

**WAC 173-441-040 Greenhouse gases.** (1) **Greenhouse gases.** Table A-1 of this section lists the GHGs regulated under this chapter and their global warming potentials.

(2) **CO<sub>2</sub>e conversion.** Use Equation A-1 of WAC 173-441-030 (1)(b)(iii) and the global warming potentials (GWP) listed in Table A-1 of this section to convert emissions into CO<sub>2</sub>e.

**Table A-1:  
Global Warming Potentials (100-Year Time Horizon)**

Name	CAS No.	Chemical Formula	GWP (100 yr.) <sup>1,2</sup>	
			2012-2013	≥ 2014 <sup>3,4</sup>
Carbon dioxide	124-38-9	CO <sub>2</sub>	1	1
Methane	74-82-8	CH <sub>4</sub>	21	25
Nitrous oxide	10024-97-2	N <sub>2</sub> O	310	298
<b>Fully Fluorinated GHGs</b>				
Sulfur hexafluoride	2551-62-4	SF <sub>6</sub>	23,900	22,800
Trifluoromethyl sulphur pentafluoride	373-80-8	SF <sub>5</sub> CF <sub>3</sub>	17,700	17,700
Nitrogen trifluoride	7783-54-2	NF <sub>3</sub>	17,200	17,200
PFC-14 (Perfluoromethane)	75-73-0	CF <sub>4</sub>	6,500	7,390
PFC-116 (Perfluoroethane)	76-16-4	C <sub>2</sub> F <sub>6</sub>	9,200	12,200
PFC-218 (Perfluoropropane)	76-19-7	C <sub>3</sub> F <sub>8</sub>	7,000	8,830
Perfluorocyclopropane	931-91-9	C-C <sub>3</sub> F <sub>6</sub>	17,340	17,340
PFC-3-1-10 (Perfluorobutane)	355-25-9	C <sub>4</sub> F <sub>10</sub>	7,000	8,860
PFC-318 (Perfluorocyclobutane)	115-25-3	C-C <sub>4</sub> F <sub>8</sub>	8,700	10,300
PFC-4-1-12 (Perfluoropentane)	678-26-2	C <sub>5</sub> F <sub>12</sub>	7,500	9,160
PFC-5-1-14 (Perfluorohexane, FC-72)	355-42-0	C <sub>6</sub> F <sub>14</sub>	7,400	9,300
PFC-6-1-12 (Hexadecafluoroheptane)	335-57-9	C <sub>7</sub> F <sub>16</sub> ; CF <sub>3</sub> (CF <sub>2</sub> ) <sub>5</sub> CF <sub>3</sub>	7,820	7,820
PFC-7-1-18 (Octadecafluorooctane)	307-34-6	C <sub>8</sub> F <sub>18</sub> ; CF <sub>3</sub> (CF <sub>2</sub> ) <sub>6</sub> CF <sub>3</sub>	7,620	7,620
PFC-9-1-18	306-94-5	C <sub>10</sub> F <sub>18</sub>	7,500	7,500
PFPMIE (HT-70)	NA	CF <sub>3</sub> OCF(CF <sub>3</sub> )CF <sub>2</sub> OCF <sub>2</sub> OCF <sub>3</sub>	10,300	10,300
Perfluorodecalin (cis)	60433-11-6	Z-C <sub>10</sub> F <sub>18</sub>	7,236	7,236
Perfluorodecalin (trans)	60433-12-7	E-C <sub>10</sub> F <sub>18</sub>	6,288	6,288
<b>Saturated Hydrofluorocarbons (HFCs) with Two or Fewer Carbon-Hydrogen Bonds</b>				
HFC-23	75-46-7	CHF <sub>3</sub>	11,700	14,800
HFC-32	75-10-5	CH <sub>2</sub> F <sub>2</sub>	650	675
HFC-125	354-33-6	C <sub>2</sub> HF <sub>5</sub>	2,800	3,500
HFC-134	359-35-3	C <sub>2</sub> H <sub>2</sub> F <sub>4</sub>	1,000	1,100
HFC-134a	811-97-2	CH <sub>2</sub> FCF <sub>3</sub>	1,300	1,430
HFC-227ca (1,1,1,2,2,3,3-Heptafluoropropane)	2252-84-8	CF <sub>3</sub> CF <sub>2</sub> CHF <sub>2</sub>	2,640	2,640
HFC-227ea	431-89-0	C <sub>3</sub> HF <sub>7</sub>	2,900	3,220
HFC-236cb	677-56-5	CH <sub>2</sub> FCF <sub>2</sub> CF <sub>3</sub>	1,340	1,340
HFC-236ea	431-63-0	CHF <sub>2</sub> CHFCF <sub>3</sub>	1,370	1,370

