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MATERIAL SAFETY DATA SHEET

105

PRODUCT NAME	CAS #
Compressed Air	N/A
TRADE NAME AND SYNONYMS Compressed Air; Air; Compressed Air, Breathing Quality	DOT I.D. No.: UN 1002
	DOT Hazard Class: Nonflammable gas
CHEMICAL NAME AND SYNONYMS See last page.	Formula: See last page.
ISSUE DATE AND REVISIONS 25 November 1985	Chemical Family: N/A

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT
None listed (ACGIH, 1985-86)

SYMPTOMS OF EXPOSURE
Air is nontoxic and necessary to support life. Inhalation of air in a high pressure environment such as underwater diving, caissons or hyperbaric chambers can result in symptoms similar to overexposure to pure oxygen. These include tingling of fingers and toes, abnormal sensations, impaired coordination and confusion. Decompression sickness pains or "bends" are possible following rapid decompression.

TOXICOLOGICAL PROPERTIES
High pressure effects (greater than two atmospheres of oxygen) are on the central nervous system. Improper decompression results in the accumulation of nitrogen in the blood.

RECOMMENDED FIRST AID TREATMENT
Facilities or practices at which air is breathed in a high pressure environment should be prepared to deal with the illnesses associated with decompression (bends or caisson disease). Decompression equipment may be required.

Information contained in this material safety data sheet is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this Company or others covering any process, composition of matter or use.
Since the Company shall have no control of the use of the product described herein, the Company assumes no liability for loss or damage incurred from the proper or improper use of such product.

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES

N/A

PHYSICAL DATA

BOILING POINT -317.8°F (-194.3°C)	LIQUID DENSITY AT BOILING POINT 54.56 lb/ft^3 (874 kg/m^3)
VAPOR PRESSURE @ 70°F (21.1°C): Above the critical temp. of -221.1°F (-140.6°C)	GAS DENSITY AT 70°F, 1 atm .0749 lb/ft^3 (1.200 kg/m^3)
SOLUBILITY IN WATER Very slightly	FREEZING POINT N/A
EVAPORATION RATE N/A	SPECIFIC GRAVITY (AIR=1) 1.0
APPEARANCE AND ODOR Colorless; odorless gas	

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) N/A	AUTO IGNITION TEMPERATURE N/A	FLAMMAGLE LIMITS % BY VOLUME LEL N/A	UEL N/A
EXTINGUISHING MEDIA Nonflammable gas		ELECTRICAL CLASSIFICATION Nonhazardous	

SPECIAL FIRE FIGHTING PROCEDURES

N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS

Compressed air at high pressures will accelerate the burning of materials to a greater rate than they burn at atmospheric pressure.

REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID
Unstable		
Stable	X	N/A

INCOMPATIBILITY (Materials to avoid)

None

HAZARDOUS DECOMPOSITION PRODUCTS

None

HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID
May Occur		
Will Not Occur	X	N/A

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

N/A

WASTE DISPOSAL METHOD

N/A

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)
N/A

VENTILATION	LOCAL EXHAUST	SPECIAL
N/A	N/A	N/A
	MECHANICAL (Gen.)	OTHER
	N/A	N/A

PROTECTIVE GLOVES
Any material

EYE PROTECTION
Safety goggles or glasses

OTHER PROTECTIVE EQUIPMENT
Safety shoes

SPECIAL PRECAUTIONS*

SPECIAL LABELING INFORMATION
DOT Shipping Name: Air, compressed
DOT Hazard Class: Nonflammable gas
DOT Shipping Label: Nonflammable gas
I.D. No.: UN 1002

SPECIAL HANDLING RECOMMENDATIONS
Valve protection caps must remain in place unless container 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 reducing regulator when connecting cylinder to lower pressure (<3,000 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 back flow into the cylinder.

For additional handling recommendations, consult the Compressed Gas Association's Pamphlets P-1, G-7 and G-7.1.

SPECIAL STORAGE RECOMMENDATIONS
Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130F (54C). 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 being stored for excesssive periods of time.

For additional storage recommendations, consult the Compressed Gas Association's Pamphlets P-1, G-7, and G-7.1.

SPECIAL PACKAGING RECOMMENDATIONS
Dry air is noncorrosive and may be used with all materials of construction. Moisture causes metal oxides which are formed with air to be hydrated so that they increase in volume and lose their protective role (rust formation). Concentrations of SO_2, Cl_2, salt, etc. in the moisture enhances the rusting of metals in air.

OTHER RECOMMENDATIONS OR PRECAUTIONS
Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).

*Various Government agencies (i.e., Department of Transportation, Occupational Safety and Health Administration, Food and Drug Administration and others) may have specific regulations concerning the transportation, handling, storage or use of this product which will not be reflected in this data sheet. The customer should review these regulations to ensure that he is in full compliance.

CHEMICAL FORMULA: (Continued)

Atmospheric air which is compressed is composed of the following concentrations of gases:

Gas	Molar %
Nitrogen	78.09
Oxygen	20.94
Argon	0.93
Carbon Dioxide	0.033*
Neon	18.18×10^{-4}
Helium	5.239×10^{-4}
Krypton	1.139×10^{-4}
Hydrogen	0.5×10^{-4}
Xenon	0.086×10^{-4}
Radon	6×10^{-18}
Water vapor	Varying concentrations

*Concentrations may have slight variations.

Compressed air is also produced by reconstitution using only oxygen and nitrogen. This product contains 79 molar percent nitrogen and 21 molar percent oxygen plus trace amounts of other atmospheric gases which are present in the oxygen and nitrogen.