

**Table 3: Production and Atmospheric Release**  
**CFC-113** (thousand metric tonnes)

**Expanded Data**

**Reporting Companies only**

(thousand metric tonnes)

	<b>Cumulative</b>														
	<b>Annual</b>		<b>Total</b>			<b>Short Banking Times</b>			<b>Long Banking Times</b>			<b>Other</b>			
	Production	Released	Production	Released	Unreleased	Sales	Released	Unreleased	Sales	Released	Unreleased	Sales	Released	Unreleased	
1934	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1935	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1936	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1938	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1939	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1940	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1941	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1942	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1943	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1944	0.8	0.4	0.8	0.4	0.4	0.8	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	
1945	0.9	0.9	1.7	1.3	0.5	1.7	1.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	
1946	1.0	1.0	2.7	2.2	0.5	2.7	2.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	
1947	1.2	1.1	4.0	3.4	0.6	3.9	3.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	
1948	1.3	1.3	5.3	4.6	0.7	5.2	4.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	
1949	1.5	1.4	6.8	6.0	0.8	6.7	6.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	
1950	1.8	1.7	8.6	7.7	0.9	8.5	7.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	
1951	2.0	1.9	10.6	9.6	1.0	10.5	9.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
1952	2.3	2.2	13.0	11.8	1.2	12.8	11.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	
1953	2.6	2.5	15.6	14.3	1.3	15.4	14.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	
1954	3.0	2.8	18.6	17.1	1.5	18.4	16.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0	
1955	3.5	3.3	22.2	20.4	1.8	21.9	20.2	1.8	0.0	0.0	0.0	0.0	0.0	0.0	
1956	4.1	3.8	26.2	24.2	2.0	25.9	23.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	
1957	4.6	4.3	30.8	28.5	2.3	30.4	28.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0	
1958	5.3	4.9	36.1	33.5	2.6	35.6	33.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	
1959	6.1	5.7	42.1	39.1	3.0	41.6	38.6	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
1960	6.9	6.5	49.1	45.6	3.4	48.4	45.0	3.4	0.1	0.0	0.0	0.0	0.0	0.0	
1961	7.9	7.4	57.0	53.0	4.0	56.1	52.2	3.8	0.2	0.0	0.2	0.0	0.0	0.0	
1962	9.1	8.4	66.1	61.4	4.7	65.0	60.5	4.4	0.3	0.0	0.3	0.0	0.0	0.0	
1963	10.4	9.7	76.5	71.0	5.5	75.1	70.1	5.1	0.4	0.0	0.4	0.0	0.0	0.0	
1964	12.0	11.1	88.5	82.1	6.4	86.8	81.0	5.8	0.6	0.0	0.6	0.0	0.0	0.0	
1965	13.7	12.7	102.2	94.8	7.4	100.1	93.4	6.7	0.7	0.0	0.7	0.0	0.0	0.0	
1966	15.7	14.5	117.9	109.3	8.6	115.4	107.7	7.6	1.0	0.0	0.9	0.0	0.0	0.0	
1967	17.9	16.6	135.8	125.9	9.9	132.9	124.1	8.7	1.2	0.1	1.1	0.0	0.0	0.0	
1968	20.6	19.0	156.4	145.0	11.4	152.9	142.9	10.0	1.5	0.1	1.4	0.0	0.0	0.0	
1969	23.5	21.8	179.9	166.8	13.1	175.8	164.3	11.4	1.8	0.1	1.6	0.0	0.0	0.0	
1970	26.9	25.0	206.8	191.7	15.1	202.0	188.9	13.1	2.1	0.2	1.9	0.0	0.0	0.0	
1971	30.9	28.6	237.7	220.4	17.3	232.1	217.1	15.0	2.5	0.3	2.3	0.0	0.0	0.0	
1972	35.5	32.9	273.2	253.2	19.9	266.7	249.4	17.3	3.0	0.3	2.6	0.0	0.0	0.0	
1973	40.5	37.6	313.7	290.9	22.8	306.1	286.4	19.7	3.5	0.5	3.1	0.0	0.0	0.0	
1974	46.5	43.1	360.2	334.0	26.2	351.4	328.8	22.6	4.1	0.6	3.5	0.0	0.0	0.0	
1975	53.3	49.4	413.5	383.4	30.0	403.3	377.4	25.9	4.8	0.8	4.1	0.0	0.0	0.0	

