

# Safety Data Sheet

Part Number 326601

## Section 1. Substance Identity and Company Contact Information

<b>Product Name</b>	R-134A	<b>Product Part Number(s)</b>	01-R134GAS and 01-R134KIT
<b>Trade Name</b>	R-134A	<b>Unit Size</b>	103 liters - 3.6 Cu. Ft. - 1,000 psig
<b>Company</b>	OI Analytical, P.O. Box 9010, College Station, TX 77842-9010, Phone: (979) 690-1711, Fax: (979) 690-0440		
<b>Emergency No. 1-800-424-9300 (Chemtrec).</b> Use only in the event of chemical emergencies involving spills, leaks, fire, exposure, or accidents involving chemicals.			

## Section 2. Hazards Identification

**Pictogram(s)**



<b>Signal Word</b>	Warning	
<b>GHS Classification</b>	Physical, Gases under Pressure, Compressed Gas	
<b>Hazard Statement(s)</b>	No data available	
<b>Precautionary Statement(s)</b>	Store in a well ventilated place. Protect from sunlight. Do not expose to temperature exceeding 50 °C / 122 °F.	
<b>Target Organ(s)</b>	Central nervous system	
<b>Potential Health Effects</b>	Eye:	Contact with rapidly expanding gas near the 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:	Not anticipated. Product is a gas at normal conditions.
	Inhalation:	Non-toxic - product contains sufficient oxygen to support respiration.
<b>Chronic Effects/ Carcinogenicity</b>	IARC:	No
	NTP:	No
	OSHA:	No
<b>Teratology (Birth Defects) Information</b>	Mutation data cited in the "Registry of Toxic Effects of Chemical Substances" or other information sources.	
<b>Reproductive Information</b>	No information found in the "Registry of Toxic Effects of Chemical Substances" or other information sources.	
<b>NFPA Ratings</b>	Health:	0
	Flammability:	0
	Reactivity:	0

<b>HMIS Rating</b>	Health:	0
	Flammability:	0
	Reactivity:	3
	Protective Equipment:	No data available

### Section 3. Chemical Composition and Data on Components

Ingredient	CAS No.	Percent	Hazard Data	
			ACGIH TLV	OSHA PEL
1, 1, 1, 2-Tetrafluoroethane	811-97-2	100	None	None

### Section 4. First Aid Measures

<b>General Advice</b>	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>If Inhaled</b>	PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO PRODUCT. RESCUE PERSONNEL SHOULD BE EQUIPED WITH SELF-CONTAINED BREATHING APPARATUS. Conscious persons 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, given assisted (artificial) respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.
<b>In Case of Skin Contact</b>	None required for gas. For frostbite, immerse skin in lukewarm water. DO NOT USE HOT WATER. Obtain medical attention.
<b>In Case of Eye Contact</b>	None Required for gas. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate
<b>If Swallowed</b>	Not a direct hazard.
<b>Indication of Any Immediate Medical Attention and Special Treatment Needed</b>	No data available.

### Section 5. Fire-fighting Measures

<b>General Information</b>	Fire Fighting Instructions: Use water spray to cool adjacent cylinders and areas. Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed cylinders until well after flames are extinguished.
<b>Suitable Extinguishing Media</b>	None required. Use as appropriate for surrounding materials.
<b>Special Hazards Arising from the Substance or mixture</b>	No data available
<b>Advice for Firefighters</b>	No data available
<b>Flash Point</b>	None
<b>Autoignition Temperature</b>	No data available
<b>Further Information</b>	No data available

### Section 6. Accidental Release Measures

<b>Personal Precautions, Protective Equipment, and Emergency Procedures</b>	Evacuate all personnel from affected area. Use appropriate protective equipment.
<b>Environmental Precautions</b>	No data available
<b>Methods and Materials for Containment and Cleaning</b>	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.
<b>Reference to Other Sections</b>	For disposal, see Section 13.

## Section 7. Handling and Storage

**Precautions for Safe Handling** 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.

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.

**Conditions for Safe Storage, Including any Incompatibilities**

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area 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. Post "NO SMOKING OR OPEN FLAMES" sign in the storage or use area.

**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** Contains no substances with occupational exposure limit values.

**Appropriate Engineering Controls** Local exhaust ventilation as necessary to limit exposure below the acceptable exposure limits.