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			2012-2013	≥ 2014 <sup>3,4</sup>
HFC-236fa	690-39-1	C <sub>3</sub> H <sub>2</sub> F <sub>6</sub>	6,300	9,810
HFC-329p (1,1,1,2,2,3,3,4,4-Nonafluorobutane)	375-17-7	CHF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	2,360	2,360
HFC-43-10mcc	138495-42-8	CF <sub>3</sub> CFHCFHCF <sub>2</sub> CF <sub>3</sub>	1,300	1,640
<b>Saturated Hydrofluorocarbons (HFCs) with Three or More Carbon-Hydrogen Bonds</b>				
HFC-41	593-53-3	CH <sub>3</sub> F	150	92
HFC-143	430-66-0	C <sub>2</sub> H <sub>3</sub> F <sub>3</sub>	300	353
HFC-143a	420-46-2	C <sub>2</sub> H <sub>3</sub> F <sub>3</sub>	3,800	4,470
HFC-152	624-72-6	CH <sub>2</sub> FCH <sub>2</sub> F	53	53
HFC-152a	75-37-6	CH <sub>3</sub> CHF <sub>2</sub>	140	124
HFC-161	353-36-6	CH <sub>3</sub> CH <sub>2</sub> F	12	12
HFC-245ca	679-86-7	C <sub>3</sub> H <sub>3</sub> F <sub>5</sub>	560	693
HFC-245cb (1,1,1,2,2-Pentafluoropropane)	1814-88-6	CF <sub>3</sub> CF <sub>2</sub> CH <sub>3</sub>	4,620	4,620
HFC-245ea (1,1,2,3,3-Pentafluoropropane)	24270-66-4	CHF <sub>2</sub> CHFCHF <sub>2</sub>	235	235
HFC-245eb (1,1,1,2,3-Pentafluoropropane)	431-31-2	CH <sub>2</sub> FCHFCF <sub>3</sub>	290	290
HFC-245fa	460-73-1	CHF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	1,030	1,030
HFC-263fb (1,1,1-Trifluoropropane)	421-07-8	CH <sub>3</sub> CH <sub>2</sub> CF <sub>3</sub>	76	76
HFC-272ca (2,2-Difluoropropane)	420-45-1	CH <sub>3</sub> CF <sub>2</sub> CH <sub>3</sub>	144	144
HFC-365mfc	406-58-6	CH <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	794	794
<b>Saturated Hydrofluoroethers (HFEs) and Hydrochlorofluoroethers (HCFEs) with One Carbon-Hydrogen Bond</b>				
HFE-125	3822-68-2	CHF <sub>2</sub> OCF <sub>3</sub>	14,900	14,900
HFE-227ea	2356-62-9	CF <sub>3</sub> CHFOCF <sub>3</sub>	1,540	1,540
HFE-329mcc2	134769-21-4	CF <sub>3</sub> CF <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>	919	919
HFE-329me3 (1,1,1,2,3,3-Hexafluoro-3-(trifluoromethoxy)propane)	428454-68-6	CF <sub>3</sub> CFHCF <sub>2</sub> OCF <sub>3</sub>	NA	4,550*
1,1,1,2,2,3,3-Heptafluoro-3-(1,2,2,2-tetrafluoroethoxy)-propane	3330-15-2	CF <sub>3</sub> CF <sub>2</sub> CF <sub>2</sub> OCHF <sub>2</sub> CF <sub>3</sub>	NA	6,490*
<b>Saturated HFEs and HCFEs with Two Carbon-Hydrogen Bonds</b>				
HFE-134 (HG-00)	1691-17-4	CHF <sub>2</sub> OCHF <sub>2</sub>	6,320	6,320
HFE-236ca (1-(Difluoromethoxy)-1,1,2,2-tetrafluoroethane)	32778-11-3	CHF <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>	NA	4,240*
HFE-236ca12 (HG-10)	78522-47-1	CHF <sub>2</sub> OCF <sub>2</sub> OCHF <sub>2</sub>	2,800	2,800
HFE-236ca2 (Desflurane)	57041-67-5	CHF <sub>2</sub> OCHF <sub>2</sub> CF <sub>3</sub>	989	989
HFE-236fa	20193-67-3	CF <sub>3</sub> CH <sub>2</sub> OCF <sub>3</sub>	487	487
HFE-338mcf2	156053-88-2	CF <sub>3</sub> CF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>	552	552
HFE-338mmz1	26103-08-2	CHF <sub>2</sub> OCH(CF <sub>3</sub> ) <sub>2</sub>	380	380
HFE-338pcc13 (HG-01)	188690-78-0	CHF <sub>2</sub> OCF <sub>2</sub> CF <sub>2</sub> OCHF <sub>2</sub>	1,500	1,500

