



A Member of The Linde Group

MATERIAL SAFETY DATA SHEET

1013

Product Name **18 TO 23% OXYGEN BALANCE NITROGEN**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name BOC LIMITED (AUSTRALIA)
Address 10 Julius Avenue, North Ryde, NSW, AUSTRALIA, 2113
Telephone 131 262, (02) 8874 4400
Fax 132 427 (24 hours)
Emergency 1800 653 572 (24/7) (Australia only)
Web Site <http://www.boc.com.au/>
Synonym(s) 1013 - MSDS NUMBER • 2940023NR - PART NUMBER • PRODUCT CODES: 276PS106, 285, 288 • SPECIAL GAS MIXTURE
Use(s) CALIBRATION • INDUSTRIAL APPLICATIONS
SDS Date 19 Feb 2010

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No.	1956	DG Class	2.2	Subsidiary Risk(s)	None Allocated
Packing Group	None Allocated	Hazchem Code	2TE	EPG	2C1

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
OXYGEN	O2	7782-44-7	18-23%
NITROGEN	N2	7727-37-9	77-82%

4. FIRST AID MEASURES

Eye None required.

Inhalation If inhaled, remove from contaminated area. If other than minor symptoms are displayed, seek immediate medical attention. An inhalation hazard is not anticipated under normal conditions of use. For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor.

Skin None required.

Ingestion Due to product form and application, ingestion is considered unlikely.

Advice to Doctor Treat symptomatically

5. FIRE FIGHTING MEASURES

Flammability	Non flammable.
Fire and Explosion	Temperatures in a fire may cause cylinders to rupture. Cool cylinders or containers exposed to fire by applying water from a protected location. Do not approach cylinders or containers suspected of being hot.
Extinguishing	Use water fog to cool containers from protected area.
Hazchem Code	2TE

6. ACCIDENTAL RELEASE MEASURES

Spillage	If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use personal protective equipment. Carefully move material to a well ventilated remote area, then allow to discharge. Do not attempt to repair leaking valve or cylinder safety devices.
-----------------	--

7. STORAGE AND HANDLING

Storage	Cylinders should be stored below 45°C in a secure area, upright and restrained to prevent cylinders from falling. Cylinders should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits.
Handling	Use of safe work practices are recommended to avoid inhalation. Do not drag, drop, slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement.

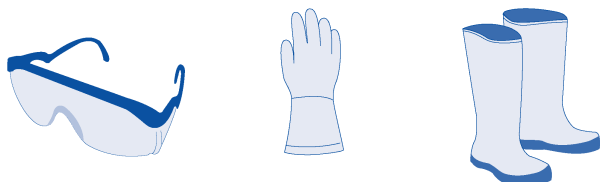
8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds	Ingredient	Reference	TWA		STEL	
			ppm	mg/m3	ppm	mg/m3
	Nitrogen	ASCC (AUS)	Asphyxiant			

Biological Limits No biological limit allocated.

Engineering Controls No special precautions are normally required when handling this product.

PPE Wear safety boots, leather gloves and safety glasses.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	COLOURLESS GAS	Solubility (Water)	0.018 cm3/cm3
Odour	ODOURLESS	Specific Gravity	NOT APPLICABLE
pH	NOT APPLICABLE	% Volatiles	100 %
Vapour Pressure	NOT AVAILABLE	Flammability	NON FLAMMABLE
Vapour Density	1 (Air = 1)	Flash Point	NOT RELEVANT
Boiling Point	-194°C	Upper Explosion Limit	NOT RELEVANT
Melting Point	NOT AVAILABLE	Lower Explosion Limit	NOT RELEVANT
Evaporation Rate	NOT APPLICABLE		
Critical Pressure	3774 kPa	Critical Temperature	-140°C
Cylinder Pressure	13000 kPa @ 15°C		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to Avoid	Avoid heat, sparks, open flames and other ignition sources.
Material to Avoid	Compatible with most commonly used materials.
Decomposition	May evolve toxic gases if heated to decomposition.
Hazardous Reactions	Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Non toxic gas. As the amount of oxygen inhaled is increased, chest tightness, burning pains and coughing spasms may occur. Other symptoms of hyperoxia include cramps, nausea, dizziness, hypothermia, amblyopia (loss of vision), bradycardia, fainting spells and convulsions capable of causing death. Over exposure at normal or elevated pressure may result in severe thickening and scarring of lung tissues. Not carcinogenic or mutagenic.
Eye	Non irritant.
Inhalation	Non irritant. Adverse health effects are not anticipated under normal conditions of use.
Skin	Non irritant.
Ingestion	Ingestion is considered unlikely due to product form.
Toxicity Data	No LD50 data available for this product.

12. ECOLOGICAL INFORMATION

Environment	No known ecological damage is caused by this product.
--------------------	---

13. DISPOSAL CONSIDERATIONS

Waste Disposal	Cylinders should be returned to the manufacturer or supplier for disposal of contents.
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Transport	Ensure cylinder is separated from driver and that outlet of relief device is not obstructed. Refer to Commonwealth, State and Territory Dangerous Goods Legislation which contain requirements which affect gas storage and transport.
------------------	--



CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

Shipping Name	COMPRESSED GAS, N.O.S.			Subsidiary Risk(s)	None Allocated
UN No.	1956	DG Class	2.2	EPG	2C1
Packing Group	None Allocated	Hazchem Code	2TE		
IATA					
Shipping Name	COMPRESSED GAS, N.O.S.			Subsidiary Risk(s)	None Allocated
UN No.	1956	DG Class	2.2		
Packing Group	None Allocated				
IMDG					
Shipping Name	COMPRESSED GAS, N.O.S.			Subsidiary Risk(s)	None Allocated
UN No.	1956	DG Class	2.2		
Packing Group	None Allocated				

15. REGULATORY INFORMATION

Poison Schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information The storage of significant quantities of gas cylinders must comply with AS4332 The storage and handling of gases in cylinders.

APPLICATION METHOD: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.

ABBREVIATIONS:

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EINECS - European INventory of Existing Commercial chemical Substances.

IARC - International Agency for Research on Cancer.

M - moles per litre, a unit of concentration.

mg/m³ - Milligrams per cubic metre.

NOS - Not Otherwise Specified.

NTP - National Toxicology Program.

OSHA - Occupational Safety and Health Administration.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

TWA/ES - Time Weighted Average or Exposure Standard.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Report Status This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

Prepared By Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au

Product Name 18 TO 23% OXYGEN BALANCE NITROGEN

SDS Date: 19 Feb 2010

End of Report

CHEM ALERT

Page 5 of 5
RMT
Reviewed: 02 Nov 2009
Printed: 19 Feb 2010