

Section 1: Product and Company Identification

Advanced Specialty Gases
135 Catron Dr. Reno, NV 89512
775-356-5500

IN CASE OF EMERGENCY CALL CHEMTREC: 1-800-424-9300

Product Code: REFRIGERANT GAS, R-407C

Section 2: Hazards Identification



Warning

Hazard Classification:

Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated

Precautionary Statements

Storage:

Protect from sunlight.
Store in well-ventilated place.

Section 3: Composition/Information on Ingredients

CAS #

75-10-5, 354-33-6, 811-97-2

Chemical Substance	Chemical Family	Trade Names
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R-407C	Refrigerants	Difluoromethane, pentafluoroethane, 1,1,1,2-tetrafluoroethane

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Flush with water. Watch out for frostbite, if present, do not rub.	Flush with large amounts of water for at least 15 minutes	Unlikely	Move to fresh air.	Use caution with catecholamine drugs because of possible cardiac rhythm disturbances

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Use standard agent appropriate for type of surrounding fire	Not available	<ul style="list-style-type: none"> ▪ Not available ▪ Not available ▪ Not available ▪ Self contained, NIOSH approved breathing apparatus

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Wear recommended personal protective equipment	May report to local/or federal authorities	Stop leak if possible

Methods for Cleanup	Other Information
Not available	Not available

Section 7: Handling and Storage

Handling	Storage
Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125F (52C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.	Do not get liquid in eyes, on skin, or clothing. Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Open valve slowly. Close cylinder valve after each use; keep closed even when empty. If valve is hard to open, discontinue use and contact your supplier.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
*1000ppm TWA (8hr)

Engineering Controls

No specific controls are needed.

Eye Protection	Skin Protection	Respiratory Protection
Wear safety glasses	General work clothing and leather gloves. Use more protective gloves if prolonged contact with the liquid or gas is anticipated	Not available

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas at ambient temperatures	Clear, colorless liquid and vapor	Colorless		Liquid and vapor	Faint ethereal odor	Not available

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Not applicable	Not available	Not available	Not available	Not available	Not available

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
-43 deg C	Not determined	156.2 psia at 70 deg F	3.0 (Air=1)	1.16 at 21.1 deg C	Unknown	Neutral	Not available	>1 COMPARED TO: CC14 = 1	Not available

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
86.2	CH2F2, CF3CHF2, CH2FCF3	Not available	Not available	Not available	Not available	Not available

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
Product is stable	Product is stable	Under specific conditions - freshly abraded aluminum surfaces chemically active metals: potassium, calcium, powdered aluminum, magnesium and zinc

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Halogens, halogen acids, and possibly carbonyl halides	Will not occur

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not available	Not available	Overexposure may cause dizziness and loss of concentration. High level may cause CNS depression and cardiac arrhythmia. Is low in acute toxicity in animals. Loss of coordination, increased pulse rate and deeper respiration

Eye Irritation	Skin Irritation	Sensitization
Severe irritation if contact with liquid	Defatting action on tissue. Liquid contact could cause frostbite	No health hazards classified.

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Not available	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: not available Invertebrate toxicity: not available Algal toxicity: not available Phyto toxicity: not available Other toxicity: not available	Unlikely to remain in water	Not available	Not available

Section 13: Disposal Considerations

Not hazardous waste

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Refrigerant gas R 407C	UN3340	2.2	Not applicable	Not available	Not available	Not available	Not available

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Refrigerant gas R407C	UN3340	2.2	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not available	Not available	Not available

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Not available	Not available	Not available	Not available	Not available

SARA 372.65

Not available

OSHA Process Safety

Not available

State Regulations

CA Proposition 65

Not available

Canadian Regulations

WHMIS Classification

In accordance with hazard criteria

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Not available	Not available	Not available

Section 16: Other Information

NFPA Rating

Health-2, Flammability-1, Reactivity-0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard