

PURPOSE

This fact sheet reviews some of the environmental concerns related to compressed air dusters, which are commonly used to clean electronics.

COMPRESSED AIR DUSTERS AND ENVIRONMENTAL CONCERNS

Compressed air dusters, also known as canned air, are containers of compressed gases with a straw outlet that can be used to expel the gas forcefully. These dusters are frequently used to clean dust and debris from electronics and components, like keyboards, desktops computers and other electronic equipment that can not be safely cleaned with water or liquid cleaners.

Chlorofluorocarbons (CFCs)



Many compressed air duster cans display a "NO CFC" or "NO CHLOROFLUOROCARBONS" symbol, like the one shown to the left. The use of CFCs in these cans has been banned for over a decade. So, you might ask "What's the problem? This is a good thing for the ozone layer." It is true that release of the can's propellant doesn't damage the ozone layer. What isn't commonly known is that many of these cans use a greenhouse gas (GHG) as the propellant.

Greenhouse Gases (GHGs)

Most compressed air duster cans sold in the U.S. use a particular class of GHGs, referred to as hydrofluorocarbons, or HFCs, as the propellant. HFCs do not directly contribute to depletion of the stratospheric ozone layer; however, some of them are potent GHGs. One of the more common propellants, HFC-134a (1,1,1,2 tetrafluoroethane), is a popular refrigerant found in nearly every U.S. residential refrigerator or automobile air conditioner manufactured since the mid-1990s. Another popular HFC propellant is HFC-152a (difluoroethane), which has an array of industrial and commercial uses.

Global Warming Potential (GWP)

represents how much a particular substance contributes to global warming over a period of time compared to a similar amount of carbon dioxide (CO₂). The GWP of CO₂ equals one.

Both HFC-134a and HFC-152a are GHGs. However, HFC-134a is much more damaging to the climate with a global warming potential (GWP) of 1,300 and an atmospheric lifetime of about 14 years. HFC-152a has a GWP of 140 and an atmospheric lifetime of approximately 1.5 years.

ALTERNATIVES TO COMPRESSED AIR DUSTERS

There are alternatives to use of compressed air dusters:

1. Keep the areas around your electronic equipment clean. Avoid eating and drinking near electronics, and dust and vacuum surrounding areas regularly.
2. Use your own air! Often, blowing gently can dislodge dust and debris from electronics and peripherals, like keyboards and mice. You can also turn your keyboard upside down over a trash can and gently shake or tap it to dislodge debris.
3. Use a microfiber cloth to clean monitor displays and the exterior surfaces of electronics. These cloths can be washed when they collect too much dust, and reused.



Compressed Air Dusters and Environmental Concerns

Updated: 6/26/2012

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4. Consider using a USB vacuum. These small electronic devices can plug into one of your computers USB ports and provide enough suction to gently clean dust from electronics.

If you do choose to use a compressed air duster, request low-GWP alternatives – such as cans that use HFC-152a over cans that use HFC-134a.

REFERENCES

Information about greenhouse gas emissions is available at the U.S. Environmental Protection Agency (EPA) Climate Change website: <http://www.epa.gov/climatechange/index.html>.

CONTACT INFORMATION

If you have questions related to this resource or need other assistance with the Federal Electronics Challenge, please contact your Regional Champion: <http://www2.epa.gov/fec/technical-assistance>.

Visit the FEC online: <http://www2.epa.gov/fec/>

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