

Safety Data Sheet

Part Number 326602

Section 1. Substance Identity and Company Contact Information

Product Name R-123 **Product Part Number(s)** 01-R123GAS and 01-R123KIT

Trade Name R-123 **Unit Size** 103 liters-3.6 cu. ft - 1,000 psig

Company OI Analytical, P.O. Box 9010, College Station, TX 77842-9010, Phone: (979) 690-1711, Fax: (979) 690-0440

Emergency No. 1-800-424-9300 (Chemtrec). Use only in the event of chemical emergencies involving spills, leaks, fire, exposure, or accidents involving chemicals.

Section 2. Hazards Identification

Pictogram(s)



Signal Word

Warning

Precautionary Statement(s)

Simple Asphyxiant-This product does not contain oxygen and may cause asphyxia if released in a confined area. Colorless, nonflammable gas that may have an ether-like odor at extremely high concentrations. Chlorofluorocarbons can cause irritation, central nervous system depression and irregular heart beat at high concentrations. Nonflammable but decomposes to toxic gases, including phosgene, under fire conditions. Use only with adequate ventilation. Contents under pressure. Use and store below 125 °F (52 °C).

Target Organ(s)

No data available

Potential Health Effects

Eye: Contact with rapidly expanding gas near point of release may cause frostbite.

Skin: Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

Ingestion: None known.

Inhalation: High concentrations of R-123 may cause dizziness, tremor, cardiac arrhythmias, or cardiac arrest.

Chronic Effects/ Carcinogenicity

IARC: No
 NTP: No
 OSHA: No

Teratology (Birth Defects) Information

No

Reproductive Information

No

NFPA Ratings

Health: 1
 Flammability: 0
 Reactivity: 0

HMIS Rating	Health:	1
	Flammability:	0
	Reactivity:	0
	Protective Equipment:	B (protective eye wear and gloves)

Section 3. Chemical Composition and Data on Components

Ingredient	CAS No.	Percent	Hazard Data	
			ACGIH TLV	OSHA PEL
2,2-Dichloro-1,1,1-trifluoroethane	306-83-2	100	None	None

Section 4. First Aid Measures

General Advice	No data available
If Inhaled	PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, and if breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.
In Case of Skin Contact	Rinse skin thoroughly with water. If frostbite has occurred, seek medical attention immediately; do NOT rub the affected areas or flush them with water. In order to prevent further tissue damage DO NOT attempt to remove frozen clothing from frostbite areas.
In Case of Eye Contact	Flush eyes with water for 15 minutes. If irritation persists or frostbite occurs, seek medical attention.
If Swallowed	None required. Product is a gas at normal temperatures and conditions.
Indication of Any Immediate Medical Attention and Special Treatment Needed	No data available.

Section 5. Fire-fighting Measures

General Information	Nonflammable. May decompose yielding toxic products, which may include phosgene, hydrochloric and hydrofluoric acids. Cylinder may rupture violently from pressure when involved in a fire situation.
Suitable Extinguishing Media	None required
Special Hazards Arising from the Substance or mixture	None. Chlorofluorocarbons decompose to toxic gases at fire temperatures.
Advice for Firefighters	If possible, stop the flow of gas supply. Use water spray to cool adjacent cylinders and areas. Fire fighters should wear a full-face piece NIOSH/MSHA approved self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout gear.
Flash Point	None
Autoignition Temperature	No data available
Further Information	No data available

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures	Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1.
Environmental Precautions	No data available
Methods and Materials for Containment and Cleaning	No data available
Reference to Other Sections	For disposal, see Section 13.

Section 7. Handling and Storage

Precautions for Safe Handling	Electrical Classification: Non-hazardous Gas mixture is non-corrosive and may be used with any common structural material. Use only in well-ventilated areas. Valve protection caps must remain in place unless the cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<3000 PSIG) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.
Conditions for Safe Storage, Including any Incompatibilities	Protect cylinders from physical damage. Store in cool, dry, well ventilated area of non-combustible construction away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 °F (52 °C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid from in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Specific End Use(s)	Apart from the uses mentioned in Section 1, no other specific uses are stipulated.

