

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Air
Product Description: Nonflammable Gas

<p>MANUFACTURER: Air Products and Chemicals, Inc. 7201 Hamilton Blvd Allentown, PA 18195-1501 Product Information: 1-800-752-1597</p>	<p>24 HR. EMERGENCY TELEPHONE NUMBERS: Emergency Phone: 1-800-523-9374 Emergency Phone: 1-610-481-7711</p>
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2. COMPOSITION/INFORMATION ON INGREDIENTS

	<u>vol. %</u>	<u>CAS Registry #</u>
Air	>99	132259-10-0

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	<u>EXPOSURE LIMITS</u>		
	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Supplier</u>
Air	None	None	None

COMMENTS:

Atmospheric air that is compressed is composed of Nitrogen, 78%; Oxygen, 21%; and Argon, 0.9%. Compressed air is also synthetically produced by mixing 79% Nitrogen and 21% Oxygen. The actual oxygen content can range between 19.5% and 23.5%.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE:

This product is a nontoxic, odorless, colorless, nonflammable compressed gas stored in cylinders at high pressure.

IMMEDIATE CONCERNS:

High pressure gas may accelerate combustion.

POTENTIAL HEALTH EFFECTS

EYES:

No adverse effect.

SKIN:

No adverse effect.

INHALATION:

At atmospheric pressure air has no adverse health effects.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES:

None

SKIN:

None

INHALATION:

None

MEDICAL CONDITIONS AGGRAVATED:

None

ROUTES OF ENTRY:

Inhalation

TARGET ORGANS:

None

CANCER STATEMENT:

This product is not listed as a carcinogen or potential carcinogen by NTP, IARC, or OSHA .

4. FIRST AID MEASURES

EYES:

Not Applicable

SKIN:

Not Applicable

INHALATION:

Not Applicable

NOTES TO PHYSICIAN:

None

5. FIRE FIGHTING MEASURES

Flashpoint and Method: Not Applicable

Autoignition Temperature: None

FLAMMABLE CLASS:

Nonflammable

EXTINGUISHING MEDIA:

Product is nonflammable, but will support combustion. Use extinguishing media appropriate for surrounding fire.

HAZARDOUS COMBUSTION PRODUCTS:

None known.

EXPLOSION HAZARDS:

Upon exposure to intense heat or flame cylinder may vent rapidly and/or rupture violently. Most cylinders are equipped with pressure relief devices designed to vent contents when exposed to elevated temperatures. Pressure in a container can build up due to heat and it may rupture if pressure relief devices should fail to function.

FIRE FIGHTING PROCEDURES:

If possible, remove cylinders from fire area or cool with water. SCBA may be required by rescue workers.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES:

If leak is from cylinder or cylinder valve contact the Air Products' emergency telephone number. If leak is in user's system, close cylinder valve and vent system pressure before attempting repairs.

7. HANDLING AND STORAGE

GENERAL PROCEDURES:

Always store and handle compressed gases in accordance with Compressed Gas Association, Inc. (ph. 703-412-0900) pamphlet CGA P-1, Safe Handling of Compressed Gases in Containers. Local regulations may require specific equipment for storage or use.

HANDLING:

Do not drag, roll, or slide cylinder. Use a suitable handtruck designed for cylinder movement. Never attempt to lift a cylinder by its cap. Secure cylinders at all times. Use a pressure reducing regulator or separate control valve to safely discharge gas from cylinder. Use a check valve to prevent reverse flow into cylinder. Do not overheat cylinder to increase pressure or discharge rate. If user experiences any difficulty operating cylinder valve, discontinue use and contact supplier. Never insert an object (e.g., wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve causing a leak to occur. Use a special cap wrench or adjustable strap-wrench to remove over-tight or rusted caps.

Use a "FULL", "IN USE", and "EMPTY" tag system on cylinders. This will greatly reduce the chances of inadvertently connecting or operating the wrong cylinder.

This product is compatible with all common materials of construction. Pressure requirements should be considered when selecting materials and designing systems.

