

**SAFETY DATA SHEET**

# 2141

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER****1.1 Product identifier**

**Product name** 3 COMPONENT MIXTURE (O<sub>2</sub>, CO<sub>2</sub> (<1PPM), BALANCE N<sub>2</sub>) (MEDICAL USE)

**Synonym(s)** 2141 - SDS NUMBER • SPECIAL GAS MIXTURE

**1.2 Uses and uses advised against**

**Use(s)** MEDICAL APPLICATIONS

**1.3 Details of the supplier of the product**

**Supplier name** BOC LIMITED (AUSTRALIA)

**Address** 10 Julius Avenue, North Ryde, NSW, 2113, AUSTRALIA

**Telephone** 131 262, (02) 8874 4400

**Fax** 132 427 (24 hours)

**Website** <http://www.boc.com.au>

**1.4 Emergency telephone number(s)**

**Emergency** 1800 653 572 (24/7) (Australia only)

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

**GHS classification(s)** Gases Under Pressure: Compressed gas  
Oxidizing Gases: Category 1

**2.2 Label elements**

**Signal word** DANGER

**Pictogram(s)**

**Hazard statement(s)**

H270 May cause or intensify fire; oxidizer.  
H280 Contains gas under pressure; may explode if heated.

**Prevention statement(s)**

P220 Keep/Store away from clothing/incompatible materials/combustible materials.  
P244 Keep reduction valves free from grease and oil.

**Response statement(s)**

P370 + P376 In case of fire: Stop leak if safe to do so.

**Storage statement(s)**

P410 + P403 Protect from sunlight. Store in a well-ventilated place.

**Disposal statement(s)**

None allocated.

**2.3 Other hazards**

No information provided.

**3. COMPOSITION/ INFORMATION ON INGREDIENTS****3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content (v/v)
OXYGEN	7782-44-7	231-956-9	26.4%
NITROGEN	7727-37-9	231-783-9	>73.6%
CARBON DIOXIDE	124-38-9	204-696-9	<0.0001%

**4. FIRST AID MEASURES****4.1 Description of first aid measures**

<b>Eye</b>	None required.
<b>Inhalation</b>	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 Poison Information Centre on 13 11 26 (Australia Wide) or a doctor.
<b>Skin</b>	None required.
<b>Ingestion</b>	Due to product form and application, ingestion is considered unlikely.
<b>First aid facilities</b>	No information provided.

**4.2 Most important symptoms and effects, both acute and delayed**

No adverse health effects expected if the product is handled in accordance with the SDS and the product label.

**4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

**5. FIRE FIGHTING MEASURES****5.1 Extinguishing media**

Use water fog to cool containers from protected area.

**5.2 Special hazards arising from the substance or mixture**

Non flammable.

**5.3 Advice for firefighters**

Temperatures in a fire may cause cylinders to rupture. Cool cylinders or containers exposed to fire by applying water from a protected location. Remove cool cylinders from the path of the fire. Evacuate the area if unable to keep cylinders cool. Do not approach cylinders or containers suspected of being hot.

**5.4 Hazchem code**

2S

2 Fine Water Spray.

S Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Dilute spill and run-off.

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use Personal Protective Equipment (PPE) as detailed in Section 8 of the SDS.

**6.2 Environmental precautions**

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

**6.3 Methods of cleaning up**

Carefully move material to a well ventilated remote area, then allow to discharge if safe to do so. Do not attempt to repair leaking valve or cylinder safety devices.

**6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

**7. HANDLING AND STORAGE****7.1 Precautions for safe 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.

**7.2 Conditions for safe storage, including any incompatibilities**

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.

**7.3 Specific end use(s)**

No information provided.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****8.1 Control parameters****Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Carbon dioxide	SWA (AUS)	5000	9000	30000	54000
Carbon dioxide in coal mines	SWA (AUS)	12500	22500	30000	54000
Nitrogen	SWA (AUS)			Asphyxiant	

**Biological limits**

No biological limit values have been entered for this product.

**8.2 Exposure controls**

**Engineering controls** No special precautions are normally required when handling this product. Maintain vapour levels below the recommended exposure standard.

