}$	335-76-2	PFDA
Ammonium perfluorodecanoate	$\text{NH}_4^+ \text{C}_9\text{F}_{19}\text{COO}^-$	3108-42-7	$\text{NH}_4$ -PFDA
Perfluoroundecanoic acid	$\text{C}_{10}\text{F}_{21}\text{COOH}$	2058-94-8	PFUnDA
Ammonium perfluoroundecanoate	$\text{NH}_4^+ \text{C}_{10}\text{F}_{21}\text{COO}^-$	4234-23-5	$\text{NH}_4$ -PFUnDA
Perfluorododecanoic acid	$\text{C}_{11}\text{F}_{23}\text{COOH}$	307-55-1	PFDODA
Perfluorotridecanoic acid	$\text{C}_{12}\text{F}_{25}\text{COOH}$	72629-94-8	PFTTrDA
Perfluorotetradecanoic acid	$\text{C}_{13}\text{F}_{27}\text{COOH}$	376-06-7	PFTeDA
Perfluoropentadecanoic acid	$\text{C}_{14}\text{F}_{29}\text{COOH}$	141074-63-7	PFPeDA
Perfluorohexadecanoic acid	$\text{C}_{15}\text{F}_{31}\text{COOH}$	67905-19-5	PFHxDA
Perfluoroheptadecanoic acid	$\text{C}_{16}\text{F}_{33}\text{COOH}$	57475-95-3	PFHpDA
Perfluorooctadecanoic acid	$\text{C}_{17}\text{F}_{35}\text{COOH}$	16517-11-6	PFODA
<b>Perfluoroalkyl carboxylate anions</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Trifluoroacetate	$\text{CF}_3\text{COO}^-$	14477-72-6	TFA

Perfluoropropanoate	$C_2F_5COO^-$	44864-55-3	PFPPrA
Perfluorobutanoate	$C_3F_7COO^-$	45048-62-2	PFBA
Perfluoropentanoate	$C_4F_9COO^-$	45167-47-3	PFPeA
Perfluorohexanoate	$C_5F_{11}COO^-$	92612-52-7	PFHxA
Perfluorohepanoate	$C_6F_{13}COO^-$	120885-29-2	PFHpA
Perfluorooctanoate	$C_7F_{15}COO^-$	45285-51-6	PFOA
Perfluorononanoate	$C_8F_{17}COO^-$	72007-68-2	PFNA
Perfluorodecanoate	$C_9F_{19}COO^-$	73829-36-4	PFDA
Perfluoroundecanoate	$C_{10}F_{21}COO^-$	196859-54-8	PFUnDA
Perfluorododecanoate	$C_{11}F_{23}COO^-$	171978-95-3	PFDoDA
Perfluorotridecanoate	$C_{12}F_{25}COO^-$	862374-87-6	PFTrDA
Perfluorotetradecanoate	$C_{13}F_{27}COO^-$	365971-87-5	PFTeDA
Perfluoropentadecanoate	$C_{14}F_{29}COO^-$	1214264-29-5	PFPeDA
Perfluorohexadecanoate	$C_{15}F_{31}COO^-$	1214264-30-8	PFHxDA
Perfluoroheptadecanoate	$C_{16}F_{33}COO^-$	None available	PFHpDA
Perfluorooctadecanoate	$C_{17}F_{35}COO^-$	798556-82-8	PFODA

<b>Perfluoroalkane sulfonic acids (and selected anions and salts)</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Trifluoromethane sulfonic (or triflic) acid	CF <sub>3</sub> SO <sub>3</sub> H	1493-13-6	TFMS
Perfluoroethane sulfonic acid	C <sub>2</sub> F <sub>5</sub> SO <sub>3</sub> H	354-88-1	PFEtS
Perfluoropropane sulfonic acid	C <sub>3</sub> F <sub>7</sub> SO <sub>3</sub> H	423-41-6	PFPrS
Perfluorobutane sulfonic acid	C <sub>4</sub> F <sub>9</sub> SO <sub>3</sub> H	375-73-5 or 59933-66-3	PFBS
Perfluorobutane sulfonate anion	C <sub>4</sub> F <sub>9</sub> SO <sub>3</sub> <sup>-</sup>	45187-15-3	PFBS
Potassium perfluorobutane sulfonate	K <sup>+</sup> C <sub>4</sub> F <sub>9</sub> SO <sub>3</sub> <sup>-</sup>	29420-49-3	K-PFBS
Perfluoropentane sulfonic acid	C <sub>5</sub> F <sub>11</sub> SO <sub>3</sub> H	2706-91-4	PFPeS
Potassium perfluoropentane sulfonate	K <sup>+</sup> C <sub>5</sub> F <sub>11</sub> SO <sub>3</sub> <sup>-</sup>	3872-25-1	K-PFPeS
Perfluorohexane sulfonic acid	C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> H	355-46-4	PFHxS
Perfluorohexane sulfonate anion	C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> <sup>-</sup>	108427-53-8	PFHxS
Potassium perfluorohexane sulfonate	K <sup>+</sup> C <sub>6</sub> F <sub>13</sub> SO <sub>3</sub> <sup>-</sup>	3871-99-6	K-PFHxS
Perfluoroheptane sulfonic acid	C <sub>7</sub> F <sub>15</sub> SO <sub>3</sub> H	375-92-8	PFHpS
Ammonium perfluoroheptane sulfonate	NH <sub>4</sub> <sup>+</sup> C <sub>7</sub> F <sub>15</sub> SO <sub>3</sub> <sup>-</sup>	68259-07-4	NH <sub>4</sub> -PFHpS
Potassium perfluoroheptane sulfonate	K <sup>+</sup> C <sub>7</sub> F <sub>15</sub> SO <sub>3</sub> <sup>-</sup>	60270-55-5	K-PFHpS
Perfluorooctane sulfonic acid	C <sub>8</sub> F <sub>17</sub> SO <sub>3</sub> H	1763-23-1	PFOS
Perfluorooctane sulfonate anion	C <sub>8</sub> F <sub>17</sub> SO <sub>3</sub> <sup>-</sup>	45298-90-6	PFOS