**Eye/Face Protection** Safety spectacles with unperforated sideshields;

**Skin Protection** Gloves

**Body Protection** Safety shoes;

**Respiratory Protection** For emergency release, use a positive pressure NIOSH approved air-supplying respirator system (SCBA or airline/escape bottle) using at a minimum Grade D air.

**Control of Environmental Exposure** No data available

## Section 9. Physical and Chemical Properties

<b>Appearance</b>	Form: Gas; Color: Colorless
<b>Odor</b>	Faint ethereal and sweetish odor
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting Point/Freezing Point</b>	No data available
<b>Initial Boiling Point and Boiling Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper/Lower Flammability or Explosive Limits</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Relative Density</b>	No data available
<b>Water Solubility</b>	Slightly soluble
<b>Partition Coefficient : n-octanol/water</b>	No data available
<b>Auto-ignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available

<b>Explosive Properties</b>	No data available
<b>Oxidizing Properties</b>	No data available
<b>Other Safety Information</b>	No data available

## Section 10. Stability and Reactivity

<b>Reactivity</b>	No data available
<b>Chemical Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	At high temperatures 1,1,1,2-Tetrafluoroethane can decompose forming hydrofluoric acid and possibly carbonyl fluoride.
<b>Conditions to Avoid</b>	No data available
<b>Incompatible Materials</b>	Incompatible with alkali or alkaline earth metals, powdered aluminum, zinc, etc.

## Section 11. Toxicological Information

<b>Routes of Exposure</b>	<i>On the skin:</i>	Irritant effect
	<i>On the eye:</i>	Irritant effect
	<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
<b>Respiratory or Skin Sensitization</b>	No sensitizing effects known	
<b>Signs and Symptoms of Overexposure</b>	No data available	
<b>Toxicity Data</b>	<i>Oral rat LD50</i>	No data available

## Section 12. Ecological Information

<b>General Notes</b>	Product does not contain Class I or Class II ozone depleting substances. Not toxic. Will not bioconcentrate.
----------------------	--

## Section 13. Disposal Considerations

<b>Product</b>	Dispose of in accordance with local regulations. Do not attempt to dispose of waste or unused quantities in returnable cylinders.
<b>Contaminated Packaging</b>	Return in the shipping container, properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place to NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in compliance with local regulations.

## Section 14. Transport Information

<b>DOT Shipping Name</b>	Non-flammable gas (2.2) #2.2
<b>UN Proper Shipping Name</b>	Compressed gas, n.o.s.
<b>DOT Hazard Class</b>	2
<b>Packing Group</b>	No data available
<b>UN Number</b>	UN1956
<b>Hazardous Ingredients</b>	No data available
<b>DOT Label</b>	No data available
<b>DOT Placard</b>	No data available
<b>IMDG Shipping Name</b>	No data available

<b>UN Number</b>	UN1956
<b>Class</b>	No data available
<b>Packing Group</b>	No data available

<b>IATA Shipping Name</b>	No data available
<b>Technical Shipping Name</b>	No data available
<b>IATA Hazard Class</b>	No data available
<b>UN Number</b>	UN1956
<b>Hazardous Ingredients</b>	No data available
<b>IATA Label</b>	No data available
<b>IATA Placard</b>	No data available

## Section 15. Regulatory Information

<b>OSHA Status</b>	No data available	
<b>TSCA Status</b>	No data available	
<b>CERCLA Reportable Quantity</b>	No data available	
<b>SARA Title III</b>	This product does not contain chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and for 40 CFR372.	
<b>RCRA Status</b>	No	
<b>California Proposition 65</b>	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
<b>Chemical Weapons Convention</b>	No	
<b>TSCA 12 (b)</b>	Yes	
<b>SARA 311/312</b>	Acute:	Yes
	Chronic:	No
	Fire:	No
	Pressure:	Yes
	Reactivity:	No
<b>Australian Hazchem Code</b>	None allocated	
<b>Poison Schedule</b>	None allocated	
<b>WHMIS</b>	No data available	

## Section 16. Other Information

Date Prepared: August 5, 2003  
Revised: May 21, 2015

For R&D use only. Not for drug, household, or other uses. Judgements as to the suitability of information herein for the purchaser's purpose are necessarily the purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, OI Analytical extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the purchaser's intended purpose for consequences of its use.

© 2015 OI Analytical. License granted to make unlimited paper copies for internal use only.

OI Analytical, WTW, Global Water, and SI Analytics are trademarks of Xylem Inc. or one of its subsidiaries.



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