Section 8. Exposure Controls and Personal Protection

Components with Workplace Control Parameters	No data available
Appropriate Engineering Controls	Local exhaust used in combination with general ventilation as necessary to maintain air contaminants at or below acceptable exposure guidelines.
Eye/Face Protection	Safety goggles or glasses as appropriate for the job.
Skin Protection	Protective gloves appropriate for the job.
Body Protection	No data available
Respiratory Protection	Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use.
Control of Environmental Exposure	No data available

Section 9. Physical and Chemical Properties

Appearance	Form: Gas; Color: Colorless
Odor	Odorless
Odor Threshold	No data available
pH	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Range	No data available
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	No data available
Water Solubility	No data available
Partition Coefficient : n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
Other Safety Information	No data available

Section 10. Stability and Reactivity

Reactivity	No data available
Chemical Stability	Stable
Possibility of Hazardous Reactions	2,2-Dichloro-1,1,1-trifluoroethane decomposes at fire temperatures to hydrochloric and hydrofluoric acids, carbonyl fluoride and phosgene.
Conditions to Avoid	No data available
Incompatible Materials	2, 2-Dichloro-1,1,1-trifluoroethane may react violently with chemically active metals such as sodium, potassium, calcium, powdered aluminum, zinc, and magnesium.

Section 11. Toxicological Information

Routes of Exposure	<i>On the skin:</i>	No data available
	<i>On the eye:</i>	No data available
	<i>Inhalation:</i>	Very high concentrations may cause effects on the cardiovascular system and central nervous system, resulting in cardiac disorders and central nervous system depression.
	<i>Ingestion:</i>	No data available
Respiratory or Skin Sensitization	No data available	
Signs and Symptoms of Overexposure	No data available	
Toxicity Data	<i>Oral rat LD 50</i>	No data available

Section 12. Ecological Information

General Notes

The gas will be dissipated rapidly in well-ventilated areas. 2,2-Dichloro-1,1,1-trifluoroethane is a hydrochlorofluorocarbon (CFC) compound. Hydrochlorofluorocarbon compounds have been implicated in the possible depletion of the stratospheric ozone, via a series of complex chemical reactions which occur in the upper atmosphere. Atmospheric ozone is essential in protecting plants and animals from potentially harmful ultraviolet-light exposures. All work practice must be directed at eliminating environmental contamination.

2,2-Dichloro-1,1,1-trifluoroethane is classified as a class 2 ozone depleting substance.

2,2-Dichloro-1,1,1-trifluoroethane is not expected to bioconcentrate.

Section 13. Disposal Considerations

Product

Do not attempt to dispose of waste or unused quantities in returnable cylinders. Non-refillable containers should be vented in a well-ventilated area then disposed of in accordance with local regulations.

Contaminated Packaging

Dispose of as unused product

Section 14. Transport Information

DOT (US)

Compressed gas, N.O.S.,
(2,2-Dichloro-1,1,1-trifluoroethane, Air)

Hazard Class:

2.2

Identification Number:

UN 1956

Shipping Label:

Non-flammable gas

Section 15. Regulatory Information

OSHA Status

No data available

TSCA Status

No data available

CERCLA Reportable Quantity

None reportable

SARA Title III

2,2-Dichloro-1,1,1-trifluoroethane is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know act (EPCRA) of 1986 and of 40 CFR 372.

Hazard Classes:

Acute Health Hazard

Sudden Release of Pressure Hazard

2,2-Dichloro-1,1,1-trifluoroethane is subject to the reporting requirements under Title VI of the Clean Air Act Amendments of 1990: "Stratospheric Ozone Protection".

2,2-Dichloro-1,1,1-trifluoroethane is listed as a Class 2 ozone-depleting chemical. This product may be required to bear the following label:

Warning: Contains 2,2-Dichloro-1,1,1-trifluoroethane, a substance which harms public health and environment by destroying ozone in the upper atmosphere.

RCRA Status

No

California Proposition 65

This product does not contain ingredient(s) known to the State of California to cause cancer or reproductive toxicity.

Chemical Weapons Convention

No

TSCA 12 (b)

No data available

SARA 311/312

Acute: No data available

Chronic: No data available

Fire: No data available

Pressure: No data available

Reactivity: No data available

Australian Hazchem Code	None allocated
Poison Schedule	None allocated
WHMIS	This SDS has been prepared according the hazard criteria of the Controlled Products Regulation (CPR) and the SDS contains all of the information required by the CPR.

Section 16. Other Information

Date Prepared: April 14, 2004
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For R&D use only. Not for drug, household, or other uses.

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151 Graham Road
PO Box 9010
College Station, Texas
77842-9010
(979) 690-1711
(800) 653-1711 USA/Canada
FAX (979) 690-0440
www.oico.com
E-mail: OI-Mail@Xyleminc.com