

Safety Data Sheet



Division of Fresno Oxygen

Barnes Welding Supply/Barnes Specialty Gases

Division of Fresno Oxygen

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Document #: G-199

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Section 1: Product and Company Identification

Barnes Welding Supply / Barnes Specialty Gases - Division of Fresno Oxygen
2825 S. Elm Ave. #101
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FOR CHEMICAL EMERGENCIES DURING TRANSPORTATION ONLY CALL INFOTRAC
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Product Name: NO 2.31%-balance Inert

Part Number : Certified Gas Mixture

Synonyms: Inhalation hazard 2.3 CS Mixtures
Recommended Use: For general analytical/synthetic chemical gas uses.

Section 2: Hazards Identification



Danger

Hazard Classification:

Acute Gas Inhalation Toxicity (Category 1)
Corrosive To Metal (Category 1)
Gases Under Pressure
Skin Corrosion (Category 1.B)

Hazard Statements:

Causes severe skin burns and eye damage
Contains gas under pressure; may explode if heated
Fatal if inhaled
May be corrosive to metals

Precautionary Statements

Prevention:
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
[In case of inadequate ventilation] wear respiratory protection.

Do not breathe dust/fume/gas/mist/ vapors/spray..

Keep only in original container.
Wear protective gloves, protective clothing, eye protection and face protection.

Response:

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Immediately call a poison center or doctor.
Absorb spillage to prevent material damage.
Specific treatment is urgent.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If inhaled: Remove person to fresh air and keep comfortable for breathing.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.

Disposal:

Dispose of contents and/or container in accordance with applicable regulations.

Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Nitric Oxide	10102-43-9	1.0-21.0
AND ONE OR MORE OF THE FOLLOWING GASES		
Argon	7440-37-1	Balance
Helium	7440-59-7	Balance
Krypton	7439-90-9	Balance
Neon	7440-01-9	Balance
Nitrogen	7727-37-9	Balance
Xenon	7440-63-3	Balance

	Chemical Substance	Chemical Family	Trade Names
Nitric Oxide	NITRIC OXIDE	Inorganic gases	NITROGEN OXIDE (NO); NITRIC OXIDE (NO); NITRIC OXIDE TRIMER; NITROGEN MONOXIDE; NITROGEN MONOOXIDE; NITROGEN OXIDE (N4O4); NITROSYL RADICAL; RCRA P076; STCC 4920330; UN 1660; NO
Argon	ARGON, COMPRESSED	Inorganic gases	ARGON; UN 1006; AR
Helium	HELIUM	Inorganic gases	HELIUM GAS; HELIUM COMPRESSED; HELIUM-4; ATOMIC HELIUM; UN 1046; He
Krypton	KRYPTON	Inorganic gases	UN 1056
Neon	NEON	Inorganic gases	NEON, COMPRESSED; UN 1065; Ne
Nitrogen	NITROGEN, COMPRESSED GAS	Inorganic gases	DIATOMIC NITROGEN; DINITROGEN; NITROGEN; NITROGEN-14; NITROGEN GAS; UN 1066; N2
Xenon	XENON	Inorganic gases	XENON ATOM; STCC 4904595; UN 2036; Xe;

Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Nitric Oxide	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.	Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.	None
Argon	Not applicable route of exposure	Flush eyes with plenty of water.	Not applicable route of exposure	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.
Helium	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.
Krypton	If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.
Neon	If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.
Nitrogen	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.
Xenon	No information on significant adverse effects	No information on significant adverse effects	No information on significant adverse effects	Remove to fresh air, and give artificial respiration is not breathing. Consider oxygen in breathing is difficult. Contact a physician immediately.	None

Section 5: Fire Fighting Measures

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Nitric Oxide	Water. Do not use dry chemicals, carbon dioxide or halogenated extinguishing agents. Large fires: Flood with fine water spray.	Nitrogen oxides	- Any self-contained breathing apparatus with a full facepiece. - Any self-contained breathing apparatus with a full facepiece.
Argon	Non-flammable gas	Not applicable	- N/A - N/A
Helium	Non-flammable. Use suitable extinguishing media for surrounding fire.	Non-flammable	- Non-flammable - Non-flammable
Krypton	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.	None known	- Any self-contained breathing apparatus with a full facepiece. - Any self-contained breathing apparatus with a full facepiece.
Neon	Non-flammable. Use extinguishing media suitable for surrounding fire.	Non-flammable	Respiratory protection may be needed for frequent or heavy exposure.
Nitrogen	Non-flammable. Use suitable extinguishing media for surrounding fire. Cylinders may rupture or explode if exposed to heat.	Non-flammable	Respiratory protection may be needed for frequent or heavy exposure.
Xenon	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.	Inorganic compounds	- Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece. - Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.

Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
Nitric Oxide	Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Avoid contact with combustible materials.	Avoid contamination of water, soil, drains, and sewers.	Stop leak if possible without personal risk.
Argon	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	None known.	Stop leak if possible without personal risk.
Helium	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	Avoid soil, waterways, drains and sewers	Stop leak if possible without personal risk.
Krypton	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	Keep out of waterways. Prevent environmental contamination.	Stop leak if possible without personal risk.
Neon	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	Prevent contamination of environment	Stop leak if possible without personal risk.
Nitrogen	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	No significant effects from contamination expected.	Stop leak if possible without personal risk.
Xenon	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	Keep out of water supplies and sewers.	Stop leak if possible without personal risk.

	Methods for Cleanup	Other Information
Nitric Oxide	Contact emergency personnel.	Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-9802 (USA) or (202)426-2675 (USA).
Argon	Leakage may be detected by a soapy-water solution.	
Helium	Stop leak, evacuate area. Contact emergency personnel.	None
Krypton	Contact emergency personnel.	None
Neon	Not available	Not available
Nitrogen	N/A	N/A
Xenon	Absorb with sand or other non-combustible material. Collect with absorbent into suitable container.	None

Section 7: Handling and Storage

	Handling	Storage
Nitric Oxide	Store and handle in accordance with all current regulations and standards. NFPA 430 Code for the Storage of Liquid and Solid Oxidizing Materials. Notify State Emergency Response Commission for storage or use at amounts greater than or equal to the TPQ (U.S. EPA SARA Section 302). SARA Section 303 requires facilities storing a material with a TPQ to participate in local emergency response planning (U.S. EPA 40 CFR 355.30).	Keep separated from incompatible substances.
Argon	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.	Avoid using in confined spaces.
Helium	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.
Krypton	Store and handle in accordance with all current regulations and standards.	Use hand truck for cylinder movement
Neon	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Protect cylinders from damage.
Nitrogen	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.
Xenon	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.

Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
Nitric Oxide	NITRIC OXIDE: 25 ppm (30 mg/m ³) OSHA TWA 25 ppm ACGIH TWA 25 ppm (30 mg/m ³) NIOSH recommended TWA 10 hour(s)
Argon	ARGON, COMPRESSED: ARGON: ACGIH (simple asphyxiant)
Helium	HELIUM: ACGIH (simple asphyxiant)
Krypton	KRYPTON: No occupational exposure limits established.
Neon	NEON: No occupational exposure limits established.
Nitrogen	NITROGEN, COMPRESSED GAS: NITROGEN: ACGIH (simple asphyxiant)
Xenon	XENON: No occupational exposure limits established.

Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Nitric Oxide	Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing.	Any self-contained breathing apparatus with a full facepiece.
Argon	Eye protection not required, but recommended.	Protective clothing is not required.	N/A
Helium	Eye protection not required, but recommended.	Protective clothing is not required.	Non-flammable
Krypton	For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.	Any self-contained breathing apparatus with a full facepiece.
Neon	For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.	Respiratory protection may be needed for frequent or heavy exposure.
Nitrogen	Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.
Xenon	Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

	Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Nitric Oxide	Gas	Clear	Colorless	N/A	Gas	Not available	N/A
Argon	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless
Helium	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless
Krypton	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless
Neon	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless
Nitrogen	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless
Xenon	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless

	Flash Point	Flammability	Partition Coefficient			Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Nitric Oxide	Not applicable	Not applicable	Not available	Not available	Nonflammable	Nonflammable	Nonflammable	
Argon	Not flammable	Not flammable	Not flammable	Not flammable	Nonflammable	Nonflammable	Nonflammable	
Helium	Not flammable	Not available	Not available	Not available	Nonflammable	Nonflammable	Nonflammable	
Krypton	Not available	Not available	Not available	Not available	Not available	Not available	Not available	
Neon	Not flammable	Not available	Not available	Not available	Nonflammable	Nonflammable	Nonflammable	
Nitrogen	Not flammable	Not available	Not available	Not available	Nonflammable	Nonflammable	Nonflammable	
Xenon	Not flammable	Not available	Not available	Not available	Nonflammable	Nonflammable	Nonflammable	

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
Nitric Oxide	-242 F (-152 C)	-263 F (-164 C)	26000 mmHg @ 20 C	1.036 (Air=1)	Not applicable	7.3% @ 0 C	Not applicable	0.3-1.0 ppm	Not applicable	0.0188 cP @ 25 C
Argon	-303 F (-186 C)	-308 F (-189 C)	500 mmHg @ -190 C	1.38 (Air=1)	Not applicable	3.36% @ 20 C	Not applicable	Not available	Not applicable	0.0225 cP @ 25 C
Helium	-452 F (-269 C)	-458 F (-272 C) @ 26 atm	1719 mmHg @ -268 C	0.138 (Air=1)	Not applicable	0.94% @ 0 C	Not applicable	Not available	Not applicable	0.02012 cP @ 26.8 C
Krypton	-242 F (-152 C)	-251 F (-157 C)	Not available	Not available	2.155 @ -153 C	Soluble	Not applicable	Odorless	Not applicable	Not available
Neon	-411 F (-246 C)	-416 F (-249 C)	760 mmHg @ -246 C	0.6964 (Air=1)	Not applicable	Slightly soluble	Not applicable	Not available	Not applicable	0.03181 cP @ 26.8 C
Nitrogen	-321 F (-196 C)	-346 F (-210 C)	760 mmHg @ -196 C	0.967 (Air=1)	Not applicable	1.6% @ 20 C	Not applicable	Not available	Not applicable	0.01787 cP @ 27 C
Xenon	-162 F (-108 C)	-170 F (-112 C)	760 mmHg @ -108 C	4.561 (Air=1)	Not applicable	0.00108	Not applicable	Not available	Not applicable	0.528 cP @ 17 C

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Nitric Oxide	30.01	N-O	1.3402 g/L	Not available	Not available	Not applicable	Soluble: Sulfuric acid, alcohol, ferrous sulfate solutions, carbon disulfide
Argon	39.948	AR	1.784 g/L @ 0 C	Not available	100%	Not applicable	Soluble: Organic solvents
Helium	4.0026	He	0.1785 g/L @ 0 C	Not available	100%	Not applicable	Insoluble: Not available
Krypton	83.8	KR	Not available	Not available	100%	Not applicable	Soluble
Neon	20.179	Ne	0.9002 g/L @ 0 C	Not available	100%	Not applicable	Soluble: Liquid oxygen
Nitrogen	28.0134	N2	1.2506 g/L	Not available	100%	1	Soluble: Liquid ammonia
Xenon	131.3	XE	5.8878 g/L	Not available	Not available	Not applicable	Not available

Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Nitric Oxide	May react on contact with air. May react on contact with water. Releases toxic, corrosive, flammable or explosive gases. May explode during distillation or evaporation.	May react on contact with air. May react on contact with water. Releases toxic, corrosive, flammable or explosive gases. May explode during distillation or evaporation.	Metals, bases, metal oxides, reducing agents, combustible materials, halo carbons, oxidizing materials, halogens, metal carbide, metal salts
Argon	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	No data available.
Helium	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	No data available.
Krypton	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	None known
Neon	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	None known. Neon is inert.
Nitrogen	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Metals, oxidizing materials
Xenon	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Halogens

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Nitric Oxide	Oxides of nitrogen	Will not polymerize.
Argon	No data available.	Will not polymerize.
Helium	Miscellaneous decomposition products	Will not polymerize.
Krypton	Miscellaneous decomposition products	Will not polymerize.
Neon	None.	Will not polymerize.
Nitrogen	Oxides of nitrogen	Will not polymerize.
Xenon	None known.	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Nitric Oxide	LC50 Inhalation Gas. Rat 1068 mg/m3 4 hours	Not available	Irritation, nausea, vomiting, stomach pain, chest pain, difficulty breathing, headache, dizziness, bluish skin color, lung congestion
Argon	Not established	Not established	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma
Helium	Not available	Not available	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, fatigue, dizziness, disorientation, emotional disturbances, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma
Krypton	Not available	Not available	Suffocation
Neon	Not available	Not available	Nausea, vomiting, difficulty breathing, irregular heartbeat, head ache, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma
Nitrogen	Not available	Not available	Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, convulsions, coma
Xenon	Not available	Not available	Nausea, vomiting, symptoms of drunkenness, suffocation, convulsions, coma

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Nitric Oxide	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Readily biodegrades	Not available	Not expected to leach through the soil or the sediment.
Argon	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available
Helium	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available
Krypton	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available
Neon	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available
Nitrogen	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available
Xenon	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available

Section 13: Disposal Considerations

Nitric Oxide	Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001, D003. Dispose in accordance with all applicable regulations.
Argon	Dispose in accordance with all applicable regulations.
Helium	Dispose in accordance with all applicable regulations.
Krypton	Dispose in accordance with all applicable regulations.
Neon	Dispose in accordance with all applicable regulations.
Nitrogen	Dispose in accordance with all applicable regulations.
Xenon	Dispose in accordance with all applicable regulations.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

