BOC
A Member of The Linde Group

SAFETY DATA SHEET

 # 1364

Product Name **7 COMPONENT MIXTURE (C6H6, C8H10, C8H10, C8H10, C8H10, C7H8, BALANCE N2)**

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)	1364 - MSDS NUMBER · PRODUCT CODES: 285, 288 · SPECIAL GAS MIXTURE
Use(s)	CALIBRATION · INDUSTRIAL APPLICATIONS
SDS Date	26 April 2012

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS (GHS) ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES

None allocated

SAFETY PHRASES

None allocated

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
BENZENE	CAS: 71-43-2 EC: 200-753-7	F;R11 Xi;R36/38 T;R45 T;R46 T;R48/23/24/25 Xn;R65	0.001%
ETHYL BENZENE	CAS: 100-41-4 EC: 202-849-4	F;R11 Xn;R20	0.001%
M-XYLENE	CAS: 108-38-3 EC: 203-576-3	F;R10 Xn;R20/21 Xi;R38	0.001%
O-XYLENE	CAS: 95-47-6 EC: 202-422-2	F;R10 Xn;R20/21 Xi;R38	0.001%
P-XYLENE	CAS: 106-42-3 EC: 203-396-5	F;R10 Xn;R20/21 Xi;R38	0.001%
TOLUENE	CAS: 108-88-3 EC: 203-625-9	F;R11 Xi;R38 Xn;R48/20 Xn;R63 Xn;R65 Xn;R67	0.001%
NITROGEN	CAS: 7727-37-9 EC: 231-783-9	Not Available	Remainder

4. FIRST AID MEASURES

Eye None required.

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 available. For advice, contact a Poison 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. 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.

Extinguishing Use water fog to cool containers from protected area.

Hazchem Code 2TE

- 2 Water Fog (or fine water spray if fog unavailable)
- T Self Contained Breathing apparatus and protective gloves.
- E Evacuation of people in the vicinity of the incident should be considered.

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 Standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Benzene	SWA (AUS)	1	3.2	--	--
Ethyl benzene	SWA (AUS)	100	434	125	543
Nitrogen	SWA (AUS)	Asphyxiant			
Toluene	SWA (AUS)	50	191	150	574
Xylene (o-, m-, p- isomers)	SWA (AUS)	80	350	150	655
p-Xylene	SWA (AUS)	80	350	150	655

Biological Limits

Ingredient	Reference	Determinant	Sampling Time	BEI
BENZENE	ACGIH BEI	S-Phenylmercapturic acid in urine	End of shift	25 mg/g creatinine
ETHYL BENZENE	ACGIH BEI	Mandelic acid in urine	End of shift at end of workweek	1.5 g/g creatinine
	ACGIH BEI	Ethyl benzene in end-exhaled air	-	-
TOLUENE	ACGIH BEI	o-Cresol in urine	End of shift	0.5 mg/L
	ACGIH BEI	Hippuric acid in urine	End of shift	1.6 g/g creatinine
	ACGIH BEI	Toluene in blood	Prior to last shift of workweek	0.05 mg/L

Engineering Controls Provide suitable ventilation to minimise or eliminate exposure. Confined areas (eg. tanks) should be adequately ventilated or gas tested. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face Wear safety glasses.

Hands Wear leather gloves.

Body Wear safety boots.

Respiratory Where an inhalation risk exists, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance COLOURLESS GAS
Odour AROMATIC 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
Cylinder pressure (when full) 12000 kPa @ 15°C
% Volatiles 100 %

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 Compatible with most commonly used materials. Xylene and ethyl benzene react with oxidising agents.

Hazardous Decomposition Products This material will not decompose to form hazardous products.

Hazardous Reactions Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary

Asphyxiant gas. Symptoms of exposure are directly related to displacement of oxygen. As the amount of oxygen inhaled is reduced from 21-14% volume, the pulse rate may accelerate and the rate and volume of breathing may increase. The ability to maintain attention and think clearly is diminished, muscular co-ordination is somewhat disturbed. As oxygen decreases from 14-10% volume, judgement becomes faulty, severe injuries may result in no pain. Muscular effort may lead to rapid fatigue. Further reduction to 6% may result in nausea and vomiting. Ability to move may be lost. Permanent brain damage may result even after resuscitation from exposure to this low level of oxygen. Below 6% breathing is in gasps and convulsions may occur. Inhalation of a mixture containing no oxygen may result in unconsciousness from the first breath and death may follow in minutes. This is a mixture of aromatic hydrocarbon solvents. In these concentrations, even if below the TLV, they must be considered toxic due to the potentiating effects of mixtures.

Eye

Non irritant.

Inhalation

Asphyxiant. Effects are proportional to oxygen displacement. Acts as a simple asphyxiant by displacing oxygen in the lungs thereby diminishing the supply of oxygen to the blood and tissues.

Skin

Non irritant.

Ingestion

Ingestion is considered unlikely due to product form.

Toxicity Data

BENZENE (71-43-2)

LC50 (inhalation)	9980 ppm (mouse)
LCLo (inhalation)	2 ppm/5 minutes (human)
LD50 (ingestion)	930 mg/kg (rat)
LD50 (intraperitoneal)	2890 ug/kg (rat)
LD50 (skin)	48 mg/kg (mouse)
LDLo (ingestion)	50 mg/kg (man)
LDLo (subcutaneous)	1400 mg/kg (frog)
TCLo (inhalation)	100 ppm (human)
TDLo (ingestion)	52000 mg/kg/52 weeks (rat)

ETHYL BENZENE (100-41-4)

LC50 (inhalation)	50 g/m³/2 hours (mouse)
LCLo (inhalation)	4000 ppm/4 hours (rat)
LD50 (ingestion)	3500 mg/kg (rat)
LD50 (skin)	17800 mg/kg (rabbit)
TCLo (inhalation)	100 ppm/7 hours (human)

P-XYLENE (106-42-3)

LC50 (inhalation)	4550 ppm/4 hours (rat)
LCLo (inhalation)	15000 mg/m³ (mouse)
LD50 (ingestion)	5000 mg/kg (rat)
LD50 (intraperitoneal)	2.45 mL/kg (mouse)
LDLo (intraperitoneal)	2000 mg/kg (mamal)
LDLo (subcutaneous)	5000 mg/kg (mamal)
TCLo (inhalation)	150 mg/m³/24 hours (pregnant rat)
TDLo (ingestion)	12 mg/kg (pregnant mouse)

TOLUENE (108-88-3)

LC50 (inhalation)	400 ppm/24 hours (mouse)
LCLo (inhalation)	1600 ppm (guinea pig)
LD50 (ingestion)	636 mg/kg (rat)
LD50 (skin)	14100 uL/kg (rabbit)
LDLo (ingestion)	50 mg/kg (human)
TCLo (inhalation)	50 ppm (man)
TDLo (ingestion)	400 mg/kg (rat)

12. ECOLOGICAL INFORMATION

Environment

Product is not harmful to 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

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.	-	-
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. Refer to Commonwealth, State and Territory Dangerous Goods Legislation which contain requirements which affect gas storage and transport.

15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 7 (S7) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Inventory Listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**
All components are listed on AICS, or are exempt.

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. Application Method: Gas regulator of suitable pressure and flow rating fitted to cylinder valve 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.

Abbreviations

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
mg/m^3	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	Standard SDS Review.

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

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End of SDS