

# New Refrigerators: Just How Friendly To Ozone Layer?

By MATTHEW L. WALD

**W**ASHINGTON, Oct. 18 — A turning necessity into a virtue, four big refrigerator manufacturers are crowding that they have helped save the environment by removing chlorofluorocarbons, which destroy the earth's protective ozone layer, from the compressors in their new models.

In fact, they must eliminate the chemicals, known as CFC's, because an international treaty decrees that after the end of this year, these compounds cannot be legally produced for use in this country. But the redesigned refrigerators will still damage the ozone because of another chemical the manufacturers have started using in foam insulation for the refrigerator walls, something the

companies. The commission's guidelines say "It is deceptive to misrepresent, directly or by implication, that a product is safe for or 'friendly' to the ozone layer. A claim that a product does not harm the ozone layer is deceptive if the product contains an ozone-depleting substance."

But the manufacturers say that they have an environmental dilemma, because the chemical they are using in the foam, while it does do some ozone damage, is extremely helpful in saving energy and thus in preventing other kinds of pollution. The arguments are over CFC's and two other classes of chemicals that even engineers find hard to pronounce: hydrochlorofluorocarbons, known as HCFC's, and hydrofluorocarbons, or HFC's.

Many of the ads say simply that the refrigerators have no CFC's, which is true. But they use a substitute product, an HCFC, to create the bubbles in the foam wall panels. HCFC's may be used for that purpose until 2003.

The Federal Trade Commission cites HCFC's in its example of a deceptive claim. The guidelines give an example of an aerosol product that contains HCFC's, which are being used more and more widely as a substitute for CFC's because they are less damaging to the ozone. "Because the claim 'Contains no CFC's' may imply to reasonable consumers that the product does not harm the ozone layer, the claim is deceptive," the commission's guidelines say. A commission spokesman said that he could not say whether an investigation was going on.

The two environmental groups filed their suit in California because it has a "green label" statute that defines the term "ozone friendly." Hannah Bentley, a lawyer with the Environmental Law Foundation, said that an amendment passed by the California Legislature earlier this year would make the environmentalists' case even stronger after Dec. 31, because from that date on green-label definitions will be bor-

The GE Profile™ CFC-Free Side-by-side refrigerator provides refrigeration all around you that contributes to a healthier environment. This refrigerator is completely free of all chlorofluorocarbons, (CFC's) and with the foam insulation, it's ozone friendly.

## Did you know?

In the tradition of creating innovative appliances, Raytheon's Amana is the first to produce a full-line of CFC-free refrigerators.

OUR CARS BRANDMASTERS... INFORMATION REGARDING SUPER EFFICIENT REFRIGERATORS.

Details of refrigerator ads for, from left, General Electric, Amana and Sears, with claims that have prompted a lawsuit.

## A lawsuit challenges ad claims.

companies are not advertising. "They're saying the refrigerators are ozone safe, but they're really just ozone safer," said John Passacantando, the executive director of Ozone Action, a Washington environmental group. Ozone Action and the Environmental Law Foundation in Oakland, Calif., say they filed suit today in California against Amana, General Electric, Sears, Roebuck and Whirlpool, accusing them of deceptive advertising.

In addition, the Federal Trade Commission has been discussing the ads with at least some of those com-

rowed directly from the Federal Trade Commission guidelines.

At Amana, a subsidiary of Raytheon, Ann Humbert, a spokeswoman here from an environmental point of view, "because a refrigerator with cyclopentane bubbles would use 10 percent more electricity." "There's not a perfect solution out there," he added.

The manufacturers are also struggling to meet Federal energy efficiency standards, a kind of mileage rule for refrigerators, and they had to give up the HCFC's in the foam, they would have to take other steps to regain efficiency.

Another problem is that cyclopentane might leak from the foam into food in the refrigerators, manufacturers say.

Experts differ on how ozone-harmful HCFC's are. The refrigerator manufacturers say that HCFC's are formerly used as blowing agents. Ozone Action says that this may be so over 100 years, but in the next 20 each HCFC molecule is 20 percent as effective as a CFC molecule in breaking up the ozone. The next 20 years are more important than the following 80, Ozone Action argues, because that is when the maximum ozone depletion is expected to occur.

Beyond 100 years, with global production of CFC's generally, the natural formation of ozone molecules will exceed the rate of man-made destruction. In the interim, scientists say that a thinner ozone layer means that more of the sun's harmful ultraviolet rays will reach the surface, causing harmful skin damage, plant, animal and people.

Some HCFC's are in the atmosphere during the manufacturing process. Some say that the foam blowing agents are not in the refrigerator after the foam is cured. The manufacturers say that the foam will eventually break down, and the gases will be released. At some point, the refrigerant could leak from the cooling system and bleed on into the atmosphere.

There is also an issue of attacking the refrigerator as a threat to health. Refrigerators of food is one of the recent aids to human health. But the technology can be made more benign, it should be the environmentalists argue.

Another issue for the environmentalists is the manufacturers' choice of a substitute refrigerant for the compressors. They're using HCFC's, which do not deplete the ozone, but do add to global warming, Ozone Action favors hydrocarbons and points to

Europe, where a once-faltering refrigerator manufacturer, the former East Germany, switched to a butane mixture similar to the fuel in some cigarette lighters. The company, Foron, has sold millions of these refrigerators, since they were introduced in March 1983. Greenpeace paid for the first 10 prototypes in July 1992.

Whirlpool also makes refrigerators in Europe that use butane, but Mr. Anderson, the company's environmental director, said that the technology was not ready for use in the United States. Few European refrigerators are frost-free, he said, but American consumers demand that feature and the blower and heater needed for frost-free models could ignite the butane if it ever leaked from the compressor. The five ounces of refrigerant used in a full-size refrigerator could be sufficient to sustain an explosion, he said, and the doors would come flying open.

The major contribution to global warming, from a refrigerator, he said, comes from burning fossil fuels in power plants. Make the machine more efficient, Mr. Anderson said, and the global-warming impact will be lower, even if the refrigerant contributes to it.

Anderson, the director of environmental programs at the Whirlpool Corporation, said, "We've got a real dilemma here from an environmental point of view," because a refrigerator with cyclopentane bubbles would use 10 percent more electricity. "There's not a perfect solution out there," he added.

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