Ammonium perfluorooctane sulfonate	$\text{NH}_4^+ \text{C}_8\text{F}_{17}\text{SO}_3^-$	29081-56-9	NH <sub>4</sub> -PFOS
Sodium perfluorooctane sulfonate	$\text{Na}^+ \text{C}_8\text{F}_{17}\text{SO}_3^-$	4021-47-0	Na-PFOS
Potassium perfluorooctane sulfonate	$\text{K}^+ \text{C}_8\text{F}_{17}\text{SO}_3^-$	2795-39-3	K-PFOS
Lithium perfluorooctane sulfonate	$\text{Li}^+ \text{C}_8\text{F}_{17}\text{SO}_3^-$	29457-72-5	Li-PFOS
Tetraethylammonium perfluorooctane sulfonate	$\text{N}(\text{C}_2\text{H}_5)_4^+ \text{C}_8\text{F}_{17}\text{SO}_3^-$	56773-42-3	NEt <sub>4</sub> -PFOS
Diethanolammonium perfluorooctane sulfonate	$\text{NH}_2(\text{CH}_2\text{CH}_2\text{OH})_2^+ \text{C}_8\text{F}_{17}\text{SO}_3^-$	56773-42-3	
Perfluorononane sulfonic acid	$\text{C}_9\text{F}_{19}\text{SO}_3\text{H}$	474511-07-4	PFNS
Ammonium perfluorononane sulfonate	$\text{NH}_4^+ \text{C}_9\text{F}_{19}\text{SO}_3^-$	17202-41-4	NH <sub>4</sub> -PFNS
Perfluorodecane sulfonic acid	$\text{C}_{10}\text{F}_{21}\text{SO}_3\text{H}$	335-77-3	PFDS
Perfluorodecane sulfonate anion	$\text{C}_{10}\text{F}_{21}\text{SO}_3^-$	126105-34-8	PFDS
Ammonium perfluorodecane sulfonate	$\text{NH}_4^+ \text{C}_{10}\text{F}_{21}\text{SO}_3^-$	67906-42-7	NH <sub>4</sub> -PFDS
Potassium perfluorodecane sulfonate	$\text{K}^+ \text{C}_{10}\text{F}_{21}\text{SO}_3^-$	2806-16-8	K-PFDS
Perfluoroundecane sulfonic acid	$\text{C}_{11}\text{F}_{23}\text{SO}_3\text{H}$	749786-16-1	PFUnDS
Perfluorododecane sulfonic acid	$\text{C}_{12}\text{F}_{25}\text{SO}_3\text{H}$	79780-39-5	PFDoDS

<b>Perfluoroalkane sulfinic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluorooctane sulfinic acid	$\text{C}_8\text{F}_{17}\text{SO}_2\text{H}$	647-29-0	PFOSI

<b>Perfluoroalkyl phosphonic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluorohexyl phosphonic acid	$O=P(OH)_2C_6F_{13}$	40143-76-8	C6-PFPA
Perfluorooctyl phosphonic acid	$O=P(OH)_2C_8F_{17}$	40143-78-0	C8-PFPA
Perfluorodecyl phosphonic acid	$O=P(OH)_2C_{10}F_{21}$	52299-26-0	C10-PFPA

<b>Perfluoroalkyl phosphinic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Bis(perfluorohexyl) phosphinic acid	$O=P(OH)(C_6F_{13})_2$	40143-77-9	C6/C6-PFPIA
Bis(perfluorooctyl) phosphinic acid	$O=P(OH)(C_8F_{17})_2$	40143-79-1	C8/C8-PFPIA
Perfluoro(hexyloctyl) phosphinic acid	$O=P(OH)(C_6F_{13})(C_8F_{17})$	610800-34-5	C6/C8-PFPIA

<b>Perfluoroalkyl iodides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluoro (or pentafluoro)ethyl iodide	$C_2F_5I$	354-64-3	PFEI
Perfluorobutyl iodide	$C_4F_9I$	423-39-2	PFBI
Perfluorohexyl iodide	$C_6F_{13}I$	355-43-1	PFHxI
Perfluorooctyl iodide	$C_8F_{17}I$	507-63-1	PFOI
Perfluorodecyl iodide	$C_{10}F_{21}I$	423-62-1	PFDI

Perfluorododecyl iodide	$C_{12}F_{25}I$	307-60-8	PFD <sub>o</sub> DI
Perfluorotetradecyl iodide	$C_{14}F_{29}I$	307-63-1	PFT <sub>e</sub> DI
Perfluorohexadecyl iodide	$C_{16}F_{33}I$	355-50-0	PFH <sub>x</sub> DI
Perfluorooctadecyl iodide	$C_{18}F_{37}I$	29809-35-6	PFODI

<b>(n:2) Fluorotelomer iodides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer iodide	$C_4F_9CH_2CH_2I$	2043-55-2	4:2 FTI
6:2 Fluorotelomer iodide	$C_6F_{13}CH_2CH_2I$	2043-57-4	6:2 FTI
8:2 Fluorotelomer iodide	$C_8F_{17}CH_2CH_2I$	2043-53-0	8:2 FTI
10:2 Fluorotelomer iodide	$C_{10}F_{21}CH_2CH_2I$	2043-54-1	10:2 FTI
12:2 Fluorotelomer iodide	$C_{12}F_{25}CH_2CH_2I$	30046-31-2	12:2 FTI
14:2 Fluorotelomer iodide	$C_{14}F_{29}CH_2CH_2I$	65510-55-6	14:2 FTI
16:2 Fluorotelomer iodide	$C_{16}F_{33}CH_2CH_2I$	65150-94-9	16:2 FTI
18:2 Fluorotelomer iodide	$C_{18}F_{37}CH_2CH_2I$	65104-63-4	18:2 FTI

<b>(n:2) Fluorotelomer olefins</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer olefin	$C_4F_9CH=CH_2$	19430-93-4	4:2 FTO
6:2 Fluorotelomer olefin	$C_6F_{13}CH=CH_2$	25291-17-2	6:2 FTO

8:2 Fluorotelomer olefin	$C_8F_{17}CH=CH_2$	21652-58-4	8:2 FTO
10:2 Fluorotelomer olefin	$C_{10}F_{21}CH=CH_2$	30389-25-4	10:2 FTO
12:2 Fluorotelomer olefin	$C_{12}F_{25}CH=CH_2$	67103-05-3	12:2 FTO

<b>(n:2) Fluorotelomer alcohols</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2-Fluorotelomer alcohol	$C_4F_9CH_2CH_2OH$	2043-47-2	4:2 FTOH
6:2-Fluorotelomer alcohol	$C_6F_{13}CH_2CH_2OH$	647-42-7	6:2 FTOH
8:2-Fluorotelomer alcohol	$C_8F_{17}CH_2CH_2OH$	678-39-7	8:2 FTOH
10:2-Fluorotelomer alcohol	$C_{10}F_{21}CH_2CH_2OH$	865-86-1	10:2 FTOH
12:2 Fluorotelomer alcohol	$C_{12}F_{25}CH_2CH_2OH$	39239-77-5	12:2 FTOH
14:2 Fluorotelomer alcohol	$C_{14}F_{29}CH_2CH_2OH$	60699-51-6	14:2 FTOH
16:2 Fluorotelomer alcohol	$C_{16}F_{33}CH_2CH_2OH$	65104-67-8	16:2 FTOH
18:2 Fluorotelomer alcohol	$C_{18}F_{37}CH_2CH_2OH$	65104-65-6	18:2 FTOH

