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GPO

GLOBAL WARMING POTENTIALS—Continued

[100-Year Time Horizon]

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
HFC–152a	75–37–6	CH_3CHF_2	140
HFC–161	353–36–6	CH_3CH_2F	12
HFC–227ea	431–89–0	C_3HF_7	2,900
HFC–236cb	677–56–5	$CH_2FCF_2CF_3$	1,340
HFC–236ea	431–63–0	CHF_2CHFCF_3	1,370
HFC–236fa	690–39–1	$C_3H_2F_6$	6,300
HFC–245ca	679–86–7	$C_3H_3F_5$	560
HFC–245fa	460–73–1	$CHF_2CH_2CF_3$	1,030
HFC–365mfc	406–58–6	$CH_3CF_2CH_2CF_3$	794
HFC–43–10mee	138495–42–8	$CF_3CFHCFHCF_2CF_3$	1,300
Sulfur hexafluoride	2551–62–4	SF_6	23,900
Trifluoromethyl sulphur pentafluoride	373–80–8	SF_5CF_3	17,700
Nitrogen trifluoride	7783–54–2	NF_3	17,200
PFC–14 (Perfluoromethane)	75–73–0	CF_4	6,500
PFC–116 (Perfluoroethane)	76–16–4	C_2F_6	9,200
PFC–218 (Perfluoropropane)	76–19–7	C_3F_8	7,000
Perfluorocyclopropane	931–91–9	$C\text{-}C_3F_6$	17,340
PFC–3–1–10 (Perfluorobutane)	355–25–9	C_4F_{10}	7,000
Perfluorocyclobutane	115–25–3	$C\text{-}C_4F_8$	8,700
PFC–4–1–12 (Perfluoropentane)	678–26–2	C_5F_{12}	7,500
PFC–5–1–14 (Perfluorohexane)	355–42–0	C_6F_{14}	7,400
PFC–9–1–18	306–94–5	$C_{10}F_{18}$	7,500
HCFE–235da2 (Isoflurane)	26675–46–7	$CHF_2OCHClCF_3$	350
HFE–43–10pccc (H–Galden 1040x)	E1730133	$CHF_2OCF_2OC_2F_4OCHF_2$	1,870
HFE–125	3822–68–2	CHF_2OCF_3	14,900
HFE–134	1691–17–4	CHF_2OCHF_2	6,320
HFE–143a	421–14–7	CH_3OCF_3	756
HFE–227ea	2356–62–9	$CF_3CHFOCF_3$	1,540
HFE–236ca12 (HG–10)	78522–47–1	$CHF_2OCF_2OCHF_2$	2,800
HFE–236ea2 (Desflurane)	57041–67–5	$CHF_2OCHFCF_3$	989
HFE–236fa	20193–67–3	$CF_3CH_2OCF_3$	487
HFE–245cb2	22410–44–2	$CH_3OCF_2CF_3$	708
HFE–245fa1	84011–15–4	$CHF_2CH_2OCF_3$	286
HFE–245fa2	1885–48–9	$CHF_2OCH_2CF_3$	659
HFE–254cb2	425–88–7	$CH_3OCF_2CHF_2$	359
HFE–263fb2	460–43–5	$CF_3CH_2OCH_3$	11
HFE–329mcc2	67490–36–2	$CF_3CF_2OCF_2CHF_2$	919
HFE–338mcf2	156053–88–2	$CF_3CF_2OCH_2CF_3$	552
HFE–338pcc13 (HG–01)	188690–78–0	$CHF_2OCF_2CF_2OCHF_2$	1,500
HFE–347mcc3	28523–86–6	$CH_3OCF_2CF_2CF_3$	575
HFE–347mcf2	E1730135	$CF_3CF_2OCH_2CHF_2$	374
HFE–347pcf2	406–78–0	$CHF_2CF_2OCH_2CF_3$	580
HFE–356mec3	382–34–3	$CH_3OCF_2CHFCF_3$	101
HFE–356pcc3	160620–20–2	$CH_3OCF_2CF_2CHF_2$	110
HFE–356pcf2	E1730137	$CHF_2CH_2OCF_2CHF_2$	265
HFE–356pcf3	35042–99–0	$CHF_2OCH_2CF_2CHF_2$	502
HFE–365mcf3	378–16–5	$CF_3CF_2CH_2OCH_3$	11
HFE–374pc2	512–51–6	$CH_3CH_2OCF_2CHF_2$	557
HFE–449sl (HFE–7100)	163702–07–6	$C_4F_9OCH_3$	297
Chemical blend	163702–08–7	$(CF_3)_2CFCF_2OCH_3$	
HFE–569sf2 (HFE–7200)	163702–05–4	$C_4F_9OC_2H_5$	59
Chemical blend	163702–06–5	$(CF_3)_2CFCF_2OC_2H_5$	
Sevoflurane	28523–86–6	$CH_2FOCH(CF_3)_2$	345
HFE–356mm1	13171–18–1	$(CF_3)_2CHOCH_3$	27
HFE–338mmz1	26103–08–2	$CHF_2OCH(CF_3)_2$	380
(Octafluorotetramethy-lene)hydroxymethyl group.	NA	$X\text{-}(CF_2)_4CH(OH)\text{-}X$	73
HFE–347mmy1	22052–84–2	$CH_3OCF(CF_3)_2$	343
Bis(trifluoromethyl)-methanol	920–66–1	$(CF_3)_2CHOH$	195
2,2,3,3,3-pentafluoropropanol	422–05–9	$CF_3CF_2CH_2OH$	42
PFPMIE	NA	$CF_3OCF(CF_3)CF_2OCF_2OCF_3$	10,300

