

Commercially available fluoropolymers

The following tables summarise the information available on the chemical identity of the most common fluoropolymers:

1. ECTFE

| | |
|----------------------------------------------------|------------------------------------------------------------|
| Name | Ethylene-CTFE copolymer |
| Other names (trade names and abbreviations) | ECTFE Copolymer of ethylene and chlorotrifluoroethylene |
| CAS number | 25101-45-5 |
| Structure/Formula | $[(\text{CH}_2\text{-CH}_2)_x\text{-(CFCl-CF}_2)_y]_n$ |
| ECHA information | No |
| FP type | Fluoroplastic |

2. ETFE

| | |
|----------------------------------------------------|---------------------------------------------------------------|
| Name | Ethylene-TFE copolymer |
| Other names (trade names and abbreviations) | ETFE Ethylene tetrafluoroethylene |
| CAS number | 25038-71-5 / 68258-85-5 |
| Structure/Formula | $[(\text{CF}_2\text{-CF}_2)_x\text{-(CH}_2\text{-CH}_2)_y]_n$ |
| ECHA information | No |
| FP type | Fluoroplastic |

3. FEP

| | |
|----------------------------------------------------|--------------------------------------------------------------------------------------------|
| Name | TFE-HFP copolymer |
| Regulatory process name | 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1,2,2-tetrafluoroethene |
| Other names (trade names and abbreviations) | FEP Fluorinated ethylene propylene Tetrafluoroethylene-hexafluoropropylene copolymer |
| EC number | 607-524-4 |
| CAS number | 25067-11-2 |
| Structure/Formula | $[(\text{CF}(\text{CF}_3)\text{-CF}_2)_x(\text{CF}_2\text{-CF}_2)_y]_n$ |
| ECHA information | Yes |
| FP type | Fluoroplastic |

4. PFA

| | |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Name | TFE-Perfluoroalkyl trifluorovinyl ethers copolymer |
| Other names (trade names and abbreviations) | PFA Perfluoroalkoxy polymer Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]-, polymer with tetrafluoroethene |

| | |
|--------------------------|--------------------------------------------------------------------------------------------------|
| | Ethene, 1,1,2,2-tetrafluoro-, polymer with 1,1,2-trifluoro-2-(1,1,2,2,2-pentafluoroethoxy)ethene |
| CAS number | 26655-00-5 / 31784-04-0 |
| Structure/Formula | $(CF_2CF_2)_x[CF_2CF(O CF_2CF_2CF_3)]_y$ |
| ECHA information | No |
| FP type | Fluoroplastic |

5. PTFE

| | |
|----------------------------------------------------|-------------------------------------------|
| Name | Polytetrafluoroethylene |
| Regulatory process name | Ethene, 1,1,2,2-tetrafluoro-, homopolymer |
| Other names (trade names and abbreviations) | PTFE |
| EC number | 618-337-2 |
| CAS number | 9002-84-0 |
| Structure/Formula | $[CF_2-CF_2]_n$ |
| ECHA information | Yes |
| FP type | Fluoroplastic |

6. PVDF

| | |
|----------------------------------------------------|--------------------------------------------|
| Name | Polyvinylidene fluoride |
| Regulatory process name | Ethene, 1,1-difluoro-, homopolymer |
| Other names (trade names and abbreviations) | PVDF Homopolymer of vinylidene fluoride |
| EC number | 607-458-6 |
| CAS number | 24937-79-9 |
| Structure/Formula | $[CH_2-CF_2]_n$ |
| ECHA information | Yes |
| FP type | Fluoroplastic |

7. P(VDF-TrFE)

| | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | VDF TrFE copolymer |
| Other names (trade names and abbreviations) | Ethene, 1,1,2-trifluoro-, polymer with 1,1-difluoroethene P(VDF-TrFE) Homopolymer of vinylidene fluoride Copolymer of vinylidene fluoride and Trifluoroethylene. Piezotech® FC |
| CAS number | 28960-88-5 |
| Structure/Formula | $[[CH_2-CF_2]_x[CHF-CF_2]_y]_n$ |
| ECHA information | No |
| FP type | |

