MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH Regulations

PORTAGAS™

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	**NON-FLAMMABLE GAS MIXTURE Containing Nitrogen Dioxide (< 2.3%) and Nitrogen (Balance)**
SYNONYMS:	Not Applicable
CHEMICAL FAMILY NAME:	Not Applicable
FORMULA:	Not Applicable
NOTE:	The Material Safety Data Sheet is for this gas supplied in cylinders with 33 cubic feet (935 liters) or less gas capacity (DOT – 39 cylinders).
PRODUCT USE:	For general analytical/synthetic chemical uses or EPA Protocol Mixture.
DOCUMENT NUMBER:	MSDS 1038
U.N. NUMBER:	UN 1956
U.N. DANGEROUS GOODS CLASS:	Class 2.2 (Non-Flammable Gas)
SUPPLIER/MANUFACTURER'S NAME:	**PortaGAS, Inc.**
ADDRESS:	1202 E. Sam Houston Pkwy S., Pasadena, TX 77503
EMERGENCY PHONE:	**TOLL-FREE in USA/Canada:** (800)255-3924 **International calls:** 01 813 248 0585 **Australian Poison Control:** 02 13 11 26 **Australian Fire Brigade:** 000
BUSINESS PHONE:	(713) 928-6477 General MSDS Info
DATE OF PREPARATION:	December 2010
DATE OF LAST REVISION:	December 2010

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This is a red-brown, non-flammable gas mixture with an acidic odor. Inhalation of this gas mixture can cause serious health effects and may be fatal. Symptoms of overexposure may not become apparent for up to 72 hours. This gas mixture may cause severe irritation and burns to skin, eyes, and other contaminated tissue. This gas mixture is not flammable. Emergency Responders must protect themselves from inhalation.

US DOT SYMBOLS

CANADA (WHMIS) SYMBOLS

EUROPEAN and (GHS) HAZARD SYMBOLS

Signal Word: **Danger**

EU LABELING AND CLASSIFICATION:

Classification of the substance or mixture according to Regulation (EC) No1272/2008

Annex 1 Index #: EC# 233-272-6, 007-002-00-0

Annex 1 Index #: EC# 231-783-9, This substance is not listed in the Annex I of Regulation (EC) No 689/2008

Pressurized Gas
Acute Toxicity Category 2
Skin Corrosive Category 1B

Hazard Statement(s):

H280: Contains gas under pressure, may explode if heated
H314: Causes severe burns and eye damage
H330: Fatal if inhaled

Precautionary Statement(s):

P260: Do not breathe dust/fume/gas/mist/vapors/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection
P284: Wear respiratory protection
P314: Get medical advice/attention if you feel unwell
P403: Store in a well ventilated place.

Hazard Classification:

[O] Oxidizer; [T] Toxic; [C] Corrosive

Risk Phrases:
R8: Contact with combustible material may cause fire
R23: Toxic by inhalation
R34: Causes burns

Safety Phrases:
S9: Keep in well ventilated area
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28: After contact with skin wash with plenty of water
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection
S45: In case of an accident or if you feel unwell, seek medical advice immediately.

HEALTH HAZARDS OR RISKS FROM EXPOSURE

ACUTE: Overexposures to this gas mixture can result in severe irritation and burns of eyes, skin, mucous membranes, and any other exposed tissue. If inhaled, delayed pulmonary damage and breathing difficulty may occur. Overexposure to this gas mixture may be fatal, due to Nitrogen Dioxide overexposure or asphyxiation.

CHRONIC: Prolonged or repeated overexposures may cause respiratory problems, bronchitis, hacking cough, nasal irritation and discharge, increased fatigue, and alteration in the senses of taste and smell. Repeated overexposures to this gas mixture can also result in dental erosion and gum disorders. Nitrogen Dioxide, a component of this gas mixture, has been shown to cause genetic damage and fetal toxicity in animal or bacterial studies. Refer to Section 11 (Toxicology Information) for additional data.

TARGET ORGANS: ACUTE: Respiratory system, skin, eyes, teeth CHRONIC: Respiratory system, skin

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Nitrogen Dioxide	10102-44-0	233-272-6	0930	<2.3%	HAZARD CLASSIFICATION:[O] OXIDIZER, [T] TOXIC, [C] CORROSIVE RISK PHRASES: R8, R23, R34
Nitrogen	7727-37-9	231-783-9	1198	Balance	HAZARD CLASSIFICATION: NONE RISK PHRASES: NONE

None of the trace impurities in this product contribute significantly to the hazards associated with the product.