<b>(n:2) Fluorotelomer acrylates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer acrylate	$C_4F_9CH_2CH_2OC(O)CH=CH_2$	52591-27-2	4:2 FTAC
6:2 Fluorotelomer acrylate	$C_6F_{13}CH_2CH_2OC(O)CH=CH_2$	17527-29-6	6:2 FTAC
8:2 Fluorotelomer acrylate	$C_8F_{17}CH_2CH_2OC(O)CH=CH_2$	27905-45-9	8:2 FTAC

10:2 Fluorotelomer acrylate	$C_{10}F_{21}CH_2CH_2OC(O)CH=CH_2$	17741-60-5	10:2 FTAC
12:2 Fluorotelomer acrylate	$C_{12}F_{25}CH_2CH_2OC(O)CH=CH_2$	34395-24-9	12:2 FTAC
14:2 Fluorotelomer acrylate	$C_{14}F_{29}CH_2CH_2OC(O)CH=CH_2$	34362-49-7	14:2 FTAC
16:2 Fluorotelomer acrylate	$C_{16}F_{33}CH_2CH_2OC(O)CH=CH_2$	65150-93-8	16:2 FTAC
18:2 Fluorotelomer acrylate	$C_{18}F_{37}CH_2CH_2OC(O)CH=CH_2$	65104-64-5	18:2 FTAC

<b>(n:2) Fluorotelomer methacrylates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer methacrylate	$C_4F_9CH_2CH_2OC(O)C(CH_3)=CH_2$	1799-84-4	4:2 FTMAC
6:2 Fluorotelomer methacrylate	$C_6F_{13}CH_2CH_2OC(O)C(CH_3)=CH_2$	2144-53-8	6:2 FTMAC
8:2 Fluorotelomer methacrylate	$C_8F_{17}CH_2CH_2OC(O)C(CH_3)=CH_2$	1996-88-9	8:2 FTMAC
10:2 Fluorotelomer methacrylate	$C_{10}F_{21}CH_2CH_2OC(O)C(CH_3)=CH_2$	2144-54-9	10:2 FTMAC
12:2 Fluorotelomer methacrylate	$C_{12}F_{25}CH_2CH_2OC(O)C(CH_3)=CH_2$	6014-75-1	12:2 FTMAC
14:2 Fluorotelomer methacrylate	$C_{14}F_{29}CH_2CH_2OC(O)C(CH_3)=CH_2$	4980-53-4	14:2 FTMAC
16:2 Fluorotelomer methacrylate	$C_{16}F_{33}CH_2CH_2OC(O)C(CH_3)=CH_2$	59778-97-1	16:2 FTMAC
18:2 Fluorotelomer methacrylate	$C_{18}F_{37}CH_2CH_2OC(O)C(CH_3)=CH_2$	65104-66-7	18:2 FTMAC



<b>Polyfluoroalkyl phosphoric acid monoesters</b> (= fluorotelomer phosphate monoesters)	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer phosphate monoester	$(\text{O})\text{P}(\text{OH})_2(\text{OCH}_2\text{CH}_2\text{C}_4\text{F}_9)$	150065-76-2	4:2 monoPAP
6:2 Fluorotelomer phosphate monoester	$(\text{O})\text{P}(\text{OH})_2(\text{OCH}_2\text{CH}_2\text{C}_6\text{F}_{13})$	57678-01-0	6:2 monoPAP
8:2 Fluorotelomer phosphate monoester	$(\text{O})\text{P}(\text{OH})_2(\text{OCH}_2\text{CH}_2\text{C}_8\text{F}_{17})$	57678-03-2	8:2 monoPAP
10:2 Fluorotelomer phosphate monoester	$(\text{O})\text{P}(\text{OH})_2(\text{OCH}_2\text{CH}_2\text{C}_{10}\text{F}_{21})$	57678-05-4	10:2 monoPAP
12:2 Fluorotelomer phosphate monoester	$(\text{O})\text{P}(\text{OH})_2(\text{OCH}_2\text{CH}_2\text{C}_{12}\text{F}_{25})$	57678-07-6	12:2 monoPAP
<b>Polyfluoroalkyl phosphoric acid diesters</b> (= fluorotelomer phosphate diesters)	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_4\text{F}_9)_2$	135098-69-0	4:2 diPAP
4:2/6:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_4\text{F}_9)(\text{OCH}_2\text{CH}_2\text{C}_6\text{F}_{13})$	1158182-59-2	4:2/6:2 diPAP
6:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_6\text{F}_{13})_2$	57677-95-9	6:2 diPAP
6:2/8:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_6\text{F}_{13})(\text{OCH}_2\text{CH}_2\text{C}_8\text{F}_{17})$	943913-15-3	6:2/8:2 diPAP
8:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_8\text{F}_{17})_2$	678-41-1	8:2 diPAP
8:2/10:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_8\text{F}_{17})(\text{OCH}_2\text{CH}_2\text{C}_{10}\text{F}_{21})$	1158182-60-5	8:2/10:2 diPAP
10:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_{10}\text{F}_{21})_2$	1895-26-7	10:2 diPAP
10:2/12:2 Fluorotel. phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_{10}\text{F}_{21})(\text{OCH}_2\text{CH}_2\text{C}_{12}\text{F}_{25})$	1158182-61-6	10:2/12:2 diPAP
12:2 Fluorotelomer phosphate diester	$(\text{O})\text{P}(\text{OH})(\text{OCH}_2\text{CH}_2\text{C}_{12}\text{F}_{25})_2$	57677-99-3	12:2 diPAP

<b>Semifluorinated <i>n</i>-alkanes</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
(Perfluorooctyl)ethane	$F(CF_2)_8(CH_2)_2H$	77117-48-7	$F_8H_2$
(Perfluorohexyl)octane	$F(CF_2)_6(CH_2)_8H$	133331-77-8	$F_6H_8$
(Perfluorohexyl)hexadecane	$F(CF_2)_6(CH_2)_{16}H$	133310-71-1	$F_6H_{16}$
(Perfluorooctyl)hexadecane	$F(CF_2)_8(CH_2)_{16}H$	117146-18-6	$F_8H_{16}$
(Perfluorohexadecyl)hexadecane	$F(CF_2)_{16}(CH_2)_{16}H$	137338-42-2	$F_{16}H_{16}$

<b>Semifluorinated <i>n</i>-alkenes</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
(Perfluorohexyl)hexadecene	$F(CF_2)_6CH=CH(CH_2)_{14}H$	1244062-15-4	$F_6H_{16}ene$
(Perfluorooctyl)hexadecene	$F(CF_2)_8CH=CH(CH_2)_{14}H$	1244062-16-5	$F_8H_{16}ene$
(Perfluorohexadecyl)hexadecene	$F(CF_2)_{16}CH=CH(CH_2)_{14}H$	1244062-14-3	$F_{16}H_{16}ene$