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	Production	Released	Production	Released	Unreleased	Sales	Released	Unreleased	Sales	Released	Unreleased	Sales	Released	Unreleased	
1976	61.0	56.6	474.4	440.1	34.4	462.7	433.0	29.7	5.6	1.0	4.7	0.0	0.0	0.0	
1977	69.9	64.9	544.3	504.9	39.4	530.8	496.8	34.0	6.6	1.2	5.4	0.0	0.0	0.0	
1978	80.0	74.3	624.4	579.2	45.1	608.7	569.8	39.0	7.6	1.5	6.2	0.0	0.0	0.0	
1979	91.7	85.1	716.0	664.3	51.7	698.0	653.4	44.6	8.8	1.8	7.1	0.0	0.0	0.0	
1980	105.0	97.5	821.1	761.8	59.2	800.3	749.2	51.1	10.2	2.1	8.1	0.0	0.0	0.0	
1981	109.9	106.4	931.0	868.3	62.7	907.3	853.8	53.5	11.8	2.5	9.2	0.0	0.0	0.0	
1982	114.5	111.1	1045.5	979.3	66.1	1018.6	962.9	55.6	13.5	3.0	10.5	0.0	0.0	0.0	
1983	134.5	123.3	1179.9	1102.6	77.3	1149.3	1083.9	65.4	15.5	3.5	12.0	0.0	0.0	0.0	
1984	173.3	152.5	1353.3	1255.1	98.2	1317.9	1233.6	84.3	18.0	4.1	13.9	0.0	0.0	0.0	
1985	189.4	179.8	1542.7	1434.9	107.8	1502.7	1410.3	92.4	20.2	4.8	15.4	0.0	0.0	0.0	
1986	199.2	193.1	1741.9	1628.0	113.9	1697.4	1600.0	97.4	22.1	5.6	16.6	0.0	0.0	0.0	
1987	228.7	213.1	1970.6	1841.0	129.6	1921.2	1809.3	111.9	24.2	6.4	17.7	0.0	0.0	0.0	
1988	250.7	238.7	2221.3	2079.7	141.6	2166.3	2043.7	122.6	26.5	7.4	19.0	0.0	0.0	0.0	
1989	254.6	251.5	2475.9	2331.2	144.7	2415.5	2290.9	124.6	28.6	8.5	20.1	0.0	0.0	0.0	
1990	177.1	214.7	2653.0	2546.0	107.0	2588.8	2502.1	86.7	30.1	9.8	20.4	0.0	0.0	0.0	
1991	149.5	163.1	2802.5	2709.1	93.4	2735.2	2662.0	73.2	31.4	11.1	20.2	0.0	0.0	0.0	
1992	108.9	128.3	2911.4	2837.4	74.0	2839.6	2787.4	52.3	34.4	12.6	21.8	0.0	0.0	0.0	
1993	48.7	78.0	2960.1	2915.4	44.6	2886.8	2863.2	23.6	35.3	14.2	21.1	0.0	0.0	0.0	
1994	29.9	40.2	2990.0	2955.6	34.4	2915.8	2901.3	14.5	35.8	15.9	19.9	0.0	0.0	0.0	
1995	23.6	28.1	3013.6	2983.7	29.9	2938.9	2927.3	11.5	36.1	17.7	18.4	0.0	0.0	0.0	
1996	6.1	16.2	3019.7	3000.0	19.8	2944.4	2941.7	2.8	36.5	19.5	17.0	0.0	0.0	0.0	
1997	3.0	6.2	3022.8	3006.1	16.6	2947.4	2945.9	1.5	36.5	21.4	15.1	0.0	0.0	0.0	
1998	1.6	4.2	3024.4	3010.3	14.1	2949.0	2948.2	0.8	36.5	23.2	13.3	0.0	0.0	0.0	
1999	1.0	3.1	3025.4	3013.4	12.0	2950.0	2949.5	0.5	36.5	25.1	11.5	0.0	0.0	0.0	
2000	1.0	2.7	3026.3	3016.1	10.2	2950.9	2950.5	0.4	36.6	26.8	9.8	0.0	0.0	0.0	
2001	0.8	2.5	3027.1	3018.6	8.5	2951.7	2951.3	0.4	36.6	28.5	8.1	0.0	0.0	0.0	
2002	0.9	2.4	3028.1	3021.0	7.1	2952.6	2952.1	0.5	36.6	30.0	6.6	0.0	0.0	0.0	
2003	0.6	2.1	3028.7	3023.1	5.5	2953.2	2952.9	0.3	36.6	31.4	5.2	0.0	0.0	0.0	

**Notes**

**The total CFC production reported to AFEAS in 2003 represented 16% of global CFC production and is falling. From now on emissions of CFC-113 will not be calculated.**

Emissions are calculated from production and categorised sales using "emission functions".

The emission functions for CFC-113 remain the same as in previous AFEAS compilations:

Of the sales into "Short Banking Times" (mainly solvents) and "Other", half are released in the year of manufacture and half in the year following.

Releases from "Long Banking Times" (predominantly heat pumps and similar enclosed systems) are distributed normally about a 10 year mean, with a total service lifetime of 20 years.

In previous compilations, fugitive emissions of CFC-113 arising during production were counted and reported in the *Short Banking Times* category and in *Annual and Total Released*.

However, the reported *Production* did not include this quantity of material. This has now been rectified and, in this compilation, the *Annual and Cumulative Production* reported for all years includes the quantities released from the production process. **This does not affect the historical record of releases.**