

**Product Name DIBORANE**

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

**Supplier Name** COREGAS PTY LTD  
**Address** 66 Loftus Rd, Yennora, NSW, AUSTRALIA, 2161  
**Telephone** (02) 9794 2223  
**Fax** (02) 9794 2221  
**Emergency** 1300 657 070  
**Email** info@coregas.com  
**Web Site** http://www.coregas.com/  
**Synonym(s)** 30831005 - MSDS NUMBER  
**Use(s)** INDUSTRIAL APPLICATIONS  
**MSDS Date** 24 Nov 2008

**2. HAZARDS IDENTIFICATION**

**CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA**

**RISK PHRASES**

R12 Extremely Flammable.  
R26 Very toxic by inhalation.

**SAFETY PHRASES**

S16 Keep away from sources of ignition - No smoking.  
S33 Take precautionary measures against static discharges.  
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).  
S9 Keep container in a well ventilated place.

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

<b>UN No.</b>	1911	<b>DG Class</b>	2.3	<b>Subsidiary Risk(s)</b>	2.1
<b>Packing Group</b>	None Allocated	<b>Hazchem Code</b>	2WE	<b>EPG</b>	2B2

**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

Ingredient	Formula	CAS No.	Content
DIBORANE	B2-H6	19287-45-7	100%

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## 4. FIRST AID MEASURES

<b>Eye</b>	Exposure is considered unlikely.
<b>Inhalation</b>	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.
<b>Skin</b>	Exposure is considered unlikely. Skin irritation is not anticipated.
<b>Ingestion</b>	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.
<b>Advice to Doctor</b>	Treat symptomatically

## 5. FIRE FIGHTING MEASURES

<b>Flammability</b>	Highly flammable. Vapours may form explosive mixtures with air. May spontaneously ignite at temperatures above 38°C. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, mobile phones etc. when handling.
<b>Fire and Explosion</b>	Highly flammable. Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Call fire brigade. This product will add fuel to a fire. Cool cylinders exposed to fire by applying water from a protected location. Do not approach cylinders suspected of being hot.
<b>Extinguishing</b>	Stop flow of gas if safe to do so, such as by slowly closing the cylinder valve.
<b>Hazchem Code</b>	2WE

## 6. ACCIDENTAL RELEASE MEASURES

<b>Spillage</b>	If the cylinder is leaking, eliminate all potential ignition sources and evacuate area of personnel. Inform manufacturer/supplier of leak. Wear appropriate PPE and carefully move it to a well ventilated remote area, then allow to discharge. Do not attempt to repair leaking valve or cylinder safety devices.
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## 7. STORAGE AND HANDLING

<b>Storage</b>	Store secured (eg chained) upright in a cool (< 45°C), well ventilated area, removed from heat and ignition sources, oxidising agents, halogens, acids and foodstuffs. Ensure cylinders are protected from physical damage and valves closed when not in use. Always make use of old stock first. Do not store empty and full stock together.
<b>Handling</b>	Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

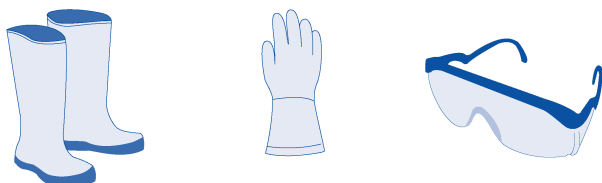
## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds	Ingredient	Reference	TWA		STEL	
			ppm	mg/m3	ppm	mg/m3
	Diborane	ASCC (AUS)	0.1	0.11	--	--

**Biological Limits** No biological limit allocated.

**Engineering Controls** Do not inhale vapours. Use in well ventilated areas - open doors and windows. In poorly ventilated areas, mechanical extraction ventilation is recommended at source. Flammable/explosive vapours may accumulate in poorly ventilated areas. Maintain vapour levels below the recommended exposure standard.

**PPE** Wear leather gloves, safety boots and safety glasses. When using large quantities or where heavy contamination is likely, wear: coveralls. Where an inhalation risk exists, wear: self Contained Breathing Apparatus (SCBA) or an Air-line respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	COLOURLESS GAS	<b>Solubility (Water)</b>	NOT AVAILABLE
<b>Odour</b>	PUNGENT ODOUR	<b>Specific Gravity</b>	NOT AVAILABLE
<b>pH</b>	NOT AVAILABLE	<b>% Volatiles</b>	NOT AVAILABLE
<b>Vapour Pressure</b>	NOT AVAILABLE	<b>Flammability</b>	HIGHLY FLAMMABLE
<b>Vapour Density</b>	NOT AVAILABLE	<b>Flash Point</b>	< 0°C
<b>Boiling Point</b>	NOT AVAILABLE	<b>Upper Explosion Limit</b>	98 %
<b>Melting Point</b>	NOT AVAILABLE	<b>Lower Explosion Limit</b>	0.9 %
<b>Evaporation Rate</b>	NOT AVAILABLE		

## 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** Incompatible (sometimes violently) with oxidising agents (eg. hypochlorites, peroxides), water (forms boric acid), acids (eg. nitric acid), metals (eg. aluminium) halogens (eg. chlorine), heat and ignition sources.

**Decomposition** May evolve toxic gases if heated to decomposition.

**Hazardous Reactions** Polymerization is not expected to occur.

## 11. TOXICOLOGICAL INFORMATION

**Health Hazard Summary** Toxic - irritant - narcotic. This product has the potential to cause acute and chronic health effects. Over exposure may result in skin, eyes and mucous membrane irritations and neurological effects. Chronic exposure may result in liver and kidney damage.

**Eye** Irritant vapour. Injury to eyes may occur if wearing contact lenses.

**Inhalation** Moderately to Highly Toxic. Exposure may result in nausea, coughing, wheezing and pulmonary oedema (fluid in the lungs). Possible burning sensation in the chest, shortness of breath, shivering and drowsiness. Use safe work practices to avoid vapour inhalation.

**Skin** Irritating vapour. Contact with evaporating liquid (eg. cold vessels or pipes containing low pressure liquid) may result in frost-bite with severe tissue damage.

**Ingestion** Ingestion is considered unlikely due to product form.

**Toxicity Data** DIBORANE (19287-45-7)  
LC50 (Inhalation): 29 ppm/4 hours (mouse)  
LCLo (Inhalation): 50 ppm/8 hours (hamster)  
TCLo (Inhalation): 100 ppb/6 hours/8 weeks-intermittent (rat)

## 12. ECOLOGICAL INFORMATION

**Environment** Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.

## 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



# PRODUCT NAME **DIBORANE**

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

<b>Shipping Name</b>	DIBORANE, COMPRESSED				
<b>UN No.</b>	1911	<b>DG Class</b>	2.3	<b>Subsidiary Risk(s)</b>	2.1
<b>Packing Group</b>	None Allocated	<b>Hazchem Code</b>	2WE	<b>EPG</b>	2B2

### IATA

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### IMDG

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<b>Packing Group</b>	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** RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

### 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/m<sup>3</sup> - 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 Material Safety Data Sheet ('MSDS').

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

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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 MSDS, 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 MSDS.

**Prepared By**

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**MSDS Date:** 24 Nov 2008

**End of Report**