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HFE-43-10pccc (H-Galden 1040x, HG-11)	E1730133	CHF <sub>2</sub> OCF <sub>2</sub> OC <sub>2</sub> F <sub>4</sub> OCHF <sub>2</sub>	1,870	1,870
HCFE-235ca2 (Enflurane) (2-Chloro-1-(difluoromethoxy)-1,1,2-trifluoroethane)	13838-16-9	CHF <sub>2</sub> OCF <sub>2</sub> CHFCl	NA	583*
HCFE-235da2 (Isoflurane)	26675-46-7	CHF <sub>2</sub> OCHClCF <sub>3</sub>	350	350
HG-02 (1-(Difluoromethoxy)-2-(2-(difluoromethoxy)-1,1,2,2-tetrafluoroethoxy)-1,1,2,2-tetrafluoroethane)	205367-61-9	HF <sub>2</sub> C-(OCF <sub>2</sub> CF <sub>2</sub> ) <sub>2</sub> -OCF <sub>2</sub> H	NA	3,825*
HG-03 (1,1,3,3,4,4,6,6,7,7,9,9,10,10,12,12-Hexadecafluoro-2,5,8,11-tetraoxadecane)	173350-37-3	HF <sub>2</sub> C-(OCF <sub>2</sub> CF <sub>2</sub> ) <sub>3</sub> -OCF <sub>2</sub> H	NA	3,670*
HG-20 ((Difluoromethoxy) (difluoromethoxy) difluoromethoxy) difluoromethane)	249932-25-0	HF <sub>2</sub> C-(OCF <sub>2</sub> ) <sub>2</sub> -OCF <sub>2</sub> H	NA	5,300*
HG-21 (1,1,3,3,5,5,7,7,8,8,10,10-Dodecafluoro-2,4,6,9-tetraoxadecane)	249932-26-1	HF <sub>2</sub> C-OCF <sub>2</sub> CF <sub>2</sub> OCF <sub>2</sub> OCF <sub>2</sub> O-CF <sub>2</sub> H	NA	3,890*
HG-30 (1,1,3,3,5,5,7,7,9,9-Decafluoro-2,4,6,8-tetraoxanonane)	188690-77-9	HF <sub>2</sub> C-(OCF <sub>2</sub> ) <sub>3</sub> -OCF <sub>2</sub> H	NA	7,330*
1,1,3,3,4,4,6,6,7,7,9,9,10,10,12,12,13,13,15,15-Eicosafluoro-2,5,8,11,14-Pentaoxapentadecane	173350-38-4	HCF <sub>2</sub> O(CF <sub>2</sub> CF <sub>2</sub> O) <sub>4</sub> CF <sub>2</sub> H	NA	3,630*
1,1,2-Trifluoro-2-(trifluoromethoxy)-ethane	84011-06-3	CHF <sub>2</sub> CHFOCF <sub>3</sub>	NA	1,240*
Trifluoro (fluoromethoxy) methane	2261-01-0	CH <sub>2</sub> FOCF <sub>3</sub>	NA	751*
<b>Saturated HFEs and HCFEs with Three or More Carbon-Hydrogen Bonds</b>				
HFE-143a	421-14-7	CH <sub>3</sub> OCF <sub>3</sub>	756	756
HFE-245cb2	22410-44-2	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>3</sub>	708	708
HFE-245fa1	84011-15-4	CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>3</sub>	286	286
HFE-245fa2	1885-48-9	CHF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>	659	659
HFE-254cb2	425-88-7	CH <sub>3</sub> OCF <sub>2</sub> CHF <sub>2</sub>	359	359
HFE-263fb2	460-43-5	CF <sub>3</sub> CH <sub>2</sub> OCH <sub>3</sub>	11	11
HFE-263m1; R-E-143a (1,1,2,2-Tetrafluoro-1-(trifluoromethoxy)ethane)	690-22-2	CF <sub>3</sub> OCH <sub>2</sub> CH <sub>3</sub>	NA	29*
HFE-347mcc3 (HFE-7000)	375-03-1	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	575	575
HFE-347mcf2	171182-95-9	CF <sub>3</sub> CF <sub>2</sub> OCH <sub>2</sub> CHF <sub>2</sub>	374	374
HFE-347mmy1	22052-84-2	CH <sub>3</sub> OCF(CF <sub>3</sub> ) <sub>2</sub>	343	343
HFE-347mmz1; Sevoflurane (2-(Difluoromethoxy)-1,1,1,3,3,3-hexafluoropropane)	28523-86-6	(CF <sub>3</sub> ) <sub>2</sub> CHOCHF <sub>2</sub>	NA	216*
HFE-347pcf2	406-78-0	CHF <sub>2</sub> CF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>	580	580
HFE-356mcc3	382-34-3	CH <sub>3</sub> OCF <sub>2</sub> CHFCF <sub>3</sub>	101	101