DOT Information For This Mixture

Shipping Name	Compressed gas, toxic, n.o.s. (Nitric Oxide)
UN Number	UN1955
Hazard Class	2.3
Hazard Information	POISON GAS
Special Provisions	This gas mixture is poisonous by inhalation. Shipments must be properly described as inhalation hazard. Refer to 49 CFR 172.313. <i>*Inhalation Hazard Zone "letter" must be part of the proper shipping name. Select the correct zone as follows:</i> Inhalation Hazard Zone D for concentrations: 2.31 - 3.82 % Inhalation Hazard Zone C for concentrations: 3.83 – 11.49 % Inhalation Hazard Zone B for concentrations: 11.5 – 57.4 % Inhalation Hazard Zone A for concentrations: >= 57.5 %

Individual Component Information

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Nitric Oxide	Nitric oxide, compressed	UN1660	2.3	Not applicable	2.3; 5.1;8	Forbidden	Forbidden	Toxic-Inhalation Hazard Zone A
Argon	Argon, compressed	UN1006	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Helium	Helium, compressed	UN1046	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Krypton	Krypton, compressed	UN1056	2.2	Not applicable	2.2	N/A	N/A	N/A
Neon	Neon, compressed	UN1065	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Nitrogen	Nitrogen, compressed	UN1066	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Xenon	Xenon	UN2036	2.2	Not applicable	2.2	50 kg	500 kg	N/A

Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Nitric Oxide	Nitric oxide, compressed	UN1660	2.3; 5.1; 8	Not applicable
Argon	Argon, compressed	UN1006	2.2	Not applicable
Helium	Helium, compressed	UN1046	2.2	Not applicable
Krypton	Krypton, compressed	UN1056	2.2	Not applicable
Neon	Neon, compressed	UN1065	2.2	Not applicable
Nitrogen	Nitrogen, compressed	UN1066	2.2	Not applicable
Xenon	Xenon, compressed	UN2036	2.2	Not applicable

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Nitric Oxide	10 LBS RQ	100 LBS TPO	10 LBS RQ
Argon	Not regulated.	Not regulated.	Not regulated.
Helium	Not regulated.	Not regulated.	Not regulated.
Krypton	Not regulated.	Not regulated.	Not regulated.
Neon	Not regulated.	Not regulated.	Not regulated.
Nitrogen	Not regulated.	Not regulated.	Not regulated.
Xenon	Not regulated.	Not regulated.	Not regulated.

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Nitric Oxide	Yes	No	No	No	Yes
Argon	Yes	No	No	No	Yes
Helium	Yes	No	No	No	Yes
Krypton	Yes	No	No	No	Yes
Neon	Yes	No	No	No	Yes
Nitrogen	Yes	No	No	No	Yes
Xenon	Yes	No	No	No	Yes

SARA 372.65

Nitric Oxide	Not regulated.
Argon	Not regulated.
Helium	Not regulated.
Krypton	Not regulated.
Neon	Not regulated.
Nitrogen	Not regulated.
Xenon	Not regulated.

OSHA Process Safety

Nitric Oxide	250 LBS TQ
Argon	Not regulated.
Helium	Not regulated.
Krypton	Not regulated.
Neon	Not regulated.
Nitrogen	Not regulated.
Xenon	Not regulated.

State Regulations

	CA Proposition 65
Nitric Oxide	Not regulated.
Argon	Not regulated.
Helium	Not regulated.
Krypton	Not regulated.
Neon	Not regulated.
Nitrogen	Not regulated.
Xenon	Not regulated.

Canadian Regulations

	WHMIS Classification
Nitric Oxide	ACD1
Argon	A
Helium	A
Krypton	A
Neon	A
Nitrogen	A
Xenon	A

National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Nitric Oxide	Listed on inventory.	Not listed.	Not determined.
Argon	Listed on inventory.	Not listed.	Listed on inventory.
Helium	Listed on inventory.	Not listed.	Not determined.
Krypton	Listed on inventory.	Not listed.	Not determined.
Neon	Listed on inventory.	Not listed.	Not determined.
Nitrogen	Listed on inventory.	Not listed.	Listed on inventory.
Xenon	Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

	NFPA Rating
Nitric Oxide	HEALTH=4 FIRE=0 REACTIVITY=1
Argon	HEALTH=0 FIRE=0 REACTIVITY=0
Helium	HEALTH=0 FIRE=0 REACTIVITY=0 SPECIFIC HAZARD=SA
Krypton	HEALTH=1 FIRE=0 REACTIVITY=0
Neon	HEALTH=1 FIRE=0 REACTIVITY=0
Nitrogen	HEALTH=1 FIRE=0 REACTIVITY=0
Xenon	HEALTH=1 FIRE=0 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard