



# R-407C Refrigerant

Product Steward Summary

July 2020 Rev. 0

Chemical Name:	Difluoromethane, Pentafluoroethane, 1,1,1,2-Tetrafluoroethane
CAS Number:	75-10-5, 354-33-6, 811-87-2
CAS Name:	Difluoromethane, Pentafluoroethane, 1,1,1,2-Tetrafluoroethane
EC (EINECS) Number:	200-839-4, 206-557-8, 212-337-0
REACH Registration Number	01-2119471312-47-0001, 01-2119485636-25-0001, 01-2119459374-33-0002

- Daikin R-407C is used on its own as a refrigerant in applications that include domestic air conditioning, commercial air conditioning and refrigeration. R-407C is the recommended refrigerant for retrofit of R22 in domestic and commercial HVAC, providing the closest match in capacity and efficiency. Successful R-407C retrofit requires the replacement of oil and elastomers. Contact the OEM manufacturer or Daikin America for retrofit guidelines.
- Refrigerant R-407C falls under US EPA SNAP and is currently scheduled as no longer acceptable for certain end uses in the U.S. for new and retrofit equipment; such as domestic refrigeration. R-407C use is unrestricted for service and maintenance purposes. Please refer to US EPA SNAP for most up to date ruling and decisions (<https://www.epa.gov/snap>).
- Refrigerant R-407C is a colorless, non-flammable volatile liquid.
- Refrigerant R-407C is practically non-toxic. It is not allergenic. Short-term exposure to very high levels of Refrigerant R-407C can induce cardiac sensitization and therefore should be used in accordance with recommended practices.
- Testing has indicated that there were no serious effects upon repeated exposure to Refrigerant R-407C, nor adverse effects on fertility or reproductions.
- Refrigerant R-407C is compatible with most existing HFC system components. Specifically exiting polyol ester lubricants (POE) filter dryers, gaskets, elastomers, and plastics. Please contact the component manufacturers for specific recommendations.
- Extreme temperature or over pressurizing of the cylinders may cause gas release or violent bursting. Refrigerant can decompose on contact with flames to produce toxic and corrosive products. Direct exposure to refrigerant may cause frostbite; may displace oxygen and cause rapid suffocation.

*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 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 not recommendations to infringe any patent.*



## PRODUCT STEWARDSHIP SUMMARY

- Refrigerant R-407C is extremely stable however, formation of toxic and corrosive gases is possible during contact with extremely hot surfaces or in case of fire.
- Recycle, reclaim and destruction of Refrigerant R-407C must be done per EPA requirements under the Clean Air Act. Any spent Refrigerant R-407C should be deposited with an EPA certified recycler. Only EPA licensed professionals can purchase refrigerant.
- Safety Data Sheets are available upon request.
- The US EPA provides guidance and requirements for safe use and handling. ASHRAE (American Society of Heating and Refrigeration Engineers) provides in depth classification and additional safety information.
- Regulatory compliance information for R-407C is as follows:
  - All components contained in R-407C are following the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory List.
  - CERCLA Reportable Quantity – this material does not contain any components with a CERCLA Reportable Quantity
  - SARA 304 – this material does not contain any components with a section EHS Reportable Quantity.
  - SARA 302 – this material does not contain any components with a section 302 Extremely Hazardous Substances Threshold Planning Quantity.
  - SARA 311/312 – this material is classified as, “Gases under pressure”, and “Simple Asphyxiant.”
  - SARA 313 - This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
  - US State Inventory List: Washington Toxic Air Pollutants and their ASIL, SQER, and de minimis emission values” List - 1,1,1,2-Tetrafluoroethane
  - US State Inventory List: Hawaii Toxic Air Contaminant Limits” List – Pentafluoroethane, Difluoromethane
  - US State Regulations: Pennsylvania Right to Know – 1,1,1,2-Tetrafluoroethane, Pentafluoroethane, Difluoromethane
  - US State Regulations: California List of Hazardous Substances – Difluoromethane
  - International Regulations – Montreal Protocol - 1,1,1,2-Tetrafluoroethane, Pentafluoroethane, Difluoromethane

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