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HFE-356mff2 (bis(2,2,2-trifluoroethyl) ether)	333-36-8	CF <sub>3</sub> CH <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>	NA	17*
HFE-356mmz1	13171-18-1	(CF <sub>3</sub> ) <sub>2</sub> CHOCH <sub>3</sub>	27	27
HFE-356pcc3	160620-20-2	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> CHF <sub>2</sub>	110	110
HFE-356pcf2	50807-77-7	CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>	265	265
HFE-356pcf3	35042-99-0	CHF <sub>2</sub> OCH <sub>2</sub> CF <sub>2</sub> CHF <sub>2</sub>	502	502
HFE-365mcf2 (1-Ethoxy-1,1,2,2,2-pentafluoroethane)	22052-81-9	CF <sub>3</sub> CF <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	NA	58*
HFE-365mcf3	378-16-5	CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub>	11	11
HFE-374pc2	512-51-6	CH <sub>3</sub> CH <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>	557	557
HFE-449sl (HFE-7100) Chemical blend	163702-07-6 163702-08-7	C <sub>4</sub> F <sub>9</sub> OCH <sub>3</sub> (CF <sub>3</sub> ) <sub>2</sub> CF <sub>2</sub> OCH <sub>3</sub>	297	297
HFE-569sf2 (HFE-7200) Chemical blend	163702-05-4 163702-06-5	C <sub>4</sub> F <sub>9</sub> OC <sub>2</sub> H <sub>5</sub> (CF <sub>3</sub> ) <sub>2</sub> CF <sub>2</sub> OC <sub>2</sub> H <sub>5</sub>	59	59
HG'-01 (1,1,2,2-Tetrafluoro-1,2-dimethoxyethane)	73287-23-7	CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> OCH <sub>3</sub>	NA	222*
HG'-02 (1,1,2,2-Tetrafluoro-1-methoxy-2-(1,1,2,2-tetrafluoro-2-methoxyethoxy)ethane)	485399-46-0	CH <sub>3</sub> O(CF <sub>2</sub> CF <sub>2</sub> O) <sub>2</sub> CH <sub>3</sub>	NA	236*
HG'-03 (3,3,4,4,6,6,7,7,9,9,10,10-Dodecafluoro-2,5,8,11-tetraoxadodecane)	485399-48-2	CH <sub>3</sub> O(CF <sub>2</sub> CF <sub>2</sub> O) <sub>3</sub> CH <sub>3</sub>	NA	221*
Difluoro(methoxy)methane	359-15-9	CH <sub>3</sub> OCHF <sub>2</sub>	NA	144*
2-Chloro-1,1,2-trifluoro-1-methoxyethane	425-87-6	CH <sub>3</sub> OCF <sub>2</sub> CHFCl	NA	122*
1-Ethoxy-1,1,2,2,3,3,3-heptafluoropropane	22052-86-4	CF <sub>3</sub> CF <sub>2</sub> CF <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	NA	61*
2-Ethoxy-3,3,4,4,5-pentafluorotetrahydro-2,5-bis [1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl]-furan	920979-28-8	C <sub>12</sub> H <sub>5</sub> F <sub>19</sub> O <sub>2</sub>	NA	56*
1-Ethoxy-1,1,2,3,3,3-hexafluoropropane	380-34-7	CF <sub>3</sub> CHFCF <sub>2</sub> OCH <sub>2</sub> CH <sub>3</sub>	NA	23*
Fluoro(methoxy)methane	460-22-0	CH <sub>3</sub> OCH <sub>2</sub> F	NA	13*
1,1,2,2-Tetrafluoro-3-methoxypropane; Methyl 2,2,3,3-tetrafluoropropyl ether	60598-17-6	CHF <sub>2</sub> CF <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub>	NA	0.5*
1,1,2,2-Tetrafluoro-1-(fluoromethoxy) ethane	37031-31-5	CH <sub>2</sub> FOCF <sub>2</sub> CF <sub>2</sub> H	NA	871*
Difluoro (fluoromethoxy) methane	461-63-2	CH <sub>2</sub> FOCHF <sub>2</sub>	NA	617*
Fluoro (fluoromethoxy) methane	462-51-1	CH <sub>2</sub> FOCH <sub>2</sub> F	NA	130*
<b>Fluorinated Formates</b>				
Trifluoromethyl formate	85358-65-2	HCOOCF <sub>3</sub>	NA	588*
Perfluoroethyl formate	313064-40-3	HCOOCF <sub>2</sub> CF <sub>3</sub>	NA	580*
1,2,2,2-Tetrafluoroethyl formate	481631-19-0	HCOOCHF <sub>2</sub> CF <sub>3</sub>	NA	470*