<b>(n:2) Fluorotelomer (saturated) aldehydes</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer aldehyde	$C_4F_9CH_2CHO$	135984-67-7	4:2 FTAL
6:2 Fluorotelomer aldehyde	$C_6F_{13}CH_2CHO$	56734-81-7	6:2 FTAL
8:2 Fluorotelomer aldehyde	$C_8F_{17}CH_2CHO$	135984-68-8	8:2 FTAL
10:2 Fluorotelomer aldehyde	$C_{10}F_{21}CH_2CHO$	864551-38-2	10:2 FTAL
12:2 Fluorotelomer aldehyde	$C_{12}F_{25}CH_2CHO$	None available	12:2 FTAL

<b>(n:2) Fluorotelomer unsaturated aldehydes</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer unsaturated aldehyde	$C_3F_7CF=CHCHO$	864551-39-3	4:2 FTUAL
6:2 Fluorotelomer unsaturated aldehyde	$C_5F_{11}CF=CHCHO$	69534-12-9	6:2 FTUAL
8:2 Fluorotelomer unsaturated aldehyde	$C_7F_{15}CF=CHCHO$	58544-13-1	8:2 FTUAL
10:2 Fluorotelomer unsaturated aldehyde	$C_9F_{19}CF=CHCHO$	864551-40-6	10:2 FTUAL
12:2 Fluorotelomer unsaturated aldehyde	$C_{11}F_{23}CF=CHCHO$	None available	12:2 FTUAL

<b>Perfluoroalkyl aldehydes</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluoropentanal	C <sub>4</sub> F <sub>9</sub> CHO	375-53-1	PFPeAL
Perfluoroheptanal	C <sub>6</sub> F <sub>13</sub> CHO	63967-41-9	PFHpAL
Perfluorononanal	C <sub>8</sub> F <sub>17</sub> CHO	63967-40-8	PFNAL
Perfluorooctanal	C <sub>9</sub> F <sub>19</sub> CHO	335-60-4	PFOAL
Perfluoroundecanal	C <sub>10</sub> F <sub>21</sub> CHO	63967-42-0	PFUnDAL

<b>Perfluoroalkyl aldehyde hydrates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluoropentanal hydrate	C <sub>4</sub> F <sub>9</sub> CH(OH) <sub>2</sub>	355-30-6	PFPeAL.H <sub>2</sub> O
Perfluoroheptanal hydrate	C <sub>6</sub> F <sub>13</sub> CH(OH) <sub>2</sub>	64739-16-8	PFHpAL.H <sub>2</sub> O
Perfluorononanal hydrate	C <sub>8</sub> F <sub>17</sub> CH(OH) <sub>2</sub>	191528-99-1	PFNAL.H <sub>2</sub> O
Perfluoroundecanal hydrate	C <sub>10</sub> F <sub>21</sub> CH(OH) <sub>2</sub>	None Available	PFUnDAL.H <sub>2</sub> O

<b>(n:2) Fluorotelomer (saturated) carboxylic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
6:2 Fluorotelomer carboxylic acid	$C_6F_{13}CH_2COOH$	53826-12-3	6:2 FTCA
8:2 Fluorotelomer carboxylic acid	$C_8F_{17}CH_2COOH$	27854-31-5	8:2 FTCA
10:2 Fluorotelomer carboxylic acid	$C_{10}F_{21}CH_2COOH$	53826-13-4	10:2 FTCA
12:2 Fluorotelomer carboxylic acid	$C_{12}F_{25}CH_2COOH$	70887-93-3	12:2 FTCA

<b>(n:2) Fluorotelomer unsaturated carboxylic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
6:2 Fluorotelomer unsaturated carboxylic acid	$C_5F_{11}CF=CHCOOH$	70887-88-6	6:2 FTUCA
8:2 Fluorotelomer unsaturated carboxylic acid	$C_7F_{15}CF=CHCOOH$	70887-84-2	8:2 FTUCA
10:2 Fluorotelomer unsaturated carboxylic acid	$C_9F_{19}CF=CHCOOH$	70887-94-4	10:2 FTUCA
12:2 Fluorotelomer unsaturated carboxylic acid	$C_{11}F_{23}CF=CHCOOH$	70887-95-5	12:2 FTUCA

<b>Other biotransformation products of n:2 FTOHs</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:3 Acid	$C_4F_9(CH_2)_2COOH$	80705-13-1	4:3 Acid
5:3 Acid	$C_5F_{11}(CH_2)_2COOH$	914637-49-3	5:3 Acid
6:3 Acid	$C_6F_{13}(CH_2)_2COOH$	27854-30-4	6:3 Acid
7:3 Acid	$C_7F_{15}(CH_2)_2COOH$	812-70-4	7:3 Acid
5:3 Unsaturated carboxylic acid	$C_5F_{11}CH=CHCOOH$	1869-04-1 875878-70-9 (E)	5:3 UAcid
7:3 Unsaturated carboxylic acid	$C_7F_{15}CH=CHCOOH$	755-03-3 56017-63-1 (E) 173441-56-0 (Z)	7:3 UAcid

<b>(n:2) Fluorotelomer sulfonic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer sulfonic acid	$C_4F_9CH_2CH_2SO_3H$	757124-72-4	4:2 FTSA
6:2 Fluorotelomer sulfonic acid	$C_6F_{13}CH_2CH_2SO_3H$	27619-97-2	6:2 FTSA
8:2 Fluorotelomer sulfonic acid	$C_8F_{17}CH_2CH_2SO_3H$	39108-34-4	8:2 FTSA
10:2 Fluorotelomer sulfonic acid	$C_{10}F_{21}CH_2CH_2SO_3H$	120226-60-0	10:2 FTSA

<b>(n:2) Fluorotelomer sulfonate anions</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
4:2 Fluorotelomer sulfonate anion	$C_4F_9CH_2CH_2SO_3^-$	414911-30-1	4:2 FTSA
6:2 Fluorotelomer sulfonate anion	$C_6F_{13}CH_2CH_2SO_3^-$	425670-75-3	6:2 FTSA
8:2 Fluorotelomer sulfonate anion	$C_8F_{17}CH_2CH_2SO_3^-$	481071-78-7	8:2 FTSA
10:2 Fluorotelomer sulfonate anion	$C_{10}F_{21}CH_2CH_2SO_3^-$	None available	10:2 FTSA

<b>Perfluoroalkane sulfonyl fluorides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluorobutane sulfonyl fluoride	$C_4F_9SO_2F$	375-72-4	PBSF
Perfluoropentane sulfonyl fluoride	$C_5F_{11}SO_2F$	375-81-5	PPeSF
Perfluorohexane sulfonyl fluoride	$C_6F_{13}SO_2F$	423-50-7	PHxSF
Perfluoroheptane sulfonyl fluoride	$C_7F_{15}SO_2F$	335-71-7	PHpSF
Perfluorooctane sulfonyl fluoride	$C_8F_{17}SO_2F$	307-35-7	POSF
Perfluorononane sulfonyl fluoride	$C_9F_{19}SO_2F$	68259-06-3	PNSF
Perfluorodecane sulfonyl fluoride	$C_{10}F_{21}SO_2F$	307-51-7	PDSF

<b>Perfluoroalkane sulfonamides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluorobutane sulfonamide	$C_4F_9SO_2NH_2$	30334-69-1	FBSA
Perfluoropentane sulfonamide	$C_5F_{11}SO_2NH_2$	82765-76-2	FPeSA
Perfluorohexane sulfonamide	$C_6F_{13}SO_2NH_2$	41997-13-1	FHxSA
Perfluoroheptane sulfonamide	$C_7F_{15}SO_2NH_2$	82765-77-3	FHpSA
Perfluorooctane sulfonamide	$C_8F_{17}SO_2NH_2$	754-91-6	FOSA
<b><i>N</i>-Methyl perfluoroalkane sulfonamides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Methyl perfluorobutane sulfonamide	$C_4F_9SO_2NH(CH_3)$	68298-12-4	MeFBSA
<i>N</i> -Methyl perfluoropentane sulfonamide	$C_5F_{11}SO_2NH(CH_3)$	68298-13-5	MeFPeSA
<i>N</i> -Methyl perfluorohexane sulfonamide	$C_6F_{13}SO_2NH(CH_3)$	68259-15-4	MeFHxSA
<i>N</i> -Methyl perfluoroheptane sulfonamide	$C_7F_{15}SO_2NH(CH_3)$	68259-14-3	MeFHpSA
<i>N</i> -Methyl perfluorooctane sulfonamide	$C_8F_{17}SO_2NH(CH_3)$	31506-32-8	MeFOSA
<b><i>N</i>-Ethyl perfluoroalkane sulfonamides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Ethyl perfluorobutane sulfonamide	$C_4F_9SO_2NH(C_2H_5)$	40630-67-9	EtFBSA
<i>N</i> -Ethyl perfluoropentane sulfonamide	$C_5F_{11}SO_2NH(C_2H_5)$	162682-16-8	EtFPeSA
<i>N</i> -Ethyl perfluorohexane sulfonamide	$C_6F_{13}SO_2NH(C_2H_5)$	87988-56-5	EtFHxSA



<i>N</i> -Ethyl perfluoroheptane sulfonamide	$C_7F_{15}SO_2NH(C_2H_5)$	68957-62-0	EtFHpSA
<i>N</i> -Ethyl perfluorooctane sulfonamide	$C_8F_{17}SO_2NH(C_2H_5)$ (sulfluramid)	4151-50-2	EtFOSA
<b><i>N,N</i>-Dialkyl perfluoroalkane sulfonamides</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N,N</i> -Dimethyl perfluorooctane sulfonamide	$C_8F_{17}SO_2N(CH_3)_2$	213181-78-3	Me <sub>2</sub> FOSA
<i>N,N</i> -Diethyl perfluorooctane sulfonamide	$C_8F_{17}SO_2N(C_2H_5)_2$	87988-61-2	Et <sub>2</sub> FOSA

<b>Perfluoroalkane sulfonamido ethanols</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluorobutane sulfonamidoethanol	$C_4F_9SO_2NHCH_2CH_2OH$	34454-99-4	FBSE
Perfluoropentane sulfonamidoethanol	$C_5F_{11}SO_2NHCH_2CH_2OH$	None available	FPeSE
Perfluorohexane sulfonamidoethanol	$C_6F_{13}SO_2NHCH_2CH_2OH$	106443-63-4	FHxSE
Perfluoroheptane sulfonamidoethanol	$C_7F_{15}SO_2NHCH_2CH_2OH$	167398-54-1	FHpSE
Perfluorooctane sulfonamidoethanol	$C_8F_{17}SO_2NHCH_2CH_2OH$	10116-92-4	FOSE

<b>Perfluoroalkane sulfonamidoacetic acids</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
Perfluorobutane sulfonamidoacetic acid	$C_4F_9SO_2NHCH_2COOH$	347872-22-4	FBSAA
Perfluoropentane sulfonamidoacetic acid	$C_5F_{11}SO_2NHCH_2COOH$	647-43-8	FPeSAA
Perfluorohexane sulfonamidoacetic acid	$C_6F_{2n+1}SO_2NHCH_2COOH$	1003193-99-4	FHxSAA
Perfluoroheptane sulfonamidoacetic acid	$C_7F_{15}SO_2NHCH_2COOH$	1003194-00-0	FHpSAA
Perfluorooctane sulfonamidoacetic acid	$C_8F_{17}SO_2NHCH_2COOH$	2806-24-8	FOSAA

<b><i>N</i>-Methyl perfluoroalkane sulfonamidoethanols</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Methyl perfluorobutane sulfonamidoethanol	$C_4F_9SO_2N(CH_3)CH_2CH_2OH$	34454-97-2	MeFBSE
<i>N</i> -Methyl perfluoropentane sulfonamidoethanol	$C_5F_{11}SO_2N(CH_3)CH_2CH_2OH$	68555-74-8	MeFPeSE
<i>N</i> -Methyl perfluorohexane sulfonamidoethanol	$C_6F_{13}SO_2N(CH_3)CH_2CH_2OH$	68555-75-9	MeFHxSE
<i>N</i> -Methyl perfluoroheptane sulfonamidoethanol	$C_7F_{15}SO_2N(CH_3)CH_2CH_2OH$	68555-76-0	MeFHpSE
<i>N</i> -Methyl perfluorooctane sulfonamidoethanol	$C_8F_{17}SO_2N(CH_3)CH_2CH_2OH$	24448-09-7	MeFOSE

<b><i>N</i>-Ethyl perfluoroalkane sulfonamidoethanols</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Ethyl perfluorobutane sulfonamidoethanol	$C_4F_9SO_2N(C_2H_5)CH_2CH_2OH$	34449-89-3	EtFBSE
<i>N</i> -Ethyl perfluoropentane sulfonamidoethanol	$C_5F_{11}SO_2N(C_2H_5)CH_2CH_2OH$	68555-72-6	EtFPeSE
<i>N</i> -Ethyl perfluorohexane sulfonamidoethanol	$C_6F_{13}SO_2N(C_2H_5)CH_2CH_2OH$	34455-03-3	EtFHxSE
<i>N</i> -Ethyl perfluoroheptane sulfonamidoethanol	$C_7F_{15}SO_2N(C_2H_5)CH_2CH_2OH$	68555-73-7	EtFHpSE
<i>N</i> -Ethyl perfluorooctane sulfonamidoethanol	$C_8F_{17}SO_2N(C_2H_5)CH_2CH_2OH$	1691-99-2	EtFOSE

