



## SAFETY DATA SHEET

Revised edition no : 1  
Date : 02/09/2015


### ZERO AIR

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#### SECTION 1. IDENTIFICATION OF THE PRODUCT AND COMPANY UNDERTAKING

<b>Material Name</b>	ZERO AIR
<b>Trade names/Synonyms</b>	Air, mixture of nitrogen and oxygen (mixture of 19.5% - 23.0% oxygen, balance nitrogen, or Air compressed from the atmosphere). Compressed Air, Synthetic Air, Zero Air, Instrument Air.
<b>Family Name</b>	Gas
<b>Product Use</b>	General Industrial
<b>Restrictions on Use</b>	None known.
<b>Company:</b>	<b>Puregas (Pty) Ltd</b> PO Box 123884, Alrode, 1451, South Africa <b>Tel :</b> (011) 903 9760 <b>Fax:</b> (011) 903 9766 <b>Emergency:</b> 082 410 4661 Info@puregas.co.za

#### SECTION 2. HAZARDS IDENTIFICATION

<b>GHS Classification</b>	Gas under pressure, Compressed gas
<b>GHS LABEL ELEMENTS Symbol(s)</b>	
<b>Signal Word</b>	WARNING
<b>Hazard Statement(s)</b>	Contains gas under pressure; may explode if heated
<b>Precautionary Statement(s) Prevention</b>	None needed according to classification criteria
<b>Response</b>	None needed according to classification criteria.
<b>Storage</b>	Store in a well-ventilated place. Protect from sunlight.

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Component	Percent
7782-44-7	Oxygen	21%
7727-37-9	Nitrogen	Balance
or		
CAS	Component	Percent
132259-10-0	Air	100%



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#### SECTION 4. FIRST AID MEASURES

<b>Inhalation</b>	If adverse effects occur, remove to uncontaminated area. Get medical attention.
<b>Skin contact</b>	Wash with soap and water.
<b>Eye contact</b>	Flush eyes with plenty of water for at least 15 minutes.
<b>Ingestion</b>	If swallowed get medical attention.
<b>Most Important Symptoms/Effects</b>	
<b>Acute</b>	No information on significant adverse effects.
<b>Delayed</b>	No information on significant adverse effects.
<b>Indication of Immediate Medical Attention and Special Treatment</b>	Treat symptomatically and supportively.

#### SECTION 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media.</b>	All known extinguishing media can be used.
<b>Specific Hazards</b>	Can support combustion. Upon exposure to intense heat or flame, cylinder will vent rapidly and or rupture violently. Move away from container and cool with water from a protected position. If possible, stop flow of product. Keep adjacent cylinders and surroundings cool by spraying with large amounts of water until the fire burns itself out.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear self-contained breathing apparatus for fire-fighting if necessary.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Evacuate personnel to safe area.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Ventilate the area.
<b>Additional advice</b>	If possible, stop flow of product. If leak is from cylinder or cylinder valve, call the Puregas emergency telephone number. If leak is in the user's system, close the cylinder valve, safely vent the pressure, before attempting repairs.



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## SECTION 7. HANDLING AND STORAGE

### Handling Procedures

Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not allow storage area temperature to exceed 50°C. Only experienced persons should handle compressed gases. Before using the product, determine its identity by reading the label. Know and understand the properties and hazards of the product before use. When doubt exists as to the correct handling procedure for a particular gas, contact the supplier. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Do not remove valve guards. Before connecting the container, check the complete gas system for suitability, particularly for pressure rating and materials. Before connecting the container for use, ensure that back feed from the system into the container is prevented. Ensure the complete gas system is compatible for pressure rating and materials of construction. Ensure the complete gas system has been checked for leaks before use. Employ suitable pressure regulating devices on all containers when the gas is being emitted to systems with lower pressure rating than that of the container.

Open valve slowly. If user experiences any difficulty operating cylinder valve, discontinue use and contact supplier. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Close valve after each use and when empty. Do not subject containers to abnormal mechanical shocks which may cause damage to their valve or safety devices. Never attempt to lift a cylinder by its valve guard. Do not use containers as rollers or supports or for any other purpose than to contain the gas as supplied. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Do not smoke while handling product or cylinders. Never re-compress a gas or a gas mixture without first consulting the supplier. Never attempt to transfer gases from one cylinder/container to another. Always use backflow protective device in piping. Never use direct flame or electrical heating devices to raise the pressure of a container. Containers should not be subjected to temperatures above 50°C. Prolonged periods of cold temperature below -30°C should be avoided.

### Storage Procedures

Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Inside storage: Store in a cool, dry place. Store in a well-ventilated area. Avoid heat, flames, sparks and other sources of ignition. Protect from sunlight.

### Incompatibilities

None Known



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### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Component Exposure Limits

ACGIH, EU, OSHA, and NIOSH have not developed exposure limits for any of this product's components

#### PERSONAL PROTECTIVE EQUIPMENT

##### Eyes/Face

Eye protection not required, but recommended.