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Perfluorobutyl formate	197218-56-7	HCOOCF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	NA	392*
Perfluoropropyl formate	271257-42-2	HCOOCF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	NA	376*
1,1,1,3,3,3-Hexafluoropropan-2-yl formate	856766-70-6	HCOOCH(CF <sub>3</sub> ) <sub>2</sub>	NA	333*
2,2,2-Trifluoroethyl formate	32042-38-9	HCOOCH <sub>2</sub> CF <sub>3</sub>	NA	33*
3,3,3-Trifluoropropyl formate	1344118-09-7	HCOOCH <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>	NA	17*
<b>Fluorinated Acetates</b>				
Methyl 2,2,2-trifluoroacetate	431-47-0	CF <sub>3</sub> COOCH <sub>3</sub>	NA	52*
1,1-Difluoroethyl 2,2,2-trifluoroacetate	1344118-13-3	CF <sub>3</sub> COOCF <sub>2</sub> CH <sub>3</sub>	NA	31*
Difluoromethyl 2,2,2-trifluoroacetate	2024-86-4	CF <sub>3</sub> COOCHF <sub>2</sub>	NA	27*
2,2,2-Trifluoroethyl 2,2,2-trifluoroacetate	407-38-5	CF <sub>3</sub> COOCH <sub>2</sub> CF <sub>3</sub>	NA	7*
Methyl 2,2-difluoroacetate	433-53-4	HCF <sub>2</sub> COOCH <sub>3</sub>	NA	3*
Perfluoroethyl acetate	343269-97-6	CH <sub>3</sub> COOCF <sub>2</sub> CF <sub>3</sub>	NA	2.1*
Trifluoromethyl acetate	74123-20-9	CH <sub>3</sub> COOCF <sub>3</sub>	NA	2.0*
Perfluoropropyl acetate	1344118-10-0	CH <sub>3</sub> COOCF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	NA	1.8*
Perfluorobutyl acetate	209597-28-4	CH <sub>3</sub> COOCF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>	NA	1.6*
Ethyl 2,2,2-trifluoroacetate	383-63-1	CF <sub>3</sub> COOCH <sub>2</sub> CH <sub>3</sub>	NA	1.3*
<b>Carbonofluoridates</b>				
Methyl carbonofluoridate	1538-06-3	FCOOCH <sub>3</sub>	NA	95*
1,1-Difluoroethyl carbonofluoridate	1344118-11-1	FCOOCF <sub>2</sub> CH <sub>3</sub>	NA	27*
<b>Fluorinated Alcohols other than Fluorotelomer Alcohols</b>				
Bis(trifluoromethyl)-methanol	920-66-1	(CF <sub>3</sub> ) <sub>2</sub> CHOH	195	195
(Octafluorotetramethyl-ene) hydroxymethyl group	NA	X-(CF <sub>2</sub> ) <sub>4</sub> CH(OH)-X	73	73
2,2,3,3,3-pentafluoropropanol	422-05-9	CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OH	42	42
2,2,3,3,4,4,4-Heptafluorobutan-1-ol	375-01-9	C <sub>3</sub> F <sub>7</sub> CH <sub>2</sub> OH	NA	25*
2,2,2-Trifluoroethanol	75-89-8	CF <sub>3</sub> CH <sub>2</sub> OH	NA	20*
2,2,3,4,4,4-Hexafluoro-1-butanol	382-31-0	CF <sub>3</sub> CHFCF <sub>2</sub> CH <sub>2</sub> OH	NA	17*
2,2,3,3-Tetrafluoro-1-propanol	76-37-9	CHF <sub>2</sub> CF <sub>2</sub> CH <sub>2</sub> OH	NA	13*
2,2-Difluoroethanol	359-13-7	CHF <sub>2</sub> CH <sub>2</sub> OH	NA	3*
2-Fluoroethanol	371-62-0	CH <sub>2</sub> FCH <sub>2</sub> OH	NA	1.1*
4,4,4-Trifluorobutan-1-ol	461-18-7	CF <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> OH	NA	0.05*
<b>Unsaturated Perfluorocarbons (PFCs)</b>				
PFC-1114; TFE (tetrafluoroethylene (TFE); Perfluoroethene)	116-14-3	CF <sub>2</sub> =CF <sub>2</sub> ; C <sub>2</sub> F <sub>4</sub>	0.04	0.004
PFC-1216; Dyneon HFP (hexafluoropropylene (HFP); Perfluoropropene)	116-15-4	C <sub>3</sub> F <sub>6</sub> ; CF <sub>3</sub> CF=CF <sub>2</sub>	0.05	0.05

