

SAFETY DATA SHEET

0209

Product Name **COSMIC 1000 FUMIGANT**

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) 209 - MSDS NUMBER • CARBONYL SULPHIDE
Use(s) GRAIN FUMIGANT
SDS Date 26 Mar 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC CRITERIA

RISK PHRASES

R11 Highly flammable.
R20 Harmful by inhalation.

SAFETY PHRASES

S16 Keep away from sources of ignition - No smoking.
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).
S7 Keep container tightly closed.

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

UN No.	2204	DG Class	2.3	Subsidiary Risk(s)	2.1
Packing Group	None Allocated	Hazchem Code	2WE	EPG	2B2

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
CARBONYL SULPHIDE	C-O-S	463-58-1	100%

4. FIRST AID MEASURES

Eye Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention.

Inhalation If inhaled, remove from contaminated area. To protect rescuer, use an Air-line respirator or Self Contained Breathing Apparatus (SCBA). Apply artificial respiration if not breathing. Give oxygen if breathing is difficult. Seek immediate medical attention. For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor.

Skin Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.

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

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Advice to Doctor Treat symptomatically

First Aid Facilities Eye wash facilities and safety shower are recommended.

5. FIRE FIGHTING MEASURES

Flammability	Highly flammable gas - potentially explosive. May evolve toxic gases (sulphur oxides) when heated to decomposition. Do not expose to heat and ignition sources. Eliminate ignition sources including cigarettes, open flames, electrical equipment, spark producing switches/ tools, naked lights, heaters, pilot lights, etc when handling.
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. Remove cool cylinders from the path of the fire. Evacuate area if unable to keep cylinders cool. This material is capable of forming explosive mixtures in air.
Extinguishing	Stop flow of gas if safe to do so, such as by slowly closing the cylinder valve.
Hazchem Code	2WE

6. ACCIDENTAL RELEASE MEASURES

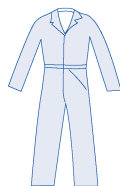
Spillage	If the cylinder is leaking, eliminate all potential ignition sources and evacuate area of personnel. Prevent spreading of vapours through drains and ventilation systems. Inform manufacturer/supplier of leak. Use personal protective equipment. Carefully move material to a well ventilated remote area, then allow to discharge. Do not attempt to repair leaking valve or cylinder safety devices.
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7. STORAGE AND HANDLING

Storage	Do not store near incompatible materials. 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 eye or skin contact and 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	No exposure standard(s) allocated.
Biological Limits	No biological limit allocated.
Engineering Controls	Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable or explosive vapours may accumulate in confined or poorly ventilated areas. Vapours may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.
PPE	Wear safety boots, leather gloves, coveralls and safety glasses. Where an inhalation risk exists, wear: an Air-line respirator or self Contained Breathing Apparatus (SCBA).



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	COLOURLESS GAS	Solubility (Water)	1.44 cm ³ /cm ³
Odour	ROTTEN EGG ODOUR	Specific Gravity	NOT APPLICABLE
pH	NOT APPLICABLE	% Volatiles	100 %
Vapour Pressure	1250 kPa @ 25°C	Flammability	HIGHLY FLAMMABLE
Vapour Density	NOT AVAILABLE	Flash Point	< 0°C
Boiling Point	-50.2°C	Upper Explosion Limit	29 %
Melting Point	NOT AVAILABLE	Lower Explosion Limit	12 %
Evaporation Rate	NOT APPLICABLE		

Critical Pressure

5877 kPa

Critical Temperature

102°C

Density

2.1 (Air = 1)

10. STABILITY AND REACTIVITY

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	Incompatible with water/moisture (evolving highly flammable and toxic hydrogen sulphide and carbon monoxide), alkalis (eg. hydroxides) and oxidising agents (eg. hypochlorites).
Decomposition	May evolve toxic gases (sulphur oxides) when heated to decomposition.
Hazardous Reactions	Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Toxic. Inadequate odour warning due to olfactory fatigue. Formation of hydrogen sulphide by decomposition in the lungs and adsorption into the blood stream is suspected. At low concentrations, marked dryness and irritation of the nose and throat occurs. Chronic exposure may result in runny nose, cough, hoarseness, shortness of breath and pneumonia. At higher concentrations, there is a temporary loss of smell, severe irritation, headache, nausea, vomiting and dizziness occur. Concentrations around 300 vppm can be rapidly fatal.
Eye	Irritant. May cause inflammation and irritation. Cold burns may be caused by evaporating liquid.
Inhalation	Irritant - toxic. Over exposure may result in depression and damage to the central nervous system, and asphyxiation.
Skin	Irritant. Low temperature evaporating liquid can cause cold burns.
Ingestion	Ingestion is considered unlikely due to product form. However, ingestion of liquid may result in burns to the mouth and throat.
Toxicity Data	CARBONYL SULPHIDE (463-58-1) LC50 (Inhalation): 1070 ppm/4 hours (rat) LD50 (Intraperitoneal): 23 mg/kg (rat) TCLo (Inhalation): 162 ppm/6 hours/14 weeks intermittently (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.
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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 foodstuffs. Refer to Commonwealth, State and Territory Dangerous Goods Legislation which contain requirements which affect gas storage and transport.
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Shipping Name	CARBONYL SULFIDE				
UN No.	2204	DG Class	2.3	Subsidiary Risk(s)	2.1
Packing Group	None Allocated	Hazchem Code	2WE	EPG	2B2

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).
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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 valve with low pressure distribution to specialised 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.

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End of Report