**PPE**

<b>Eye / Face</b>	Wear safety glasses.
<b>Hands</b>	Wear leather gloves.
<b>Body</b>	Wear safety boots.
<b>Respiratory</b>	Not required under normal conditions of use.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	COLOURLESS GAS
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT RELEVANT
<b>Boiling point</b>	NOT AVAILABLE
<b>Melting point</b>	NOT AVAILABLE
<b>Evaporation rate</b>	NOT APPLICABLE
<b>pH</b>	NOT APPLICABLE
<b>Vapour density</b>	NOT AVAILABLE
<b>Specific gravity</b>	NOT APPLICABLE
<b>Solubility (water)</b>	NOT AVAILABLE

**9.1 Information on basic physical and chemical properties**

Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	OXIDISING GAS
Odour threshold	NOT AVAILABLE

**9.2 Other information**

% Volatiles	100 %
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**10. STABILITY AND REACTIVITY****10.1 Reactivity**

Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**

Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**

Polymerization will not occur.

**10.4 Conditions to avoid**

Avoid heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**

Compatible with most commonly used materials.

**10.6 Hazardous decomposition products**

This material will not decompose to form hazardous products other than that already present.

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**11. TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects**

Acute toxicity	Based on available data, the classification criteria are not met.
Skin	Not classified as a skin irritant.
Eye	Not classified as an eye irritant.
Sensitization	Not classified as causing skin or respiratory sensitisation.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Not classified as a carcinogen.
Reproductive	Not classified as a reproductive toxin.
STOT – single exposure	Not classified as causing organ effects from single exposure.
STOT – repeated exposure	Not classified as causing organ effects from repeated exposure.
Aspiration	Not classified as causing aspiration.

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

No information provided.

**12.2 Persistence and degradability**

No information provided.

**12.3 Bioaccumulative potential**

No information provided.

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

No known ecological damage is caused by this product.

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**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

**Waste disposal** Cylinders should be returned to the manufacturer or supplier for disposal of contents.

**Legislation** Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION****CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	3156	3156	3156
<b>14.2 Proper Shipping Name</b>	COMPRESSED GAS, OXIDIZING, N.O.S. (Contains oxygen)	COMPRESSED GAS, OXIDIZING, N.O.S. (Contains oxygen)	COMPRESSED GAS, OXIDIZING, N.O.S. (Contains oxygen)
<b>14.3 Transport hazard classes</b>	2.2, 5.1	2.2, 5.1	2.2, 5.1
<b>14.4 Packing Group</b>	None Allocated	None Allocated	None Allocated

**14.5 Environmental hazards** No information provided

**14.6 Special precautions for user**

**Hazchem code** 2S

**EMS** F-C, S-W

**Other information** Ensure cylinder is separated from driver and that outlet of relief device is not obstructed.

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**15. REGULATORY INFORMATION****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>Poison schedule</b>	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).	
<b>Classifications</b>	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.  The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].	
<b>Hazard codes</b>	O	Oxidising
<b>Risk phrases</b>	R8	Contact with combustible material may cause fire.
<b>Safety phrases</b>	S17	Keep away from combustible material.
<b>Inventory listing(s)</b>	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.	

## 16. OTHER INFORMATION

Additional information	<p>The storage of significant quantities of gas cylinders must comply with AS4332 The storage and handling of gases in cylinders.</p> <p>APPLICATION METHOD: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.</p>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:</b> The recommendation for protective equipment contained within this 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.</p> <p><b>HEALTH EFFECTS FROM EXPOSURE:</b> 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.</p>
<b>Abbreviations</b>	<p>ACGIH American Conference of Governmental Industrial Hygienists</p> <p>CAS # Chemical Abstract Service number - used to uniquely identify chemical compounds</p> <p>CNS Central Nervous System</p> <p>EC No. EC No - European Community Number</p> <p>EMS Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)</p> <p>GHS Globally Harmonized System</p> <p>GTEPG Group Text Emergency Procedure Guide</p> <p>IARC International Agency for Research on Cancer</p> <p>LC50 Lethal Concentration, 50% / Median Lethal Concentration</p> <p>LD50 Lethal Dose, 50% / Median Lethal Dose</p> <p>mg/m<sup>3</sup> Milligrams per Cubic Metre</p> <p>OEL Occupational Exposure Limit</p> <p>pH relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).</p> <p>ppm Parts Per Million</p> <p>STEL Short-Term Exposure Limit</p> <p>STOT-RE Specific target organ toxicity (repeated exposure)</p> <p>STOT-SE Specific target organ toxicity (single exposure)</p> <p>SUSMP Standard for the Uniform Scheduling of Medicines and Poisons</p> <p>SWA Safe Work Australia</p> <p>TLV Threshold Limit Value</p> <p>TWA Time Weighted Average</p>
<b>Report status</b>	<p>This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').</p> <p>It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier 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, importer or supplier.</p> <p>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.</p>
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