Name	CAS No.	Chemical Formula	GWP (100 yr.) <sup>1,2</sup>	
			2012-2013	≥ 2014 <sup>3,4</sup>
PFC C-1418 (Perfluorocyclopentene; Octafluorocyclopentene)	559-40-0	c-C <sub>5</sub> F <sub>8</sub>	1.97	1.97
Perfluorobut-2-ene	360-89-4	CF <sub>3</sub> CF=CFCF <sub>3</sub>	1.82	1.82
Perfluorobut-1-ene	357-26-6	CF <sub>3</sub> CF <sub>2</sub> CF=CF <sub>2</sub>	0.10	0.10
Perfluorobuta-1,3-diene	685-63-2	CF <sub>2</sub> =CFCF=CF <sub>2</sub>	0	0.003
<b>Unsaturated Hydrofluorocarbons (HFCs) and Hydrochlorofluorocarbons (HCFCs)</b>				
HFC-1132a; VF2 (vinylidene fluoride)	75-38-7	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> , CF <sub>2</sub> =CH <sub>2</sub>	0.04	0.04
HFC-1141; VF (vinyl fluoride)	75-02-5	C <sub>2</sub> H <sub>3</sub> F, CH <sub>2</sub> =CHF	0.02	0.02
(E)-HFC-1225ye ((E)-1,2,3,3,3-Pentafluoroprop-1-ene)	5595-10-8	CF <sub>3</sub> CF=CHF(E)	0.06	0.06
(Z)-HFC-1225ye ((Z)-1,2,3,3,3-Pentafluoroprop-1-ene)	5528-43-8	CF <sub>3</sub> CF=CHF(Z)	0.22	0.22
Solstice 1233zd(E) (trans-1-chloro-3,3,3-trifluoroprop-1-ene)	102687-65-0	C <sub>3</sub> H <sub>2</sub> ClF <sub>3</sub> ; CHCl=CHCF <sub>3</sub>	NA	1.34*
HFC-1234yf; HFO-1234yf (2,3,3,3-Tetrafluoroprop-1-ene)	754-12-1	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> ; CF <sub>3</sub> CF=CH <sub>2</sub>	0.31	0.31
HFC-1234ze(E) ((E)-1,3,3,3-Tetrafluoroprop-1-ene)	1645-83-6	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> ; trans-CF <sub>3</sub> CH=CHF	0.97	0.97
HFC-1234ze(Z) ((Z)-1,3,3,3-Tetrafluoroprop-1-ene)	29118-25-0	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> ; cis-CF <sub>3</sub> CH=CHF; CF <sub>3</sub> CH=CHF	0.29	0.29
HFC-1243zf; TFP (trifluoropropene (TFP); 3,3,3-Trifluoroprop-1-ene)	677-21-4	C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> , CF <sub>3</sub> CH=CH <sub>2</sub>	0.12	0.12
(Z)-HFC-1336 ((Z)-1,1,1,4,4,4-Hexafluorobut-2-ene)	692-49-9	CF <sub>3</sub> CH=CHCF <sub>3</sub> (Z)	1.58	1.58
HFC-1345zfc (3,3,4,4,4-Pentafluorobut-1-ene)	374-27-6	C <sub>2</sub> F <sub>5</sub> CH=CH <sub>2</sub>	0.09	0.09
Capstone 42-U (perfluorobutyl ethene (42-U); 3,3,4,4,5,5,6,6,6-Nonafluorohex-1-ene)	19430-93-4	C <sub>6</sub> H <sub>3</sub> F <sub>9</sub> , CF <sub>3</sub> (CF <sub>2</sub> ) <sub>3</sub> CH=CH <sub>2</sub>	0.16	0.16
Capstone 62-U (perfluorohexyl ethene (62-U); 3,3,4,4,5,5,6,6,7,7,8,8,8-Tridecafluorooct-1-ene)	25291-17-2	C <sub>8</sub> H <sub>3</sub> F <sub>13</sub> , CF <sub>3</sub> (CF <sub>2</sub> ) <sub>5</sub> CH=CH <sub>2</sub>	0.11	0.11
Capstone 82-U (perfluorooctyl ethene (82-U); 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-Heptafluorodec-1-ene)	21652-58-4	C <sub>10</sub> H <sub>3</sub> F <sub>17</sub> , CF <sub>3</sub> (CF <sub>2</sub> ) <sub>7</sub> CH=CH <sub>2</sub>	0.09	0.09
<b>Unsaturated Halogenated Ethers</b>				
PMVE; HFE-216 (perfluoromethyl vinyl ether (PMVE))	1187-93-5	CF <sub>3</sub> OCF=CF <sub>2</sub>	NA	0.17*
Fluoroxene ((2,2,2-Trifluoroethoxy) ethene)	406-90-6	CF <sub>3</sub> CH <sub>2</sub> OCH=CH <sub>2</sub>	NA	0.05*
<b>Fluorinated Aldehydes</b>				
3,3,3-Trifluoro-propanal	460-40-2	CF <sub>3</sub> CH <sub>2</sub> CHO	NA	0.01*
<b>Fluorinated Ketones</b>				

