

HFC-245fa

Product Stewardship Summary

December 2007

Chemical Name:	1,1,1,3,3-Pentafluoropropane
Synonyms:	HFC-245fa; R-245fa; Pentafluoropropane; Enovate®
CAS Number:	460-73-1
CAS Name:	1,1,1,3,3-Pentafluoropropane
EC (EINECS) Number:	419-170-6
Document Number:	GPS0010, V1.0

- HFC-245fa is used primarily as a blowing and insulation agent for plastic foam insulation. For these applications it is sold under the name Enovate®. HFC-245fa is also used in systems for waste heat recovery, process and comfort cooling with centrifugal chillers, electronics cooling, heat transfer, and thermal storage. For these applications it is sold under the name, Genetron® 245fa.
- HFC-245fa is a high production volume (HPV) chemical produced at over 1,000,000 pounds annually.
- HFC-245fa is used in closed systems, thus significant exposure to workers is unlikely. Workplace exposure limits have been established. Please see the MSDS for additional information. During use in spray foam insulation products, HFC-245fa is intended to remain trapped within the insulation, thus increasing the foam's insulating effects and thereby reducing energy consumption and the concomitant CO₂ emissions.
- HFC-245fa is a colorless, non-flammable volatile liquid or gas hydrofluorocarbon. HFC-245fa is not classified as a volatile organic compound (precursor to ground level ozone – “Smog”) under U.S. regulations. Although HFC-245fa is non-ozone depleting and therefore regarded as “environmentally friendly”, HFC-245fa is a global warming gas with a global warming potential (“GWP”) of 950-1020.
- HFC-245fa is practically non-toxic. Short-term exposure to extremely high levels of HFC-245fa can induce cardiac sensitization. It should therefore be used in accordance with recommended practices.
- In toxicological testing only minor effects upon repeated exposure to HFC-245fa, including increased urination and mild inflammation of the heart, were noted. There were also no adverse effects on reproduction or fetal development during pregnancy upon repeated exposure to HFC-245fa.

This product stewardship summary is intended to give general information about the chemical or categories of chemicals addressed. It is not intended to provide an in-depth discussion of all health and safety information. Additional information on the chemical is available through the applicable Material Safety Data Sheet which should be consulted before use of the chemical. The product stewardship summary does not supplant or replace required regulatory and/or legal communication documents. Statements concerning use of our products are made without warranty that any such use is free of patent infringement and are not recommendations to infringe any patent.

- Toxicological testing indicated that HFC-245fa was inactive in a cancer screening test. There was a weak positive reaction in a test with cultured human cells. Overall the available data, coupled with data on similar substances, indicate that the cancer risk for HFC-245fa is low.
- Although practically non-biodegradable, HFC-245fa is unlikely to impact the aquatic environment because of its relatively high boiling point and low toxicity to aquatic organisms. It will migrate almost exclusively to the atmosphere where it is expected to have a lifetime of 7.2 years.
- HFC-245fa is not likely to accumulate in the bodies of humans or animals.
- For more information, send an e-mail to ProductRiskInformation@honeywell.com. Additional information may also be found at the following links:

Fluorocarbons.org

[Workplace Environmental Exposure Level \(WEEL\)](#)

[The European Centre for Ecotoxicology and Toxicology of Chemicals](#)

[Honeywell Enovate Blowing Agent](#)

