MATERIAL SAFETY DATA SHEET (MSDS)
AIR

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Ref. No.: MS104

1 PRODUCT AND COMPANY

IDENTIFICATION Product Name AIR

Chemical Formula	21% Oxygen/Balance Nitrogen
Trade Names	Air, Compressed Dry Air Air, Instrument Grade Air, Instrument Grade, (ZERO)
Colour coding	*Air Compressed & Dry* French Grey (H.30) Body *Air Instrument Grade* French Grey (H.30) body with "Instrument Grade" logo affixed to body of the cylinder Air, Instrument grade, (ZERO) Protea Pink (P.58) body with "Instrument Grade" logo and "ZERO" Decal affixed to the body of the cylinder Medical Air, Compressed French Grey (H.30) body with white and black quadrants on shoulder of cylinder
Valve	All of above grades have 3 SO - Brass 5/8 inch right hand female valve fitted
Company Identification	Afrox Malawi Limited Johnstone Road Ginnery Corner, Blantyre Tel No: +265(1)871 611 Fax No: +265(1)871 260
EMERGENCY NUMBER	**+265 (1) 871 611** **(24 hours)**

2 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Air
Synonyms CAS	Atmospheric Air
No.	None
UN No.	1002
ERG No.	122
Hazard Warning	2 C Non-flammable, non-toxic Gas

3 HAZARDS

IDENTIFICATION Main Hazards
Air is non-flammable, but readily supports combustion. Never permit oil, grease, other readily combustible substance to come into contact with air at high pressure.

Adverse Health Effects
Air is non-toxic and non-flammable. Of the constituents that make up air, only oxygen and nitrogen are necessary for life.

Chemical Hazards
In air, which contains more than normal 21% oxygen, combustible materials are easier to ignite and burn faster. The higher the concentration of oxygen, the greater the fire risk. In a compartment (such as a tunnel, caisson or chamber) filled with air under pressure, most combustible materials will ignite more readily and burn much more rapidly than they would in air at normal atmospheric pressure, because of the increase in partial pressure of oxygen, even though the air contains only the normal 21% of oxygen.

Biological Hazards	No known effect
Vapour Inhalation	No known effect
Eye Contact	No known effect
Skin Contact	No known effect
Ingestion	No known effect

4 FIRST AID MEASURES

Care should be taken with the exposure to either oxygen-deficient or oxygen-enriched atmospheres. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. They should be kept warm and quiet. Quick removal from the contaminated area is most important. The physician should be informed when a patient has experienced hyperoxia.

5 FIRE FIGHTING MEASURES

Extinguishing Media
As Air is non-flammable, but supports combustion, the correct type of extinguisher should be used depending on the combustible material involved.

Specific Hazards
Materials that would not normally burn in air could combust vigorously in atmospheres having high concentrations of oxygen.

Emergency Actions
All cylinders should be removed from the vicinity of the fire. Cylinders that can't be removed should be cooled with water from a safe distance. Cylinders which have been exposed to excessive heat should be clearly identified and returned to the supplier. CONTACT THE NEAREST AFROX BRANCH.

Protective Clothing
Safety goggles, gloves and safety shoes should be worn when handling cylinders.

Environmental Precautions
None

6 ACCIDENTAL RELEASE

MEASURES Personal Precautions
Avoid exposure to either oxygen deficient or oxygen-enriched atmospheres.

Environmental Precautions
Beware of oxygen enriched atmospheres coming into contact with readily combustible materials.

Small Spills	No known effect.
Large Spills	No known effect.

7 HANDLING AND STORAGE

Do not allow cylinders to slide or come into contact with sharp edges. Cylinders of air should not be stored near cylinders of acetylene or other combustible gases. Air cylinders may be stacked horizontally provided that they are firmly secured at each end to prevent rolling. Prevent dirt, grit or any sort, oil, or any other lubricant from entering the cylinder valves, and store cylinders well clear of any corrosive influence, e.g. battery acid. Compliance with all relevant legislation is essential. Use a "first in - first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Keep out of reach of children.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Hazards
Avoid exposure to oxygen-enriched atmospheres, as this could result in clothing becoming saturated by oxygen-enriched air. On ignition the clothing could burn fiercely resulting in serious burns.

Engineering Control Measures
No known effect.

Personal Protection
Safety goggles, gloves and shoes, or boots, should be worn when handling cylinders.

Skin No known effect.

9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DATA

Chemical Symbol	None
Molecular Weight	28.95
Density, gas @ 101,325 kPa & 20°C	1.205 kg/m3
Colour	None
Taste	None
Odour	None

10 STABILITY AND REACTIVITY

Conditions to avoid
Never use cylinders as rollers or supports, or for any other purpose than the storing of air. Never expose the cylinders to excessive heat, as this may cause sufficient build-up of pressure to rupture the cylinders.

Incompatible Materials
Since dry air is non-corrosive, most materials of construction are suitable.

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Hazardous Decomposition Products None

11 TOXICOLOGICAL INFORMATION

Acute Toxicity	No known effect
Skin & eye contact	No known effect
Chronic Toxicity	No known effect
Carcinogenicity	No known effect
Mutagenicity	No known effect
Reproductive Hazards	No known effect

(For further information see Section 3. Adverse Health effects)

12 ECOLOGICAL INFORMATION

No harmful effect.

13 DISPOSAL CONSIDERATIONS

Disposal Methods
Small amounts may be blown to the atmosphere under controlled conditions.

Disposal of Packaging
The disposal of cylinders must only be handled by the gas supplier.

14 TRANSPORT INFORMATION

ROAD TRANSPORTATION

UN No	1002
ERG No	122
Hazchem warning	2C Non-flammable Gas

SEA TRANSPORTATION

IMDG	1002
Class/Packaging Group	
Label	Non-flammable Gas

AIR TRANSPORTATION

ICAO/IATA Code	1002
Class	2.2
Packaging group/instructions	
-Cargo	200
-Passenger	200
Maximum quantity allowed	
-Cargo	150 kg
-Passenger	75 kg

15 REGULATORY INFORMATION

EEC Hazard class Non-flammable Gas

Risk Phrase	Description	Safety Phrase	Description
R44	Risk of explosion if heated under confinement	S2	Keep out of reach of Children
		S3	Keep in a cool place

National legislation: None
Refer to SANS 10265 for explanation of the above.

16 OTHER INFORMATION

Bibliography
SANS 10265 - Labelling of Dangerous Substances

17 EXCLUSION OF LIABILITY

Information contained in this publication is accurate at the date of publication. The company does not accept liability arising from the use of this information, or the use, application, adaptation or process of any products described herein.