

MATERIAL SAFETY DATA SHEET

An explanation of the terms used herein may be found in OSHA 29 CFR 1910.1200, available from OSHA regional or area offices.
(Essentially similar to U.S. Department of Labor Form OMS No. 1218-0072, and generally accepted in Canada for information purposes.)
Do Not Duplicate This Form. Request an Original.



VIII. SPECIAL PROTECTION INFORMATION

PROTECTION (specify type): Not required.

LOCAL EXHAUST—Not applicable.

MECHANICAL (general)—Adequate.

SPECIAL—Not Applicable.

OTHER—Not Applicable.

VE GLOVES: Preferred for cylinder handling.

TECTION Select in accordance with OSHA 29 CFR 1910.133

ROTECTIVE EQUIPMENT Metatarsal shoes for cylinder handling. Select in accordance with OSHA 29 CFR 1910.133

IX. SPECIAL PRECAUTIONS

High pressure gas. May accelerate combustion. Keep oil and grease away. Close valve when not in use and when empty. and equipment adequately designed to withstand pressures to be encountered.

When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids mixtures which can cause serious injury or death.

read and understand all labels and other instructions supplied with all containers of this product.

for use in underwater breathing is to be determined by or under the supervision of personnel experienced in the use of or breathing gas mixtures and familiar with the effect, methods, frequency and duration of use, hazards, side effects, and risks to be taken.

information on general handling of compressed gas cylinders, obtain a copy of pamphlet P-1, "Safe Handling of Compressed Containers" from the Compressed Gas Association, Inc., 1235 Jefferson Davis Highway, Arlington, VA 22202.

HANDLING AND STORAGE CONDITIONS: Never work on a pressurized system. If there is a leak, close the cylinder valve, vent the system by venting to a safe place, then repair the leak. Store and use away from flammable materials. Never lubricate regulators, etc. with any combustible substance.

ions expressed herein are those of qualified experts within Union Carbide Industrial Gases Inc. We believe that the information herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and these opinions conditions of use of the product are not within the control of Union Carbide Industrial Gases, Inc. it is the user's obligation to note the conditions of safe use of the product.

UNION CARBIDE INDUSTRIAL GASES, INC.
LINDE DIVISION

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Other offices in principal cities all over the world.

Lithographed in U.S.A.

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I. PRODUCT IDENTIFICATION

PRODUCT	Air	SYNONYMS	Synthetic air, reconstituted air, compressed air, medical air, USP
CHEMICAL NAME	Air	CHEMICAL FAMILY	Not Applicable
FORMULA	Mixture of N ₂ and O ₂	MOLECULAR WEIGHT	Not Applicable

II. HAZARDOUS INGREDIENTS

For mixtures of this product request the respective component Material Safety Data Sheets. See Section IX.

MATERIAL (CAS NO.)	Wt (%)	1990-1991 ACGIH TLV-TWA (OSHA-PEL)
Air:		
Oxygen (7782-44-7)	21	None currently established (None currently established)
Nitrogen (7727-37-9)	79	Simple asphyxiant (None currently established)
		For compressed air the oxygen concentration range is 19.5% to 23.5%

III. PHYSICAL DATA

BOILING POINT, 760 mm. Hg	-194.3°C (-317.8°F)	FREEZING POINT	-218.2 to -191.3°C (-357.2 to -312.4°F)
SPECIFIC GRAVITY (H ₂ O = 1)	Gas	VAPOR PRESSURE AT 20 °C.	Gas
VAPOR DENSITY (air = 1)	1.00	SOLUBILITY IN WATER, % by wt.	Negligible
PERCENT VOLATILES BY VOLUME	100	EVAPORATION RATE (Butyl Acetate = 1)	Not Applicable
APPEARANCE AND ODOR	Colorless gas at normal temperature and pressure; odorless.		

EMERGENCY (or) PHONE NUMBER

IN CASE OF EMERGENCIES involving this material, further information is available at all times:
In the USA 1-800-UCC-HELP (1-800-822-4357)
In Canada 514-640-6400
For routine information contact your local supplier

D-9574

Union Carbide Industrial Gases, Inc. requests the users of this product to study this Material Safety Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

UNION CARBIDE INDUSTRIAL GASES, INC.
LINDE DIVISION

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John S. ... SEP 10 1991

PRODUCT: Air

L-4560-D
June 1991

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II.

EFFECTS OF SINGLE (ACUTE) OR REPEATED (CHRONIC) OVEREXPOSURE: None expected.

EMERGENCY AND FIRST-AID PROCEDURES: No emergency care anticipated.

PRODUCT: Air

L-4560-
June 1991

V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method)	Not Applicable	AUTOIGNITION TEMPERATURE	Not Applicable
FLAMMABLE LIMITS IN AIR, % by volume	LOWER Not Applicable	UPPER Not Applicable	

EXTINGUISHING MEDIA

Oxidizing agent. May accelerate combustion. Use media appropriate for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES

Evacuate all personnel from danger area. Immediately cool containers with water spray from maximum distance until cool then move containers away from fire area if without risk. Shut off leak if without risk.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Oxidizing agent, may accelerate combustion. Contact with flammable materials may cause fire or explosion. Container may rupture due to heat of fire. No part of a container should be subjected to a temperature higher than 52°C (approximately 125°F). Most containers are provided with a pressure-relief device designed to vent contents when they are exposed to elevated temperatures.

VI. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID: See Section IX.
UNSTABLE	STABLE	
	X	

INCOMPATIBILITY (materials to avoid): Flammable and combustible materials.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID: None currently known
May Occur	Will not Occur	
	X	

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Shut off cylinder, if without risk.

WASTE DISPOSAL METHOD:

Slowly release into atmosphere. Discard any product, residue, disposable container or liner in an environmentally acceptable manner in full compliance with Federal, state and local regulations.