##### Protective Clothing

Protective clothing is not required under normal conditions.

##### Glove Recommendations

Protective gloves are not required, but recommended.

##### Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

#### For Unknown Concentrations or Immediately Dangerous to Life or Health

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Any supplied-air respirator with a full face piece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Gas

**Color:** Colourless

**Odor:** Odorless

**Taste:** Tasteless

#### Melting/Freezing

**Point:** -216.2 °C

**Flash Point:** Not flammable

**LEL:** Not available

760 mmHg @ -

**Vapor Pressure:** 194°C

**Density:** 1.29 g/L @0°C

0.01853 cP @

**Viscosity:** 26.85°C

#### Evaporation

**Rate:** Not available

**Appearance:** Colourless, gas

**Physical Form:** Gas

**Odor Threshold:** Not available

**pH:** Not available

**Boiling Point:** -1940.3 °C

**Decomposition:** Not available

**OSHA** Not available

**Flammability class:**

**UEL:** Not available

**Vapour Density**

**(air = 1):** 1

**Water solubility:** Slightly soluble

**Auto Ignition:** Not available

**Molecular Weight:** 28.975

**Volatility:** 100%

**Specific Gravity**

**(water=1):** 1

**Log KOW:** Not available

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SECTION 10. STABILITY AND REACTIVITY	
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.
<b>Possibility of Hazardous Reactions</b>	Will not polymerize.
<b>Incompatible Materials</b>	None known
<b>Hazardous Decomposition</b>	<b>Combustion:</b> None known

SECTION 11. TOXICOLOGICAL INFORMATION	
<b>Acute and Chronic Toxicity Component Analysis - LD50/LC50</b>	The components of this material have been reviewed in various sources and no selected endpoints have been identified.
<b>RTECS Acute Toxicity (selected)</b>	The components of this material have been reviewed and RTECS publishes no data as of the date on this document.
<b>Information on Likely Routes of Exposure</b>	
<b>Inhalation:</b>	
<b>Ingestion:</b>	No information available
<b>Skin Contact:</b>	Ingestion of a gas is unlikely
<b>Eye Contact:</b>	No information is available
<b>Immediate Effects</b>	No information is available
<b>Delayed Effects</b>	No information on significant adverse effects.
<b>Medical Conditions Aggravated by Exposure</b>	No information on significant adverse effects.
<b>Irritation/Corrosivity Data</b>	No data available
<b>RTECS Irritation</b>	No data available
<b>Respiratory Sensitizer</b>	The components of this material have been reviewed and RTECS publishes no data as of the date on this document.
<b>Dermal Sensitizer</b>	No data available
<b>Carcinogenicity Component Carcinogenicity</b>	No data available
<b>RTECS Mutagenic</b>	None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.
<b>Reproductive Effects Data</b>	No data available

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<b>RTECS Tumorigenic</b>	No data available
<b>Specific Target Organ Toxicity - Single Exposure</b>	No data available
<b>Specific Target Organ Toxicity - Repeated Exposure</b>	No data available
<b>Aspiration Hazard</b>	No data available
	Not applicable

SECTION 12. ECOLOGICAL INFORMATION	
<b>Component Analysis - Aquatic Toxicity</b>	No LOEL ecotoxicity data are available for this product's components
<b>Persistence and Degradability</b>	No data available.
<b>Bioaccumulative Potential</b>	No data available
<b>Mobility in Environmental Media</b>	No data available

SECTION 13. DISPOSAL CONSIDERATIONS	
<b>Disposal methods</b>	Dispose in accordance with all applicable regulations.
<b>Component Waste Numbers</b>	The U.S. EPA has not published waste numbers for this product's components.

SECTION 14. TRANSPORT INFORMATION	
<b>US DOT Information</b>	<b>Shipping Name:</b> Air, compressed <b>UN/NA #:</b> UN1002 <b>Hazard Class:</b> 2.2 <b>Required Label(s):</b> 2.2
<b>IMDG Information</b>	<b>Shipping Name:</b> Air, compressed <b>UN #:</b> UN1002 <b>Hazard Class:</b> 2.3 <b>Required Label(s):</b> 2.2

SECTION 15. REGULATORY INFORMATION	
<b>Component Analysis</b> <b>U.S. Federal Regulations</b> None of this products components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372,65), CERCLA (40 CFR 302,4), TSCA 12(b), and/or require an OSHA process safety plan.	
<b>SARA 311/312 Hazardous Categories</b> <b>Acute Health:</b> Yes <b>Chronic Health:</b> No <b>Fire:</b> No <b>Pressure:</b> Yes <b>Reactive:</b> No	



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### U.S. State Regulations

None of this product's components are listed on the state lists from CA, MA, MN, NJ OR PA.

Not regulated under California Proposition 65

### Component Analysis - Inventory

Listed on inventory.

### Component Analysis – Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Air, Compressed	132259-10-0	No	No	No	No	No	No	No	Yes	Yes

## SECTION 16. OTHER INFORMATION

**NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

### Other Information

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