

MSDS	MATERIAL SAFETY DATA SHEET
Leland Limited, Inc. 2614 South Clinton Ave. South Plainfield, NJ 07080 908-668-1008 9-5 EST 908-668-1744** 908-668-7716	Emergency Contact Information: CHEMTREC Domestic 800-424-9300 International 703-527-3887
**speak a callback number then hit #911. Someone will call back in a short amount of time.	Gas: Nitrous Oxide UN# 1070 (Compressed) Dinitrogen Monoxide, Hyponitrous Acid Anhydride, N2O, Molecular Mass: 44.0

Component: Nitrous Oxide (CAS#10024-97-2) 100%

CERCLA Ratings (Scale 0-3): Health=U, Fire=0, Reactivity=0, Persistence=0

NFPA Ratings (Scale 0-4): Health=U, Fire=0, Reactivity=0

Physical State; Appearance: Odorless, colorless, refrigerated, liquefied gas, colorless gas or liquid with a slightly sweet odor and taste.

Types of Hazard & Exposure	Acute Hazards / Symptoms	Prevention	First Aid / Fire Fighting
Fire	Not Combustible but enhances combustion of other substances. Gives off irritating or toxic fumes (or gases) in a fire.	NO Open flames. NO sparks, and NO smoking.	In case of fire in the surroundings: use appropriate extinguishing media.
Explosion	None	None	In case of fire: keep cylinder cool by spraying with water. Combat fire from a sheltered position.
Exposure		AVOID EXPOSURE OF (PREGNANT) WOMEN!	
Inhalation	Euphoria. Drowsiness. Unconsciousness.	Ventilation. Local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	ON CONTACT WITH LIQUID: FROSTBITE	Cold insulating gloves. Protective clothing.	ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention;
Eyes	On contact with liquid: frostbite.	Safety goggles or eye protection in combination with breathing protection.	First rinse with plenty of warm water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	None	Do not eat, drink, or smoke while working with Nitrous Oxide.	None
Spillage Disposal	Storage	Packaging & Labeling	
Evacuate danger area! Consult an expert! Ventilation. If in liquid	Fireproof if in building. Separated from incompatible	R: S:	

state: do NOT absorb in saw-dust or other combustible absorbents. NEVER direct water jet on liquid. Personal protection self-contained breathing apparatus.	materials. See Chemical Dangers. Cool.	UN Hazard Class: 2.2 UN Subsidiary Risks: 5.1
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Physical Properties	Boiling Point: -88.5°C Melting Point : -90.8°C Specific Gravity: 1.8122 G/L @ 25C Vapor Pressure: 760 mmHg @ -88C Solubility in Water: 59% @ 25 C Solvent Solubility: Soluble in alcohol, ether, sulfuric acid, alkaline solution, and oils. Vapor Density: 1.53
Physical Dangers	The gas is heavier than air and may accumulate in low ceiling spaces causing deficiency of oxygen.
Chemical Dangers	Reacts violently with sulphurous anhydride, amorphous boron, phosphine, ethers, aluminum, hydrazine, phenyl-lithium and tungsten carbide causing fire and explosion hazard. The gas is a strong oxidant above 300°C and may form explosive mixtures with ammonia, carbon monoxide, hydrogen sulfide, oil, grease, and fuels.
Routes of Exposure	The substance can be absorbed into the body by inhalation.
Inhalation Risk	A harmful concentration of this gas in the air will be reached very quickly on loss of containment.
Effects of Short Term Exposure	This liquid may cause frostbite. The substance may cause effects on the central nervous system, resulting in lowering of consciousness.
Effects of long term exposure	The substance may have effects on the bone marrow and peripheral nervous system. May cause reproductive toxicity in humans.
Applicability	Leland Produces and ships many gas filled cylinders and the content (type of gas) is identified on the cylinder label, cylinder box, or shipping carton. ORM-D is a shipping label relating to a gas type which has been re-named as Consumer Commodity as allowed per 49 CFR 173.306.