8. P(VDF-TrFE-CTFE)

| | |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | VDF TrFE copolymer |
| Other names (trade names and abbreviations) | Ethene, 1-chloro-1,2,2-trifluoro-, polymer with 1,1-difluoroethene and 1,1,2-trifluoroethene P(VDF-TrFE-CTFE). Copolymers of vinylidene fluoride, trifluoroethylene and chlorotrifluoroethylene, Piezotech® RT F |
| CAS number | 81197-12-8 |
| Structure/Formula | $[[\text{CH}_2\text{-CF}_2]_x[\text{CHF-CF}_2]_y[\text{CFCl-CF}_2]_z]_n$ |
| ECHA information | No |
| FP type | Fluoroplastic |

9. P(VDF-TrFE-CFE)

| | |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | VDF-TrFE-CFE copolymer |
| Other names (trade names and abbreviations) | Ethene, 1,1,2-trifluoro-, polymer with 1-chloro-1-fluoroethene and 1,1-difluoroethene P(VDF-TrFE-CFE). Terpolymer of vinylidene fluoride, trifluoroethylene and chlorofluoroethylene, Piezotech® RT F |
| CAS number | 433301-55-4 |
| Structure/Formula | $[[\text{CH}_2\text{-CF}_2]_x[\text{CHF-CF}_2]_y[\text{CFCl-CH}_2]_z]_n$ |
| ECHA information | No |
| FP type | Fluoroplastic |

10. PCTFE

| | |
|----------------------------------------------------|------------------------------------------------|
| Name | Polymer of chlorotrifluoroethylene |
| Regulatory process name | Ethene, 1-chloro-1,2,2-trifluoro-, homopolymer |
| Other names (trade names and abbreviations) | PCTFE Polychlorotrifluoroethylene |
| EC number | 618-336-7 |
| CAS number | 9002-83-9 |
| Structure/Formula | $[\text{CF}_2\text{-CFCl}]_n$ |
| ECHA information | Yes |
| FP type | Fluoroplastic |

11. EFEP

| | |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Name | Copolymer of ethylene, tetrafluoroethylene, and hexafluoropropylene |
| Other names (trade names and abbreviations) | EFEP Ethylene fluorinated ethylene propylene |
| CAS number | <i>Confidential</i> |
| Structure/Formula | $[(\text{CH}_2\text{-CH}_2)_x(\text{CF}_2\text{-CF}_2)_y(\text{CF}(\text{CF}_3)\text{-CF}_2)_z]_n$ |
| ECHA information | No |
| FP type | Fluoroplastic |

12.CPT

| | |
|----------------------------------------------------|------------------------------------------------------------------------------------|
| Name | Terpolymer of TFE, perfluoroalkyl trifluorovinyl ether and chlorotrifluoroethylene |
| Other names (trade names and abbreviations) | CPT Copolymer of tetrafluoroethylene and perfluoroalkyl vinyl ether |
| ECHA information | No |
| FP type | Fluoroplastic/ Fluoroelastomer |

13. VDF-co-HFP / FKM#1

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|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | VDF-HFP copolymer |
| Regulatory process name | 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene |
| IUPAC names | 1,1-Difluorethylen-hexafluorpropenpolymer |
| Other names (trade names and abbreviations) | VDF-co-HFP FKM#1 VDF/HFP VFHP HV PVDF copolymer Copolymer of vinylidene fluoride and hexafluoropropylene Vinylidene fluoride-hexafluoropropylene copolymer Polyvinylidene fluoropropene-hexafluoropropene 1,1-Difluorethylen-hexafluorpropenopolymer |
| EC number | 618-470-6 |
| CAS number | 9011-17-0 |
| Structure/Formula | $[CF(CF_3)-CF_2]_x(CH_2-CF_2)_y]_n$ |
| ECHA information | Yes |
| FP type | Fluoroplastic |

14.THV / FKM#2

| | |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Terpolymer of TFE, HFP and VDF |
| Regulatory process name | 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene and 1,1,2,2-tetrafluoroethene |
| Other names (trade names and abbreviations) | THV FKM#2 Terpolymer of tetrafluoroethylene, hexafluoropropylene and vinylidene fluoride Vinylidene fluoride-tetrafluoroethylene-hexafluoropropylene copolymer |
| EC number | 607-638-4 |
| CAS number | 25190-89-0 |

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|-------------------------|---------------------------------|
| ECHA information | Yes |
| FP type | Fluoroplastic / Fluoroelastomer |

15.VTP / FKM#3

| | |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Polymer of Vinylidene fluoride, Tetrafluoroethene and Perfluoromethylvinylether |
| Other names (trade names and abbreviations) | VTP FKM#3 TFE/PMVE/VDF Vinylidene fluoride-tetrafluoroethylene-trifluoro(trifluoromethoxy)ethene copolymer Ethene, tetrafluoro-, polymer with 1,1-difluoroethene and trifluoro(trifluoromethoxy)ethene |
| CAS number | 56357-87-0 |
| Structure/Formula | C ₇ H ₂ F ₁₂ O |
| ECHA information | No |
| FP type | Fluoroplastic / Fluoroelastomer |

16.FFKM

| | |
|----------------------------------------------------|---------------------------------------------------------------------------------------|
| Name | Copolymer of tetrafluoroethylene and perfluoromethylvinylether |
| Other names (trade names and abbreviations) | FFKM Ethene, tetrafluoro-, polymer with trifluoro(trifluoromethoxy)ethene |
| CAS number | 26425-79-6 |
| Structure/Formula | [CF(OCF ₃)CF ₂ .CF ₂ CF ₂] _x |
| ECHA information | No |
| FP type | Fluoroelastomer |

17. FEPM

| | |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | 1-Propene, polymer with 1,1,2,2-tetrafluoroethene |
| Other names (trade names and abbreviations) | FEPM TFE/P Propylene tetrafluoroethylene copolymer 1-Propene polymer with tetrafluoroethene Tetrafluoroethylene-propylene copolymer |
| EC number | 608-038-5 |
| CAS number | 27029-05-6 |
| ECHA information | Yes |
| FP type | Fluoroplastic / Fluoroelastomer |

18.VDF/HFO-1234yf

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|-------------|------------------------------------------------------------------|
| Name | 1-Propene, 2,3,3,3-tetrafluoro-, polymer with 1,1-difluoroethene |
|-------------|------------------------------------------------------------------|

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|----------------------------------------------------|---------------------------------|
| Other names (trade names and abbreviations) | VDF/HFO-1234yf |
| CAS number | 1034381-22-0 |
| ECHA information | No |
| FP type | Fluoroplastic / Fluoroelastomer |

19.TFE/E/HFP/PMVE/VDF

| | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Polymer of Vinylidene fluoride, Hexafluoropropene, Tetrafluoroethene |
| Other names (trade names and abbreviations) | TFE/E/HFP/PMVE/VDF 1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene, ethene, 1,1,2,2-tetrafluoroethene and 1,1,2-trifluoro-2-(trifluoromethoxy)ethene |
| CAS number | 149935-01-3 |
| Structure/Formula | $(C_3F_6O.C_3F_6.C_2H_4.C_2H_2F_2.C_2F_4)_x$ |
| ECHA information | No |
| FP type | Fluoroelastomer |

20.TDM

| | |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Vinylidene fluoride-tetrafluoroethylene-trifluoro(trifluoromethoxy)ethane |
| Other names (trade names and abbreviations) | TDM Low T FKM Ethene, [difluoro (trifluoromethoxy) methoxy] trifluoro copolymer Ethene, [difluoro(trifluoromethoxy)methoxy]trifluoro-, Polymer with 1,1-difluoroethene |
| CAS number | 870707-45-2 |
| ECHA information | No |
| FP type | Fluoroplastic / Fluoroelastomer |

21.PFPE 1

| | |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)], α -(1,1,2,2,2-pentafluoroethyl)- ω -[tetrafluoro(trifluoromethyl)ethoxy] |
| IUPAC names | Perfluoroalkylether |
| Other names (trade names and abbreviations) | PFPE 1 Perfluoropolyether/ Perfluorinated Polyetheroil, for lubricants |
| EC number | 611-940-1 |
| CAS number | 60164-51-4 |
| Structure / Formula | $(C_3F_6O)_x.C_5F_{12}O$ |
| ECHA information | Yes |
| FP type | Perfluoropolyether |

22.PFPE 2

| | |
|----------------------------------------------------|---------------------------------------------------------|
| Name | Oxetane, 2,2,3,3-tetrafluoro-, homopolymer, fluorinated |
| Other names (trade names and abbreviations) | PFPE 2 |
| CAS number | 113114-19-5 |
| Structure / Formula | $(C_3F_6O)_x \cdot C_5F_{12}O$ |
| ECHA information | No |
| FP type | Perfluoropolyether |

23.PFPE 3

| | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Name | Ethene, 1,1,2,2-tetrafluoro-, oxidized, polymd. |
| Other names (trade names and abbreviations) | PFPE 3 Ethene, tetrafluoro-, oxidized, polymd. 1,1,2,2-Tetrafluoro-Ethene-, oxidized, polymd. |
| EC number | 615-043-6 |
| CAS number | 69991-61-3 |
| ECHA information | Yes |
| FP type | Perfluoropolyether |

24.CAS 185701-88-6

| | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name | Propanoyl fluoride, 2,3,3,3-tetrafluoro-2-(1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy)-, polymer with trifluoro(trifluoromethyl)oxirane, reaction products with 3-(ethenyldimethylsilyl)-N-methylbenzenamine |
| CAS number | 185701-88-6 |
| ECHA information | No |
| FP type | Fluoroplastic / Fluoroelastomer |

25.PFPE 4

| | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Name | 1-Propene, 1,1,2,3,3,3-hexafluoro-, oxidized, polymd., reduced, hydrolysed reaction products with ammonia |
| Other names (trade names and abbreviations) | PFPE 4 |
| CAS number | 370097-12-4 |
| ECHA information | No |
| FP type | Perfluoropolyether |

26. PFPE 5

| | |
|----------------------------------------------------|-------------------------------------------------------|
| Name | 1-Propene, 1,1,2,3,3,3-hexafluoro-, oxidized, polymd. |
| IUPAC names | 1-Propene, 1,1,2,3,3,3-hexafluoro-, oxidized, polymd. |
| Other names (trade names and abbreviations) | PFPE 5 |
| EC number | 615-044-1 |
| CAS number | 69991-67-9 |
| ECHA information | Yes |
| FP type | Perfluoropolyether |

27. FEVE

| | |
|----------------------------------------------------|---------------------------------------------|
| Name | Copolymer of fluoroethylene and vinyl ether |
| Other names (trade names and abbreviations) | FEVE Fluoro ethylene and vinyl ether |
| CAS number | 146915-43-7 / 207691-69-8 |
| ECHA information | No |
| FP type | Fluoroplastic / Fluoroelastomer |

28. Fluoropolymer ionomer

| | |
|----------------------------------------------------|--------------------------------------------------------|
| Name | Fluoropolymer ionomer |
| Other names (trade names and abbreviations) | Perfluorinated ionomer Ion conducting fluoropolymer |
| ECHA information | No |
| FP type | Fluoroplastic |

29. Amorphous fluoropolymer

| | |
|-------------------------|-------------------------|
| Name | Amorphous fluoropolymer |
| CAS number | 101182-89-2 |
| ECHA information | No |
| FP type | Fluoroplastic |

30. Mixture

| | |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Name | Mixture of Ethylene-tetrafluoroethylene copolymer and Vinylidene fluoridetetrafluoroethylene-hexafluoropropylene copolymer |
| CAS number | 94228-79-2 and 25190-89-0 |
| ECHA information | No |
| FP type | Mixture of fluoroplastic and fluoroelastomer |

31.VT

| | |
|-------------------------|---------------|
| Name | VT polymer |
| ECHA information | No |
| FP type | Fluoroplastic |

32.PFPE 6

| | |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Name | PFPE 6 Poly [oxy(1,1,2,2,3,3-hexafluoro-1,3-propanediyl)] , a-(2-carboxy-1,1,2,2-tetrafluoroethyl)-w-(heptafluoropropoxy)- |
| CAS number | 120895-92-3 |
| ECHA information | No |
| FP type | Perfluoropolyether |

33.PFPE 7

| | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Regulatory process name | Poly(oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)), alpha-(1-carboxy-1,2,2,2-tetrafluoroethyl)-omega-(tetrafluoro(trifluoromethyl)ethoxy)- |
| IUPAC name | Perfluoropolyether carboxylic acid |
| Name | PFPE 7 Poly(oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)), alpha-(1-carboxy-1,2,2,2-tetrafluoroethyl)-omega-(tetrafluoro(trifluoromethyl)ethoxy)- |
| EC number | 680-272-0 |
| CAS number | 51798-33-5 |
| ECHA information | Yes |
| FP type | Perfluoropolyether |

34.VdF/TFE

| | |
|---------------------------------------------------|--------------------------------------------------------------|
| Name | VdF/TFE co-polymer |
| Other names (trade names and abbreviation) | Copolymer of vinylidene fluoride and tetrafluoroethylene |
| Structure/Formula | $[(\text{CH}_2\text{-CF}_2)_x(\text{CF}_2\text{-CF}_2)_y]_n$ |
| ECHA information | No |
| FP type | Fluoroplastic |