Abstract
Process Economics Program Report No. 201
CHLOROFLUOROCARBON ALTERNATIVES
(January 1991)

Production and use of chlorofluorocarbons are being phased out under international agreements to protect the “ozone layer” that reduces the amount of ultraviolet radiation reaching the earth’s surface. This report summarizes the status of the chlorofluorocarbon industry and the applications of the compounds. Using patent information, three processes are evaluated for the manufacture of promising alternatives. The first process produces HFC-134a (CH₂FCF₃). The second produces HCFC-123 and HCFC-124 (CHCl₂CF₃ and CHClFCF₃, respectively). The third produces HCFC-141b (CH₃CCl₂F). Other potential substitutes and properties are also reviewed.
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