Material Safety Data Sheet

Supa Lazer H, Compressed

1. MATERIAL IDENTIFICATION AND SUPPLIER

Supplier name: Supagas 2009 limited
Address: 141 Roscommon Road, Manukau, Auckland, New Zealand
Telephone: 09 278 0145
Fax: 09 278 5672
Emergency: 111
Email: enquiries@supagas.co.nz
Web Site http://www.supagas.co.nz
Use(s) Lazer resonator gas, lasing gas
Synonym(s) SUPA LAZER H, COMPRESSED
MSDS Date 9 June 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES REGULATIONS 2001

HAZARD CLASSIFICATION
Contains gas under pressure

CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO NZS 5433:2007
UN No. 1956

Pkg Group: None Allocated

DG Class: 2.2

Hazchem Code: 2T

Hazard Risk(s): Ruptured cylinders may rocket.

EPG: 2C1

3. COMPOSITION

Ingredients	CAS no.	Content
Helium	7440-59-7	61%
Nitrogen	7727-37-9	34%
Carbon Dioxide	124-38-9	5%

4. FIRST AID MEASURES

Eye	Exposure is considered unlikely.
Skin	Exposure is considered unlikely.
Inhalation	SupaLazer H is non-toxic at normal temperature and pressure. However when the introduction of this gas mixture is forcing the oxygen levels to deplete it can act as an asphyxiant. It is important to have a well ventilated factory/workshop. If inhalation has taken place be sure to not put yourself in harm's way, wear a self contained breathing apparatus and remove the person from the affected area and seek urgent medical attention. Give oxygen if available.
Ingestion	Ingestion is considered unlikely. However, should ingestion occur, contact a Poison Information Centre on 0800764 766 (0800 POISON) or +643 479 7248 (New Zealand) or a doctor.
Advice to Doctor	Treat symptomatically

5. FIRE FIGHTING MEASURES

Fire and Explosion

Non flammable gas. Temperatures in a fire may cause cylinders to rupture and internal pressure relief devices to be activated. Call fire brigade. Do not approach cylinders suspected to be hot. Remove cool cylinders from the path of the fire if safe to do so. Ensure working area is well ventilated before re-use. Notify the manufacturer that you will be returning a faulty cylinder. Residual product will be disposed of when the cylinder is returned.

Extinguishing

Non flammable. Use water fog to cool containers from protected area.

Flammability
Non flammable
Hazchem Code 2T

6. ACCIDENTAL RELEASE MEASURES

Spillage GAS CYLINDERS: If the cylinder is leaking, eliminate all potential ignition sources and evacuate area of personnel. Inform manufacturer/supplier of leak. Wear appropriate PPE and if safe to do so carefully move it to a well ventilated remote area, then allow to discharge. Do not attempt to repair leaking valve or cylinder safety devices.

Personal protection: Do not smoke while handling this product. Persons moving cylinders should be provided with safety footwear, safety glasses and leather or PVC gloves. Full cover overalls are recommended. All personal protective equipment must be free from oil and grease.

7. STORAGE AND HANDLING

Handling
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.

Storage
Do not store near sources of ignition or incompatible materials. Cylinders should be stored below 45º 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards	**Helium and nitrogen are simple asphyxiants. Carbon Dioxide TWA 5,000 ppm v/v STEL 30,000 ppm**
Biological Limit Values	No biological limit allocated.
Engineering Controls	Do not allow backfeed into the cylinder. Use only properly specified equipment which is suitable for this product, its pressure and temperature. Provide suitable extraction and ventilation for the influenced areas.
Personal Protection Equipment	Wear safety boots, leather gloves and safety glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Colourless gas	**Solubility (Water) : Insoluble**
Odour: odourless	**Specific gravity: Not Available**
PH: Not Available	**% Volatiles :** Not Available
Vapour pressure: Not Available	**Flammability:** Non Flammable
Vapour Density: Not Available	**Flash point:** Not relevant
Boiling point: Not Available	**Upper explosion limit:** Not Relevant
Melting point: not available	**Lower explosion limit:** not relevant
Evaporation rate; not available	**Autoignition Temperature:** not available
Critical Temperature: Not Available	**Density:** Not Available

10. STABILITY AND REACTIVITY

Chemical Stability
Stable under recommended conditions of storage

Conditions to Avoid
Avoid contact with incompatible Substances.