<b><i>N</i>-Methyl perfluoroalkane sulfonamidoacetic acids and salts</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Methyl perfluorobutane sulfonamidoacetic acid	$C_4F_9SO_2N(CH_3)CH_2COOH$	159381-10-9	MeFBSAA
<i>N</i> -Methyl perfluorohexane sulfonamidoacetic acid	$C_6F_{13}SO_2N(CH_3)CH_2COOH$	715646-50-7	MeFHxSAA
<i>N</i> -Methyl perfluorooctane sulfonamidoacetic acid	$C_8F_{17}SO_2N(CH_3)CH_2COOH$	2355-31-9	MeFOSAA
Potassium <i>N</i> -methyl perfluorooctane sulfonamidoacetate	$K^+ C_8F_{17}SO_2N(CH_3)CH_2COO^-$	70281-93-5	K-MeFOSAA

<b><i>N</i>-Ethyl perfluoroalkane sulfonamidoacetic acids and salts</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Ethyl perfluorobutane sulfonamidoacetic acid	$C_4F_9SO_2N(C_2H_5)CH_2COOH$	68957-33-5	EtFBSAA
<i>N</i> -Ethyl perfluoropentane sulfonamidoacetic acid	$C_5F_{11}SO_2N(C_2H_5)CH_2COOH$	68957-31-3	EtFPeSAA
<i>N</i> -Ethyl perfluorohexane sulfonamidoacetic acid	$C_6F_{13}SO_2N(C_2H_5)CH_2COOH$	68957-32-4	EtFHxSAA
<i>N</i> -Ethyl perfluoroheptane sulfonamidoacetic acid	$C_7F_{15}SO_2N(C_2H_5)CH_2COOH$	68957-63-1	EtFHpSAA
<i>N</i> -Ethyl perfluorooctane sulfonamidoacetic acid	$C_8F_{17}SO_2N(C_2H_5)CH_2COOH$	2991-50-6	EtFOSAA
Potassium <i>N</i> -ethyl perfluorooctane sulfonamidoacetate	$K^+ C_8F_{17}SO_2N(C_2H_5)CH_2COO^-$	2991-51-7	K-EtFOSAA

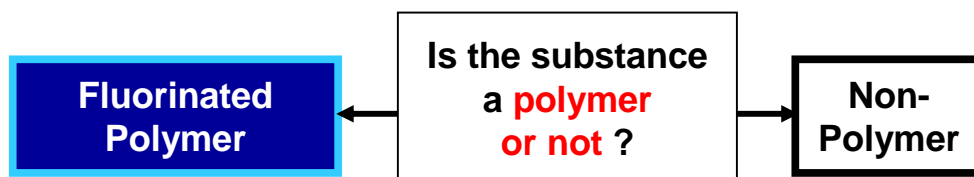
<b><i>N</i>-Methyl perfluoroalkane sulfonamidoethyl acrylates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Methyl perfluorobutane sulfonamidoethyl acrylate	$C_4F_9SO_2N(CH_3)CH_2CH_2OC(O)CH=CH_2$	67584-55-8	MeFBSAC
<i>N</i> -Methyl perfluoropentane sulfonamidoethyl acrylate	$C_5F_{11}SO_2N(CH_3)CH_2CH_2OC(O)CH=CH_2$	67584-56-9	MeFPeSAC
<i>N</i> -Methyl perfluorohexane sulfonamidoethyl acrylate	$C_6F_{13}SO_2N(CH_3)CH_2CH_2OC(O)CH=CH_2$	67584-57-0	MeFHxSAC

<i>N</i> -Methyl perfluoroheptane sulfonamidoethyl acrylate	$C_7F_{15}SO_2N(CH_3)CH_2CH_2OC(O)CH=CH_2$	68084-62-8	MeFHpSAC
<i>N</i> -Methyl perfluorooctane sulfonamidoethyl acrylate	$C_8F_{17}SO_2N(CH_3)CH_2CH_2OC(O)CH=CH_2$	25268-77-3	MeFOSAC
<b><i>N</i>-Ethyl perfluoroalkane sulfonamidoethyl acrylates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Ethyl perfluorobutane sulfonamidoethyl acrylate	$C_4F_9SO_2N(C_2H_5)CH_2CH_2OC(O)CH=CH_2$	17329-79-2	EtFBSAC
<i>N</i> -Ethyl perfluoropentane sulfonamidoethyl acrylate	$C_5F_{11}SO_2N(C_2H_5)CH_2CH_2OC(O)CH=CH_2$	68298-06-6	EtFPeSAC
<i>N</i> -Ethyl perfluorohexane sulfonamidoethyl acrylate	$C_6F_{13}SO_2N(C_2H_5)CH_2CH_2OC(O)CH=CH_2$	1893-52-3	EtFHxSAC
<i>N</i> -Ethyl perfluoroheptane sulfonamidoethyl acrylate	$C_7F_{15}SO_2N(C_2H_5)CH_2CH_2OC(O)CH=CH_2$	59071-10-2	EtFHpSAC
<i>N</i> -Ethyl perfluorooctane sulfonamidoethyl acrylate	$C_8F_{17}SO_2N(C_2H_5)CH_2CH_2OC(O)CH=CH_2$	423-82-5	EtFOSAC
<b><i>N</i>-Methyl perfluoroalkane sulfonamidoethyl methacrylates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Methyl perfluorobutane sulfonamidoethyl methacrylate	$C_4F_9SO_2N(CH_3)CH_2CH_2OC(O)C(CH_3)=CH_2$	67584-59-2	MeFBSMAC
<i>N</i> -Methyl perfluoropentane sulfonamidoethyl methacrylate	$C_5F_{11}SO_2N(CH_3)CH_2CH_2OC(O)C(CH_3)=CH_2$	67584-60-5	MeFPeSMAC
<i>N</i> -Methyl perfluorohexane sulfonamidoethyl methacrylate	$C_6F_{13}SO_2N(CH_3)CH_2CH_2OC(O)C(CH_3)=CH_2$	67584-61-6	MeFHxSMAC