STORAGE:

Cylinders should be stored upright in a well-ventilated, secure area, protected from the weather, away from combustible materials. Storage temperature should not exceed 125 F (52 C). Storage should be away from heavily traveled areas and emergency exits. Avoid areas where salt or other corrosive materials are present. Valve protection caps and valve outlet seals should remain on cylinders not connected for use. Separate full from empty cylinders. Avoid excessive inventory and storage time. Use a first-in first-out system. Keep good inventory records. Visually inspect stored cylinders on a routine basis, at least weekly, for any indication of leakage or other problems.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Not required.

PERSONAL PROTECTION

EYES AND FACE:

Safety glasses.

RESPIRATORY:

Not required.

PROTECTIVE CLOTHING:

Safety shoes and leather work gloves are recommended when handling cylinders.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Gas

Odor: None

Appearance: Colorless gas.

Color: Colorless.

Boiling Point: -317.8°F

Freezing Point: -357.2°F

Density: 0.0749 lbs/cu ft at 70°F

Specific Gravity: 1 (Air = 1)

Specific Volume: 13.346 cu.ft./lb.

Molecular Weight: 28.975

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID:

Avoid the use of oil in systems at full cylinder pressure.

HAZARDOUS DECOMPOSITION:

None

INCOMPATIBLE MATERIALS:

None known.

11. TOXICOLOGICAL INFORMATION

GENERAL COMMENTS:

Air is nontoxic and is necessary to support life. Inhalation of air in high pressure environments can result in symptoms similar to overexposure to oxygen. These include tingling of fingers, impaired coordination, and confusion. Decompression sickness (Bends) is possible following rapid decompression. Decompression equipment may be required if exposed to high pressure environment.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA:

No adverse ecological effects are expected. This product does not contain any Class I or Class II ozone depleting chemicals.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

For emergency disposal, secure the cylinder and slowly discharge gas to the atmosphere in a well ventilated area or outdoors.

EMPTY CONTAINER:

Return cylinder and unused product to supplier. Do not attempt to dispose of residual or unused quantities. Ensure cylinder valve is properly closed, valve outlet seal has been reinstalled, and valve protection cap is secured before shipping cylinder.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

Proper Shipping Name: Air, Compressed

Hazard Class: 2.2

NA/UN Number: 1002

Label: Nonflammable Gas

Marine Pollutant #1: Not listed.

NAERG: 122

Other Shipping Information: Cylinders should be transported in a secure position in a well ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards.

SPECIAL SHIPPING NOTES:

Compressed gas cylinders shall 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 filled without the owner's written consent is a violation of federal law.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

Fire: NO Pressure Generating: YES Reactivity: NO Acute: NO Chronic: NO
Requires submission of material safety data sheets (MSDS) and chemical inventory reporting with identification of EPA defined hazard classes as listed above.

313 Reportable Ingredients: This product does not require reporting under Section 313.

302/304 EMERGENCY PLANNING:

Requires emergency planning based on threshold planning quantities (TPQ) and release reporting based on reportable quantities (RQ) of EPA's extremely hazardous substances (40 CFR 355).

This product is not an extremely hazardous substance.

THRESHOLD QUANTITY: None

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: None

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA Status: This product is listed on the TSCA inventory.

CLEAN AIR ACT

40 CFR PART 68—RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION:

This product is not listed as a regulated substance.

AIR TOXICS: This product is not listed as a hazardous air pollutant under Section 112 of the Clean Air Act Amendments of 1990.

THRESHOLD QUANTITY: None

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910.119—PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS:

This product is not listed in Appendix A as a highly hazardous chemical.

THRESHOLD QUANTITY: None

STATE REGULATIONS

PROPOSITION 65 STATEMENT:

This product does NOT contain any listed substances which the State of California requires warning under this statute.

16. OTHER INFORMATION

Approval date: 07/11/1997

REVISION SUMMARY

New MSDS In Section 9

Boiling (From) Freezing Point (From) Density (lbs) Density Specific Gravity (From) Specific Gravity (Unit) Molecular Weight # Specific Volume (From) Specific Volume (Unit)

In Section 11

Toxicological (text)

In Section 14

Proper Shipping Name UN/NA Number

In Section 15

SARA 311/312 Hazard Categories (text) CERCLA RQ (text)

In Section 16

Additional MSDS Information (text)

NFPA CODES

Fire: 0 Health: 0 Reactivity: 0

HMIS CODES

Fire: 0 Health: 0 Reactivity: 0 Protection: 0

ADDITIONAL MSDS INFORMATION:

MSDS Revision: 7