

TIMELINE: DuPont, CFCs and Alternatives

- 1928 Midgley discovers chlorofluorocarbons (CFCs) as safer alternatives to toxic and/or flammable refrigerants then in use.
- 1931 Commercial scale production of CFCs in DuPont/GM joint venture.
- 1931-1970s CFCs become known as “miracle chemicals.” Uses include refrigeration and air conditioning, solvents, expanding agents for foams and aerosol propellants.
- 1971 Lovelock reports persistence of CFCs in atmosphere.
- 1972 McCarthy of DuPont organizes International Conference on the Ecology and Toxicology of Fluorocarbons with representatives of industrial producers of CFCs. This conference leads to the establishment of industry-sponsored research programs to determine potential health and environmental impacts of CFCs.
- 1974 Molina and Rowland publish CFC/ozone depletion theory. Industry-sponsored research program now focuses on potential for ozone depletion.
- 1974 DuPont begins screening candidate fluorocarbon substitutes for CFCs. Regulations ban (except for a few exempted applications) use of CFCs as aerosol propellants in U.S. and a few other countries.
- 1974-5 DuPont states: “should reputable evidence show that some fluorocarbons cause a health hazard through ozone depletion, we are prepared to stop production of the offending compounds.”
- 1986 DuPont calls for global limits to CFC consumption based on growing demand for CFCs and international scientific consensus assessment that CFC causes ozone depletion.
- 1986 DuPont increases development effort for alternatives to CFCs.
- 1987 DuPont initiative leads to industry program for testing toxicity of fluorocarbon alternatives to CFCs. Montreal Protocol treaty signed.
- 1988 DuPont commits to unilateral phaseout of CFCs through orderly transition to alternatives; calls for international agreement to achieve global phase-out based on scientific assessment linking CFCs to the Antarctic ozone hole and potentially to ozone losses over mid-latitudes.
- 1988 DuPont enhances program to develop alternatives.
- 1989 DuPont initiative leads to industry program to investigate environmental properties of fluorocarbon alternatives.
- 1988-current DuPont rapidly develops and commercializes alternatives to CFCs and other ozone depleting compounds in critical applications such as refrigeration, air conditioning, medical aerosols and fire extinguishants.