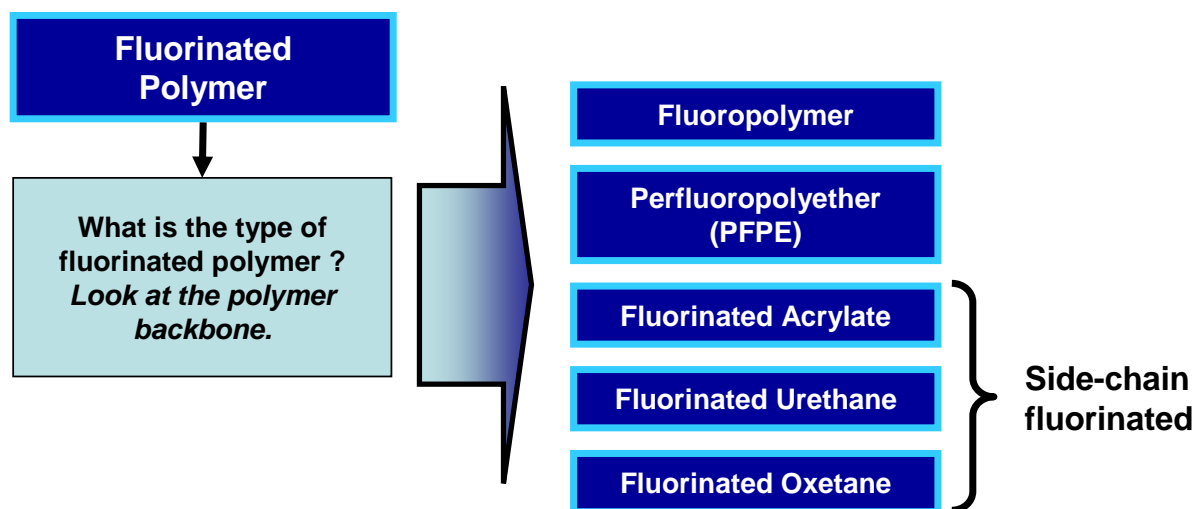
<i>N</i> -Methyl perfluoroheptane sulfonamidoethyl methacrylate	$C_7F_{15}SO_2N(CH_3)CH_2CH_2OC(O)C(CH_3)=CH_2$	67939-96-2	MeFHpSMAC
<i>N</i> -Methyl perfluorooctane sulfonamidoethyl methacrylate	$C_8F_{17}SO_2N(CH_3)CH_2CH_2OC(O)C(CH_3)=CH_2$	14650-24-9	MeFOSMAC
<b><i>N</i>-Ethyl perfluoroalkane sulfonamidoethyl methacrylates</b>	<b>FORMULA</b>	<b>CAS REGISTRY NUMBER</b>	<b>ACRONYM</b>
<i>N</i> -Ethyl perfluorobutane sulfonamidoethyl methacrylate	$C_4F_9SO_2N(C_2H_5)CH_2CH_2OC(O)C(CH_3)=CH_2$	67939-33-7	EtFBSMAC
<i>N</i> -Ethyl perfluoropentane sulfonamidoethyl methacrylate	$C_5F_{11}SO_2N(C_2H_5)CH_2CH_2OC(O)C(CH_3)=CH_2$	67906-73-4	EtFPeSMAC
<i>N</i> -Ethyl perfluorohexane sulfonamidoethyl methacrylate	$C_6F_{13}SO_2N(C_2H_5)CH_2CH_2OC(O)C(CH_3)=CH_2$	67906-70-1	EtFHxSMAC
<i>N</i> -Ethyl perfluoroheptane sulfonamidoethyl methacrylate	$C_7F_{15}SO_2N(C_2H_5)CH_2CH_2OC(O)C(CH_3)=CH_2$	67939-36-0	EtFHpSMAC
<i>N</i> -Ethyl perfluorooctane sulfonamidoethyl methacrylate	$C_8F_{17}SO_2N(C_2H_5)CH_2CH_2OC(O)C(CH_3)=CH_2$	376-14-7	EtFOSMAC

## Figure S1. Terminology Decision Flowcharts

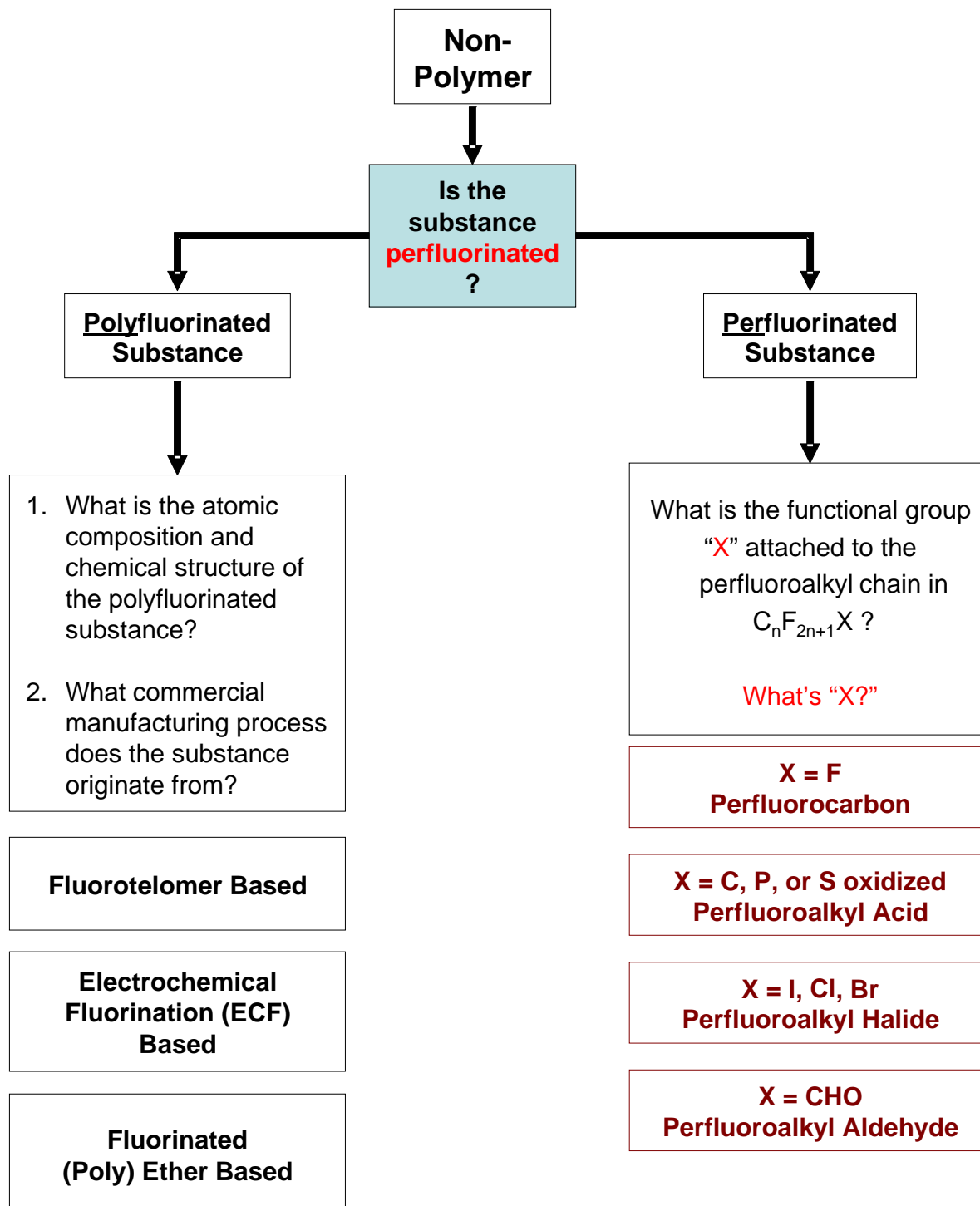
How to determine nomenclature – **an Overview**



