



Product Safety Summary

1-Chloro-1,1-Difluoroethane

CAS No. 75-68-3

The Product Safety Summary is intended to provide a general overview of the chemical substance. The information on the summary is basic information and is not intended to provide emergency response information, medical information or treatment information. The summary should not be used to provide in-depth safety and health information. In-depth safety and health information can be found on the Safety Data Sheet (SDS) for the chemical substance.

Names

- Chlorodifluoroethane
- Difluoro-1-chloroethane
- Ethane, 1-chloro-1,1-difluoro
- Refrigerant gas R-142b
- HCFC-142b
- Meforex[®] 142b

Product Overview

Solvay Specialty Polymers USA, LLC does not sell 1-Chloro-1,1-Difluoroethane to the general public. Solvay Specialty Polymers USA, LLC uses chlorodifluoroethane (R-142b) on site as a chemical intermediate to make polymers. Chlorodifluoroethane is also sold by other companies for use as a refrigerant gas, and to other industrial companies that use it to make polymers.

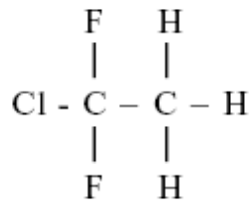
- Chlorodifluoroethane is used as starting material in the manufacture of polyvinylidene fluoride and elastomeric copolymers. These polymers are used in commercial applications requiring chemical and weather resistance.
- Chlorodifluoroethane is a colorless flammable gas with a faint ether-like odor under normal temperature and pressure.

Manufacture of Product

Production Process - Solvay uses proven technology in order to manufacture its chemicals in a safe and controlled manner. Chlorodifluoroethane is manufactured by several companies in the United States.



Structure of Chlorodifluoroethane:



Product Description

Chlorodifluoroethane is a colorless, flammable gas with a faint ether-like odor under normal temperature and pressure.

Product Uses

Chlorodifluoroethane is used by Solvay Specialty Polymers USA, LLC as a chemical intermediate in the manufacture of polyvinylidene fluoride and elastomeric copolymers. These polymers are used in commercial applications requiring chemical and weather resistance such as wire and cable coating, durable architectural coatings, and automotive components. Chlorodifluoroethane can also be used as refrigerant gas.

Exposure Potential

- **Workplace Exposure** - Chlorodifluoroethane is produced in a “closed” (limited exposure to the environment) system. Emissions will therefore be incidental during equipment failure, maintenance operations, and loading/unloading. It was also used for refrigeration systems in industrial equipment manufactured prior to 2010, and thus there exists the potential for exposure during servicing and maintenance. Potential exposure to chlorodifluoroethane is limited to industrial settings.
- **Consumer Exposure to Products Containing Chlorodifluoroethane** - There are no direct consumer uses of chlorodifluoroethane. Chlorodifluoroethane is used industrially as a starting material in the production of polymers and also as a refrigerant gas. Prior to 2010, chlorodifluoroethane was used as a blowing agent in the manufacture of rigid foam insulation. In rigid foam, loss is limited to a very slow diffusion resulting in levels below 1 ppb, and may lead to some very low human exposure.
- **Environmental Releases** - Chlorodifluoroethane is not expected to be intentionally released to the environment during production processes or during transportation.
- **Spills and Releases** - Chlorodifluoroethane is a flammable gas and can form explosive mixtures with air. In case of accidental release, evacuate the area, stay upwind of the release, and extinguish all ignition sources. Immediately notify the appropriate authorities if required by Federal, State, and local laws and regulations.



Health Information

Chlorodifluoroethane may be hazardous in case of accidental exposure to high vapor concentrations. If inhaled, chlorodifluoroethane can act as an asphyxiant and cause headache, dizziness, lightheadedness, passing out, or even death at very high levels. Chlorodifluoroethane vapors may affect the heartbeat causing irregular rhythms and sensitize the heart to epinephrine, which may cause it to stop upon sudden exertion. In industrial settings, contact with liquefied chlorodifluoroethane can cause frostbite. Chlorodifluoroethane may emit toxic fumes when involved in a fire.

Chlorodifluoroethane is not considered a carcinogen meaning it does not cause cancer.

Environmental Information

Chlorodifluoroethane is not expected to be intentionally released to the environment during production processes or during transportation.

Chlorodifluoroethane is a gas at ambient temperature and has limited solubility in water. It has a low toxicity to fish and has no significant bioaccumulation potential. This means that any chlorodifluoroethane release will dissipate quickly in air and not be taken up and stored by living organisms. Chlorodifluoroethane is considered to be an ozone depleting substance.

Physical Hazard Information

Chlorodifluoroethane is handled in "closed" (not exposed to the environment) systems under high pressure. Take measures to prevent the buildup of electrostatic charge and keep away from open flames, hot surfaces, and sources of ignition. Avoid contact with oxidizing agents and incompatible materials. If working in an industrial setting handling chlorodifluoroethane, please contact Solvay Specialty Polymers USA, LLC to request the most current Safety Data Sheet (SDS). The SDS provides more detailed information on the physical hazards and safe handling practices.

Regulatory Information

Regulatory information may vary by geographic location. Please consult the Safety Data Sheet for regulatory information in your area.



Additional Information

- Solvay America, Inc. www.solvaynorthamerica.com
- Solvay Specialty Polymers USA, LLC www.solvayplastics.com
- This summary was prepared in October, 2010
This summary was revised in September, 2013

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