All hazard information pertinent to the product has been provided in this Material Safety Data sheet., per the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and State equivalent standards

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard *JIS Z 7250: 2000*.

SECTION 4 - FIRST-AID MEASURES

RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO THIS PRODUCT WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT:

NOTICE! Delayed onset of life-threatening symptoms is very likely to occur. **Victim(s) must be taken for immediate medical attention**. Rescuers should be taken for medical attention if necessary. Take copy of label and MSDS to physician or other health professional with victim(s). Medical care providers should refer to Recommendations to Physicians, below, for additional information. Remove victim(s) to fresh air as quickly as possible. If the victim is unconscious, vomiting may occur as the person awakes. In order to prevent aspiration, exposed individuals should be placed on their side with their head at the level of, or slightly lower than, their body. Due to the possibility of the victim developing pulmonary edema, the symptoms of which can be delayed up to 72 hours, the victim should be discouraged from physical exertion during this time period.

SKIN EXPOSURE: If this gas contaminates the skin and irritation occurs, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Victim must seek medical attention.

EYE EXPOSURE: If irritation of the eye develops after exposure to this gas mixture, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory, dental, skin, and eye conditions may be aggravated by overexposure to this gas mixture.

RECOMMENDATIONS TO PHYSICIANS: Administer oxygen as soon as possible following exposure. Due to the presence of Nitrogen Dioxide in this gas mixture, be observant for signs of pulmonary edema. If possible, have victim breathe as deeply and rapidly as possible to help flush gas from the lungs. Treat symptoms; reduce or eliminate exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: Not Applicable.
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not Applicable Upper (UEL): Not Applicable
FIRE EXTINGUISHING MATERIALS: Non-flammable. Use extinguishing media appropriate for surrounding fire.

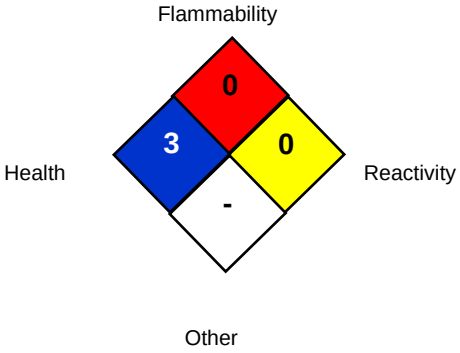
UNUSUAL FIRE AND EXPLOSION HAZARDS: This gas mixture can severely irritate the skin, eyes, and other contaminated tissues and may cause delayed effects on the lungs; subsequently, it presents a significant health hazard to firefighters. Nitrogen Dioxide, a component of this gas mixture, can slowly react with water to form a corrosive solution of nitric acid. Nitric acid is corrosive to skin and metal. Corrosive and toxic gases, vapors, and mists may spread from the point of release. This gas mixture does not burn; however, cylinders, when involved in a fire, may rupture or burst in the heat of the fire.

Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, shut off the flow of this gas mixture. If this product is involved in a fire, fire run-off water should be contained to prevent possible environmental damage.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE)	**3**
FLAMMABILITY HAZARD (RED)	**0**
PHYSICAL HAZARD (YELLOW)	**0**

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8

For Routine Industrial Use and Handling Applications

Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate **3** = Serious **4** = Severe * = Chronic hazard

SECTION 6 - ACCIDENTAL RELEASE MEASURES

LEAK RESPONSE: Evacuate immediate area. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Minimum Personal Protective Equipment should be **Level B: protective clothing, gloves and Self-Contained Breathing Apparatus**. Locate and seal the source of the leaking gas. Allow the gas to dissipate. Monitor the surrounding area for the level of Nitrogen Dioxide and oxygen level. The level of Nitrogen Dioxide must be below levels indicated in Section 2 (Composition and Information on Ingredients) and the atmosphere must have at least 19.5 percent oxygen and before personnel can be allowed in the area without Self-Contained Breathing Apparatus. Attempt to close the main source valve prior to entering the area. If this does not stop the release (or if it is not possible to reach the valve), allow the gas to release in place or remove it to a safe area and allow the gas to be released there. Colorimetric tubes are available for Nitrogen Dioxide. If gas is leaking incidentally from the cylinder or its valve, contact your supplier.