## Fluorinated Polymer Decision

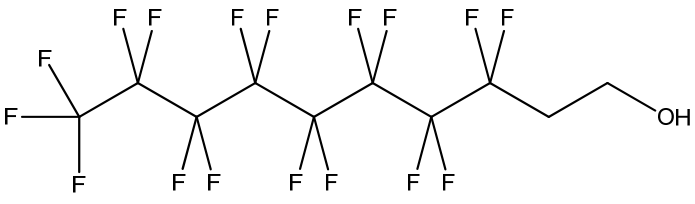


# Non-Polymer Decision Tree





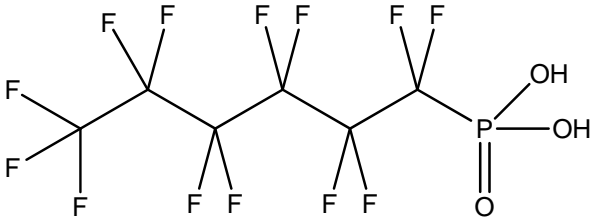
### Example #1 8:2 Fluorotelomer alcohol

Substance Chemical Structure	Question	Conclusion
<p><math>F(CF_2)_8CH_2CH_2OH</math></p> 	<p><b>Polymer or Non-Polymer?</b></p>	<p><b>Non-Polymer</b></p>
<p><math>F(CF_2)_8CH_2CH_2OH</math></p>	<p><b>Perfluorinated?</b></p> <p><i>No. The substance has a perfluoroalkyl chain, <math>F(CF_2)_8</math>, but all hydrogen on carbons are not replaced with fluorine</i></p>	<p><b>Poly-fluorinated</b></p>
<p><math>F(CF_2)_8CH_2CH_2OH</math></p>	<p><b>Process Origin?</b></p> <p><i>Perfluoroalkyl chain with an ethylene spacer (-CH<sub>2</sub>CH<sub>2</sub>-). Fluorotelomer origin</i></p>	<p><b>Fluoro-telomer origin</b></p>
<p><math>F(CF_2)_8CH_2CH_2OH</math></p>	<p><b>Functionality</b></p> <p><i>Alcohol</i></p>	<p><b>Fluoro-telomer Alcohol (FTOH)</b></p>
<p><math>F(CF_2)_8CH_2CH_2OH</math></p>	<p><i>Eight fluorinated carbons, two non-fluorinated carbons, therefore 8:2</i></p>	<p><b>8:2 Fluoro-telomer Alcohol (8:2 FTOH)</b></p>

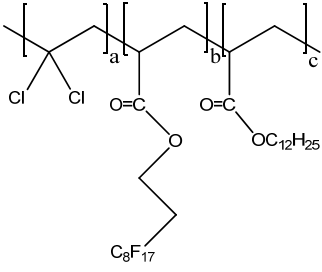
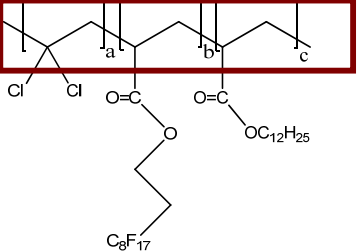
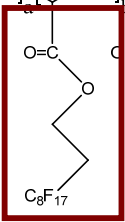
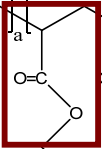
## Example #2 Perfluorobutane sulfonamide

Substance Chemical Structure	Question	Conclusion
<p><math>F(CF_2)_4SO_2NH_2</math></p>	<p><b>Polymer or Non-Polymer?</b></p>	<p>Non-Polymer</p>
<p><math>F(CF_2)_4SO_2NH_2</math></p>	<p><b>Perfluorinated?</b></p> <p><i>Yes. All hydrogens on all four carbons are replaced with fluorine.</i></p> <p><i>Perfluorobutyl</i></p>	<p>Perfluorinated</p>
<p><math>F(CF_2)_4SO_2NH_2</math></p>	<p><b>Perfluoroalkyl Acid?</b></p> <p><i>No. Has no acid functionality</i></p>	
<p><math>F(CF_2)_4SO_2NH_2</math></p>	<p><b>Process Origin?</b></p> <p><i>Perfluoroalkyl chain with a sulfone, <math>-SO_2-</math>, spacer.</i></p> <p><i>Electrochemical fluorination (ECF) origin</i></p>	<p>ECF origin</p>
<p><math>F(CF_2)_4SO_2NH_2</math></p>	<p><b>Functionality</b></p> <p><i>Sulfonamide</i></p>	<p>Perfluorobutane-sulfonamide (FBSA)</p>

### Example #3 Perfluorohexyl phosphonic acid

Substance Chemical Structure	Question	Conclusion
$\text{F}(\text{CF}_2)_6\text{P}(=\text{O})(\text{OH})_2$ 	<p><b>Polymer or Non-Polymer?</b></p>	<p><b>Non-Polymer</b></p>
$\text{F}(\text{CF}_2)_6\text{P}(=\text{O})(\text{OH})_2$	<p><b>Perfluorinated?</b></p> <p><i>Yes. All hydrogens on all six carbons are replaced with fluorine. Perfluorohexyl</i></p>	<p><b>Perfluorinated</b></p>
$\text{F}(\text{CF}_2)_6\text{P}(=\text{O})(\text{OH})_2$	<p><b>Perfluoroalkyl Acid?</b></p> <p><i>Yes. Phosphonic, -P(=O)(OH)<sub>2</sub>, acid</i></p>	<p><b>Perfluoroalkyl acid</b></p>
$\text{F}(\text{CF}_2)_6\text{P}(=\text{O})(\text{OH})_2$		<p><b>Perfluorohexyl phosphonic acid (C6-PFPA)</b></p>

**Example #4 Side-chain Fluorinated Acrylate Polymer (Fluorotelomer origin)**

Substance Chemical Structure	Question	Conclusion
	<p><b>Polymer or Non-Polymer?</b></p>	<p><b>Polymer</b></p>
	<p><b>Fluoropolymer?</b></p> <p><i>No. The polymer backbone contains no fluorine bound to carbon.</i></p>	
	<p><b>Side-chain fluorinated?</b></p> <p>Yes</p>	<p><b>Side-chain fluorinated polymer</b></p>
	<p><b>Polymer Type?</b></p> <p><i>Acrylate</i></p>	<p><b>Side-chain fluorinated acrylate polymer</b></p>