Materials to Avoid
Aluminium, Chrome and manganese dust may explode when heated in carbon dioxide. Incompatible with acryaldenhyde , aziridine , metal acetylides and sodium peroxide. Avoid heating cylinders. Hazardous by products may be produced when this gas mixture is used in welding, cutting and associated processes.

Decomposition Products
May evolve toxic gases if heated to decomposition.

Polymerization
Polymerization will not occur

11. TOXICOLOGICAL INFORMATION

Health Hazard
Summary
Asphyxiant gas. Symptoms of exposure are directly related to displacement of oxygen from air. As the influence of the gas is increased and oxygen levels begin to diminish the pulse rate will accelerate and the rate of breathing will increase. The ability to maintain attention and think clearly is diminished, muscular co-ordination is disturbed. As the exposure is increased and oxygen is decreased poor judgement becomes evident and severe injuries may occur, the ability to feel pain will be lost. Further reduction may cause nausea and vomiting. Below 10 % oxygen levels may cause death.

Eye
Non irritating.

Inhalation
Non-irritant. As the amount of oxygen inhaled is increased chest tightness, burning pains and coughing spasms will occur. Other symptoms of hyperoxia include cramps, nausea, dizziness, hypothermia, amblyopia (loss of vision), bradycardia, fainting spells and convulsions capable of causing death.

Skin
Non irritating.

Ingestion
Due to product form, ingestion is considered highly unlikely.

Toxicity Data
Carbon Dioxide LcLo (Inhalation) : 9 pph/ 5minutes (Human)

12. ECOLOGICAL INFORMATION

Environment
Carbon Dioxide is a natural component of the earth's atmosphere; this however has shown to be a link to global warming and a contributing factor to the increase in global warming. The emission of Carbon Dioxide into the atmosphere should be minimised as far as possible

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 that outlet of relief device is not obstructed.

CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO NZS 5433

Shipping Name : Supa Lazer H, Compressed

UN No. 1956	**DG Class: 2.2**	**Subsidiary Risk(s): None Allocated**
Pkg Group: None Allocated	**Hazchem Code: 2T**	**EPG: 2C1**

15. REGULATORY INFORMATION

Group Name Supa Lazer H
The ”HASNO” act 1996 and hazardous substances (compressed gases) regulations 2004

16. OTHER INFORMATION

Additional Information

APPLICATION METHOD: Gas regulator of suitable pressure and flow rating fitted to cylinder or manifold with low pressure gas distribution to equipment.

ABBREVIATIONS:

mg/m3 - Milligrams per cubic metre
ppm - Parts Per Million
TWA/ES - Time Weighted Average or Exposure Standard.
CNS - Central Nervous System
NOS - Not Otherwise Specified
pH - relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline.
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
M - moles per litre, a unit of concentration.
IARC - International Agency for Research on Cancer.
HSNO –Hazardous substances and new organisms act 1996.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
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.

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

This MSDS summarises to our best knowledge, at the date of issue, the health and safety hazard information regarding this product and general guidance on how to safely handle the product in the workplace. All due care has been taken to include accurate and up-to-date information in this MSDS.
Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Supagas 2009 Ltd. As far as lawfully possible, 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 can be accepted. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is available

on request. This MSDS has been prepared in accordance with NZCIC Code of Practice – Preparation of Safety Data Sheets. This MSDS is subject to change without notice, for the latest version of this MSDS visit www.supagas.co.nz

Reviewed 6 June 2010.