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Avoid all contact with the gas mixture. All work practices should minimize the release of this gas mixture. Eye wash stations/safety showers should be near areas where this product is used or stored. All work operations should be monitored in such a way that emergency personnel can be immediately contacted in the event of a release.

STORAGE AND HANDLING PRACTICES: Compressed gases can present significant safety hazards. Store cylinders away from heavily trafficked areas and emergency exits. Cylinders should be stored upright (with valve protection cap in place) and firmly secured to prevent falling or being knocked over. Cylinders can be stored in the open, but in such cases, should be protected against extremes of weather and from the dampness of the ground to prevent rusting. Cylinders should be stored in dry, well-ventilated areas away from sources of heat, ignition, and direct sunlight. Keep storage area clear of materials that can burn. Do not allow area where cylinders are stored to exceed 52°C (125°F). Store containers away from heavily trafficked areas and emergency exits. Store away from process and gas production areas, elevators, building and room exits, or main aisles leading to exits. Protect cylinders against physical damage. Keep the smallest amount on-site as is necessary. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time. Use a check valve in the discharge line to prevent hazardous backflow. Never tamper with pressure relief devices in valves and cylinders. **WARNING! Do not refill DOT 39 cylinders. To do so may cause personal injury or property damage.**

SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS: Compressed gases can present significant safety hazards. During cylinder use, use equipment designed for these specific cylinders. Ensure all lines and equipment are rated for proper service pressure.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain application equipment is locked and tagged-out safely. Always use product in areas where adequate ventilation is provided.

SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA	SWA
Nitrogen Dioxide	10102-44-0	3 ppm	Not Listed	5 ppm
Nitrogen	7727-37-9	SA	SA	SA

Nitrogen is a simple asphyxiant (SA).

Currently, International exposure limits are not established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

VENTILATION AND ENGINEERING CONTROLS: Employee exposure should be monitored and reduced to the lowest practical levels using ventilation or other appropriate engineering controls. If appropriate, install automatic monitoring equipment to detect the level of Nitrogen Dioxide and oxygen.

RESPIRATORY PROTECTION: Maintain Nitrogen Dioxide levels below those described in Section 2 (Composition and Information on Ingredients) and oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection if oxygen levels are below 19.5% (air-purifying respirators will not function) or during emergency response to a release of this gas mixture. During an emergency situation, before entering the area, check for oxygen-deficient atmospheres. If respiratory protection is needed, such as during emergency response to situations in which liquid is released along with other potentially hazardous materials, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

EYE PROTECTION: Safety glasses or safety glasses with side shields and face shield. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Wear gloves when handling cylinders of this gas mixture. Wear PVC, Teflon®, Kel-F®, or Neoprene Rubber gloves for industrial use. Use triple gloves for spill response (see Section 6, Accidental Release Measures). If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Chemical resistant protective clothing is recommended when handling this material due to its toxicity and corrosivity. Safety shoes are recommended when handling cylinders. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

GAS DENSITY@32°F (0°C) and 1 atm:	0.072 lbs/cu ft (1.153 kg/m^3)
BOILING POINT:	-195.8°C (-320.4°F)
FREEZING/MELTING POINT (@ 10 psig):	-210°C (-345.8°F)
SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C):	0.90
pH:	Not applicable.
SOLUBILITY IN WATER vol/vol at 32°F (0°C) and 1 atm:	0.023
MOLECULAR WEIGHT:	28.01
EVAPORATION RATE (nBuAc = 1):	Not applicable.
EXPANSION RATIO:	Not applicable.
ODOR THRESHOLD:	0.1 - 0.4 ppm (detection for Nitrogen Dioxide)
SPECIFIC VOLUME (ft^3/lb):	13.8
VAPOR PRESSURE @ 70°F (21.1°C) (psig):	Not applicable.
COEFFICIENT WATER/OIL DISTRIBUTION:	Not applicable.
APPEARANCE, ODOR AND COLOR:	This is a red-brown, non-flammable gas mixture with an acidic odor.
HOW TO DETECT THIS SUBSTANCE (warning properties):	Though the odor is strong and irritating, it does not serve as a reliable warning property for this gas mixture. In terms of leak detection, fittings and joints can be painted with a soap solution to detect leaks, which will be indicated by a bubble formation. The red-brown color of the gas is characteristic.