Name	CAS No.	Chemical Formula	GWP (100 yr.) <sup>1,2</sup>	
			2012-2013	≥ 2014 <sup>3,4</sup>
Novac 1230 (FK-5-1-12 Perfluoroketone; FK-5-1-12myy2; perfluoro (2-methyl-3-pentanone))	756-13-8	CF <sub>3</sub> CF <sub>2</sub> C(O)CF (CF <sub>3</sub> ) <sub>2</sub>	NA	0.1*
<b>Fluorotelomer Alcohols</b>				
3,3,4,4,5,5,6,6,7,7,7-Undecafluoroheptan-1-ol	185689-57-0	CF <sub>3</sub> (CF <sub>2</sub> ) <sub>4</sub> CH <sub>2</sub> CH <sub>2</sub> OH	NA	0.43*
3,3,3-Trifluoropropan-1-ol	2240-88-2	CF <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> OH	NA	0.35*
3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-Pentadecafluorononan-1-ol	755-02-2	CF <sub>3</sub> (CF <sub>2</sub> ) <sub>6</sub> CH <sub>2</sub> CH <sub>2</sub> OH	NA	0.33*
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-Nonadecafluoroundecan-1-ol	87017-97-8	CF <sub>3</sub> (CF <sub>2</sub> ) <sub>8</sub> CH <sub>2</sub> CH <sub>2</sub> OH	NA	0.19*
<b>Fluorinated GHGs with Carbon-Iodine Bond(s)</b>				
Trifluoroiodomethane	2314-97-8	CF <sub>3</sub> I	NA	0.4*
<b>Other Fluorinated Compounds</b>				
Dibromodifluoromethane (Halon 1202)	75-61-6	CB <sub>2</sub> F <sub>2</sub>	NA	231*
2-Bromo-2-chloro-1,1,1-trifluoroethane (Halon-2311/ Halothane)	151-67-7	CHBrClCF <sub>3</sub>	NA	41*
<b>Default GWPs for which Chemical-Specific GWPs are not Listed Above</b>				
Saturated PFCs			10,000	10,000
Saturated HFCs with 2 or fewer carbon-hydrogen bonds			3,700	3,700
Saturated HFCs with 3 or more carbon-hydrogen bonds			930	930
Unsaturated PFCs and unsaturated HFCs			1	1

