

## SAFETY DATA SHEET

**Product Name** 2 COMPONENT MIXTURE (NO<sub>2</sub>, BALANCE N<sub>2</sub>)

### 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)** BOC COMPONENT MIXTURE  
**Use(s)** CALIBRATION · INDUSTRIAL APPLICATIONS  
**SDS Date** 19 July 2012

### 2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

#### RISK PHRASES

R20 Harmful by inhalation.

#### SAFETY PHRASES

S9 Keep container in a well ventilated place.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S28 After contact with skin, wash immediately with plenty of water.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

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

**UN Number** 1956 **DG Division** 2.2  
**Packing Group** None Allocated **Subsidiary Risk(s)** None Allocated  
**Hazchem Code** 2TE

### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Identification	Classification	Content (v/v)
NITROGEN DIOXIDE	CAS: 10102-44-0 EC: 233-272-6	T+;R26 C;R34 O;R8	0.1 - 0.5%
NITROGEN	CAS: 7727-37-9 EC: 231-783-9	Not Available	Remainder

### 4. FIRST AID MEASURES

**Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation** If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Be aware of possible explosive atmospheres. Apply artificial respiration if not breathing. Give oxygen if available. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.



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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance	RED/BROWN COLOURED GAS
Odour	PUNGENT ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT RELEVANT
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT APPLICABLE
pH	NOT APPLICABLE
Vapour density	NOT AVAILABLE
Specific gravity	NOT APPLICABLE
Solubility (water)	NOT AVAILABLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Partition coefficient	NOT AVAILABLE
% Volatiles	100 %

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**10. STABILITY AND REACTIVITY**

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Chemical Stability	Stable under recommended conditions of storage.
Conditions to Avoid	Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.
Material to Avoid	Nitric oxide reacts in air to form nitrogen dioxide which is highly oxidising and reacts violently with fluorine and chlorine in the presence of moisture.
Hazardous Decomposition Products	This material will not decompose to form hazardous products other than that already present.
Hazardous Reactions	Polymerization will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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Health Hazard Summary	Asphyxiant. A toxic and asphyxiant mixture if directly inhaled. When released into air the concentration of nitrogen dioxide is diluted. Nitrogen dioxide concentrations above 25 ppm may have an immediate effect of irritating the nose and throat followed by delayed onset of respiratory difficulties. Over exposure to concentrations of nitrogen dioxide above 5 ppm may result in sudden onset pulmonary oedema which can be rapidly fatal. The effects of nitric oxide may be observed before the asphyxiation hazard due to other gases present. Mutation data reported for nitrogen dioxide. Results in chronic irritation of the respiratory tract in low doses.
Eye	Irritant. Contact may result in irritation. Contact lenses should not be worn when using this product.
Inhalation	Irritant. An asphyxiant mixture if directly inhaled.
Skin	Irritant. Contact may result in irritation.
Ingestion	Ingestion is considered unlikely due to product form.
Toxicity Data	NITROGEN DIOXIDE (10102-44-0) LC50 (inhalation) 88 ppm/4 hours (rat) LCLo (inhalation) 200 ppm/1 minute (human) TCLo (inhalation) 6200 ppb/10 minutes (man)

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**12. ECOLOGICAL INFORMATION**

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Environment	Nitrogen oxides react with volatile organic compounds to produce ozone, a principal factor in photochemical smog. Will form nitric acid in contact with water. Nitrates can persist for prolonged periods in water. Not expected to concentrate in the food chain.
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**13. DISPOSAL CONSIDERATIONS**

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Waste Disposal	Cylinders should be returned to the manufacturer or supplier for disposal of contents.
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Product Name **2 COMPONENT MIXTURE (NO2, BALANCE N2)**

Legislation Dispose of in accordance with relevant local legislation.

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## 14. TRANSPORT INFORMATION

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



	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN Number	1956	-	-
Proper Shipping Name	COMPRESSED GAS, N.O.S. (Contains nitrogen)	-	-
DG Class/ Division	2.2	-	-
Subsidiary Risk(s)	None Allocated	-	-
Packing Group	None Allocated	-	-
GTEPG	2C1		
Hazchem Code	2TE		
Other Information	Ensure cylinder is separated from driver and that outlet of relief device is not obstructed.		

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## 15. REGULATORY INFORMATION

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Poison Schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Inventory Listing(s)	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.

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## 16. OTHER INFORMATION

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**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.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this ChemAlert 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.

**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 ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Product Name**      **2 COMPONENT MIXTURE (NO2, BALANCE N2)**

<b>Abbreviations</b>	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	GHS	Globally Harmonized System
	IARC	International Agency for Research on Cancer
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m <sup>3</sup>	Milligrams per Cubic Metre
	PEL	Permissible Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	TLV	Threshold Limit Value
	TWA/OEL	Time Weighted Average or Occupational Exposure Limit

**Revision History**

Revision	Description
1.0	Initial SDS Creation

**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.

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**End of SDS**