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Normally stable.

DECOMPOSITION PRODUCTS: Nitrogen Dioxide, a component of this gas mixture, does not decompose, but reacts with water to form acidic solutions. Nitrogen, the main component of this gas mixture does not decompose, per se, but may react with other compounds in the heat of a fire.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Due to the presence of Nitrogen Dioxide, this gas mixture is not compatible with strong bases, strong oxidizers, alkali metals, alkali earth metals, and powdered metals (e.g., powered iron and aluminum).

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials. Avoid exposing cylinders to extremely high temperatures, which could cause the cylinders to rupture.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following toxicology data are available for the components of this product:

NITROGEN DIOXIDE: Mutation in Microorganism System (Salmonella typhimurium) 6 ppm Sister Chromatid Exchange (hamster lung) 5 ppm for 10 minutes TDLo (inhalation, mouse) 22 ppm, reproductive effects TCLo (inhalation, rat) 0.85 mg/m^3 for 24 hours, teratogenic effects LCLo (inhalation, human) 200 ppm for 1 minute TCLo (inhalation, man) 6.2 ppm for 10 minutes, pulmonary effects TCLo (inhalation, man) 90 ppm for 40 minutes, pulmonary effects LC_{50} (inhalation, rat) 88 ppm for 4 hours LC_{50} (inhalation, mouse) 1000 ppm for 10 minutes LCLo (inhalation, dog) 123 mg/m^3LCLo (inhalation, monkey) 123 mg/m^3 for 8 hours LC_{50} (inhalation, rabbit) 315 ppm for 15 minutes LC_{50} (inhalation, guinea pig) 30 ppm for 1 hour

NITROGEN: There are no specific toxicology data for Nitrogen gas. Nitrogen is a simple asphyxiant (SA), which acts to displace oxygen in the environment.

SUSPECTED CANCER AGENT: Nitrogen Dioxide, a component of this gas mixture, is listed as follows: ACGIH-A4 (Not Classifiable as a Human Carcinogen). The other components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and IARC, and therefore are neither considered to be or suspected to be a cancer-causing agent by these agencies.

IRRITANCY OF PRODUCT: This gas mixture is severely irritating to skin, eyes, and other contaminated tissue.

SENSITIZATION OF PRODUCT: This gas mixture contains no known skin or respiratory sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this gas mixture and its components on the human reproductive system. Mutagenicity: No mutagenicity effects on humans have been described for this gas mixture. Nitrogen Dioxide, a component of this gas mixture, has been shown to cause genetic damage in bacterial studies. Embryotoxicity: This gas mixture is not expected to cause embryotoxic effects in humans. Teratogenicity: This gas mixture is not expected to cause teratogenic effects in humans. Reproductive Toxicity: This gas mixture is not expected to cause adverse reproductive effects in humans. Nitrogen Dioxide has been shown to cause fetal toxicity in animal studies.

BIOLOGICAL EXPOSURE INDICES (BEIs): Currently there are no ACGIH Biological Exposure Indices (BEIs) applicable for this gas mixture's components.

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: This gas mixture will be dissipated rapidly in well-ventilated areas. Complex reactions of Nitrogen Dioxide occur in the atmosphere which contribute to air pollution. The following environmental data are applicable to the components of this product.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: Due to the presence of Nitrogen Dioxide in this gas mixture, exposed animals may experience tissue damage, burns, and may be killed. Refer to Section 11 (Toxicology Information) for additional information on the components of this gas mixture and their effects on test animals. Plants contaminated with this gas mixture may be adversely effected or destroyed.

EFFECT OF CHEMICAL ON AQUATIC LIFE: Nitrogen Dioxide, a component of this gas mixture, hydrolyzes to nitric acid when in contact with water. If a release this product occurs near a river or other body of water, the release has the potential to kill fish and other aquatic life.

SECTION 13 - DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information, refer to Section 16 (Other Information).

