

Fine Gas Company Limited

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Safety Data Sheet: Nitrous Oxide (N₂O)

Revision Number
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1	Product	Nitrous Oxide (N ₂ O)
2	Hazard Identification	Vigorously accelerates combustion. Keep Oil, grease and Combustible material away. React violently with combustible Material.
3	Potential Health Effects	
3.1	Breathing	Move to fresh air. If breathing is stopped or irregular, administer Artificial respiration. Get medical advice immediately.
3.2	Contact	Direct contact with liquid can cause frostbite.
4	Aggravated Medical Condition	In high concentrations, may cause Asphyxiation. Symptoms may Include loss of mobility and consciousness. Patient may not be aware of this and it may bring about so quickly that patient may not be able to protect him / her self
5	First Aid Measures	
5.1	Eye Contact	Nil
5.2	Skin Contact	Wash with water and soap as a precaution
6	Fire Fighting Measures	
6.1	General	All type of fire extinguishers can be used for fire fighting. Upon exposure to intense heat or flame, cylinder will vent rapidly and Can rupture violently. Nitrous Oxide supports combustion and May react violently with combustible materials. Some materials which are non-combustible in air may burn in the presence of An oxidizer like nitrous oxide gas. This gas is heavier than air and may accumulate in low areas or travel along the ground where There may be an ignition source present. Move away from the Cylinder and cool it with water from a protected position. Stop flow Of product if possible. Keep adjacent cylinders cool by spraying large amount of water until the fire is extinguished or burns itself Out. Most cylinders are designed to vent contents when exposed to elevated temperatures
6.2	Specific Hazard	Wear self contained breathing apparatus for fire fighting / rescue operation if necessary
7	Accidental Release Measures	Evacuate personnel's to safe and uncontaminated areas. Remove All sources of ignition. Wear self contained breathing apparatus when entering gas concentrated areas unless atmosphere is proved to be safe
8	Handling & Storage	Nitrous Oxide is a compressed liquefied gas. Protect cylinders from physical damage like dragging, rolling, sliding, dropping etc. Don't allow storage area temperature to reach more than 50 °C (122 °F). Only experienced and trained personnel are allowed to Handle compressed gases. Use trolley or cart for moving cylinder Even for a shorter distance. Ensure complete gas system has been checked for leakages, pressure rating and materials before

8 Handling & Storage

Use. Never pressurize the system at once. Use only with equipment cleaned for oxygen service and rated for cylinder Pressure. Open valve of the cylinder slowly. In case, the user feels any difficulty in the operation of the cylinder valve, never use the cylinder or try to repair / modify its valves or safety relief Devices. Close valve after use or when cylinder is empty. Don't Subject cylinder to any mechanical shock or lifting it by its valve. Don't use cylinders for uses for which they are not designed or Specified. Never strike an arc on a compressed gas cylinder or Making it a part of the electrical circuit. Don't allow any ignition, Spark or flame in the cylinder handling & storage area. Never recompress the gas or its mixture or transfer gas from one Cylinder to another. Never use any electrical or any other heating Device to raise the pressure of the gas cylinder. Cylinders should be stored in a purpose built compound which should be well Ventilated, preferably in an open air. Stored cylinders should be Periodically checked for general condition or leakage. Always Safe guard cylinders from rust and extreme weather conditions. Full and empty cylinders should be properly segregated in the Storage area. Display board should be hanged outside storage & Handling area of "No Smoking / Open Flames". Never permit oil, grease and other combustible materials on cylinder valve /spindle Secure cylinder vertically & properly to prevent them from toppling Use cylinders on First In First Out basis. Flammable Gases storage should be separated from oxygen and other oxidizers by a minimum distance of 20 ft or by a non-combustible material Barrier for at least 5 ft. All electrical equipment in the storage area Should be compatible with flammable materials stored.

9 Personal Protective Equipment

- 9.1 Hands Protection** Work gloves are recommended while handling cylinders
- 9.2 Eyes Protection** Safety Glasses are recommended for eyes protection
- 9.3 Skin & Body Protection** Wear appropriate personal protective equipment like Safety Shoes when handling cylinders

10 Physical & Chemical Properties

- 10.1 Physical Status** Compressed / Liquefied Gas
- 10.2 Colour** Colourless
- 10.3 Odour** Sweet
- 10.4 Boiling Point** -88.5 °C (-127 °F)

11 Stability & Reactivity Stable under normal conditions. Materials to be avoid are Flammable & Organic Materials. Also avoid oil, grease and all other combustible materials

Prepared By Management Representative	Reviewed By Production Manager	Approved By General Manager	Issued On 01/04/06
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