NA = not available.

TABLE A–2 TO SUBPART A OF PART 98—UNITS OF MEASURE CONVERSIONS

To convert from	To	Multiply by
Kilograms (kg)	Pounds (lbs)	2.20462

To convert from	To	Multiply by
Pounds (lbs)	Kilograms (kg)	0.45359
Pounds (lbs)	Metric tons	4.53592×10^{-4}
Short tons	Pounds (lbs)	2,000
Short tons	Metric tons	0.90718
Metric tons	Short tons	1.10231
Metric tons	Kilograms (kg)	1,000
Cubic meters (m^3)	Cubic feet (ft^3)	35.31467
Cubic feet (ft^3)	Cubic meters (m^3)	0.028317
Gallons (liquid, US)	Liters (l)	3.78541
Liters (l)	Gallons (liquid, US)	0.26417
Barrels of Liquid Fuel (bbl)	Cubic meters (m^3)	0.15891
Cubic meters (m^3)	Barrels of Liquid Fuel (bbl)	6.289
Barrels of Liquid Fuel (bbl)	Gallons (liquid, US)	42
Gallons (liquid, US)	Barrels of Liquid Fuel (bbl)	0.023810
Gallons (liquid, US)	Cubic meters (m^3)	0.0037854
Liters (l)	Cubic meters (m^3)	0.001
Feet (ft)	Meters (m)	0.3048
Meters (m)	Feet (ft)	3.28084
Miles (mi)	Kilometers (km)	1.60934
Kilometers (km)	Miles (mi)	0.62137
Square feet (ft^2)	Acres	2.29568×10^{-5}
Square meters (m^2)	Acres	2.47105×10^{-4}
Square miles (mi^2)	Square kilometers (km^2)	2.58999
Degrees Celsius (°C)	Degrees Fahrenheit (°F)	°C = (5/9) × (°F − 32)
Degrees Fahrenheit (°F)	Degrees Celsius (°C)	°F = (9/5) × °C + 32
Degrees Celsius (°C)	Kelvin (K)	K = °C + 273.15
Kelvin (K)	Degrees Rankine (°R)	1.8
Joules	Btu	9.47817×10^{-4}
Btu	MMBtu	1×10^{-6}
Pascals (Pa)	Inches of Mercury (in Hg)	2.95334×10^{-4}
Inches of Mercury (inHg)	Pounds per square inch (psi)	0.49110
Pounds per square inch (psi)	Inches of Mercury (in Hg)	2.03625

TABLE A–3 TO SUBPART A OF PART 98—SOURCE CATEGORY LIST FOR § 98.2(a)(1)

SOURCE CATEGORY LIST FOR § 98.2(a)(1)

Source Categories[a] Applicable in 2010 and Future Years

- Electricity generation units that report CO_2 mass emissions year round through 40 CFR part 75 (subpart D).
- Adipic acid production (subpart E).
- Aluminum production (subpart F).
- Ammonia manufacturing (subpart G).
- Cement production (subpart H).
- HCFC–22 production (subpart O).
- HFC–23 destruction processes that are not collocated with a HCFC–22 production facility and that destroy more than 2.14 metric tons of HFC–23 per year (subpart O).
- Lime manufacturing (subpart S).
- Nitric acid production (subpart V).
- Petrochemical production (subpart X).
- Petroleum refineries (subpart Y).
- Phosphoric acid production (subpart Z).
- Silicon carbide production (subpart BB).
- Soda ash production (subpart CC).
- Titanium dioxide production (subpart EE).
- Municipal solid waste landfills that generate CH_4 in amounts equivalent to 25,000 metric tons CO_2e or more per year, as determined according to subpart HH of this part.
- Manure management systems with combined CH_4 and N_2O emissions in amounts equivalent to 25,000 metric tons CO_2e or more per year, as determined according to subpart JJ of this part.

Additional Source Categories[a] Applicable in 2011 and Future Years

Electrical transmission and distribution equipment use at facilities where the total nameplate capacity of SF_6 and PFC containing equipment exceeds 17,820 pounds, as determined under § 98.301 (subpart DD).