NA = not available.

<sup>1</sup> = **Determining applicability for emissions years 2013 and 2014.** For emissions year 2013 (reported in 2014) and emissions year 2014 (reported in 2015), facilities may use the GWPs in either column when calculating GHG emissions for comparison to the reporting threshold under WAC 173-441-030(1).

<sup>2</sup> = **Calculating annual GHG emissions for emissions year 2013.** For emissions year 2013 (reported in 2014), facilities may use the GWPs in either column when calculating GHG emissions for the annual GHG report.

<sup>3</sup> = **Determining applicability for emissions year 2015+.** For emissions year 2015 (reported in 2016) and subsequent years, facilities must use the GWPs in this column when calculating GHG emissions for comparison to the reporting threshold under WAC 173-441-030(1).

<sup>4</sup> = **Calculating annual GHG emissions for emissions year 2014+.** For emissions year 2014 (reported in 2015) and subsequent years, facilities must use the GWPs in this column when calculating GHG emissions for the annual GHG report.

\* = Requirements to include emissions of this compound when calculating GHG emissions for comparison to the reporting threshold under WAC 173-441-030(1) and when calculating GHG emissions for the annual GHG report become effective beginning with emissions year 2016 (reported in 2017).

[Statutory Authority: Chapters 70.235 and 70.94 RCW. WSR 15-04-051 (Order 13-13), § 173-441-040, filed 1/29/15, effective 3/1/15. Statutory Authority: 2010 c 146, and chapters 70.235 and 70.94 RCW. WSR 10-24-108 (Order 10-08), § 173-441-040, filed 12/1/10, effective 1/1/11.]

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.