SECTION 14 - TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

THIS GAS IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Compressed gases, n.o.s. (Nitrogen, Nitrogen Dioxide)

HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)

UN IDENTIFICATION NUMBER: UN 1956

PACKING GROUP: Not applicable.

DOT LABEL(S) REQUIRED: Non-Flammable Gas

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126

MARINE POLLUTANT: The components of this gas mixture are not classified by the DOT as Marine Pollutants (as defined by 49 CFR 172.101, Appendix B).

SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

NOTE: DOT 39 Cylinders ship in a strong outer carton (over pack). Pertinent shipping information goes on the outside of the over pack. DOT 39 Cylinders do not have transportation information on the cylinder itself.

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:
This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:
This product is classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):
This product is classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:
This product is classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):
This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

SECTION 15 - REGULATORY INFORMATION

UNITED STATES REGULATIONS:

SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows: Nitrogen Dioxide SARA 302 & SARA 304.

TSCA: All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

SARA 311/312:

Acute Health: Yes Chronic Health: Yes Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: Nitrogen Dioxide = 100 lb (45.4 kg)

U.S. CERCLA REPORTABLE QUANTITY (RQ): Nitrogen Dioxide = 10 lb (4.54 kg) [Extremely Hazardous Substance].

OTHER U.S. FEDERAL REGULATIONS: Nitrogen Dioxide is subject to the reporting requirements of CFR 29 1910.1000. Nitrogen Dioxide is listed on Table Z.1. This gas mixture does not contain any Class I or Class II ozone depleting chemicals (40 CFR part 82). Nitrogen Dioxide is subject to the reporting requirements of Section 112(r) of the Clean Air Act. Depending on specific operations involving the use of this product, the regulations of the Process Safety Management of Highly Hazardous Chemicals may be applicable (29 CFR 1910.119). Under this regulation Nitrogen Dioxide is listed in Appendix A. The threshold quantity for Nitrogen Dioxide under this regulation is 250 lb. The components of this gas mixture are not listed as a Regulated Substance, per 40 CFR, Part 68, of the Risk Management for Chemical Release Prevention.

U.S. STATE REGULATORY INFORMATION: The components of this gas mixture are covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances:	Nitrogen Dioxide.
California - Permissible Exposure Limits for Chemical Contaminants:	Nitrogen Dioxide, Nitrogen.
Florida - Substance List:	Nitrogen Dioxide.
Illinois - Toxic Substance List:	Nitrogen Dioxide.
Kansas - Section 302/313 List:	Nitrogen Dioxide.
Massachusetts - Substance List:	Nitrogen Dioxide.
Michigan - Critical Materials Register:	No
Minnesota - List of Hazardous Substances:	Nitrogen Dioxide.
Missouri - Employer Information/Toxic Substance List:	Nitrogen Dioxide.
New Jersey - Right to Know Hazardous Substance List:	Nitrogen Dioxide, Nitrogen.
North Dakota - List of Hazardous Chemicals, Reportable Quantities:	Nitrogen Dioxide.
Pennsylvania - Hazardous Substance List:	Nitrogen Dioxide
Rhode Island - Hazardous Substance List:	Nitrogen Dioxide
Texas - Hazardous Substance List:	Nitrogen Dioxide.
West Virginia - Hazardous Substance List:	Nitrogen Dioxide.
Wisconsin - Toxic and Hazardous Substances:	Nitrogen Dioxide.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): The components of this gas mixture are not on the California Proposition 65 lists.

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CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This gas mixture is categorized as a Controlled Product, Hazard Classes A, D1B, D2A, and E, as per the Controlled Product Regulations.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION: Classification of the substance or mixture according to Regulation (EC) No1272/2008. See section 2 for details.

AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac:	Listed
Australian Inventory of Chemical Substances (AICS):	Listed
Korean Existing Chemicals List (ECL):	Listed
Japanese Existing National Inventory of Chemical Substances (ENCS):	Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS):	Listed
Swiss Giftliste List of Toxic Substances:	Listed
U.S. TSCA:	Listed

SECTION 16 - OTHER INFORMATION

INFORMATION ABOUT DOT-39 NRC (Non-Refillable Cylinder) PRODUCTS: DOT 39 cylinders ship as hazardous materials when full. Once the cylinders are relieved of pressure (empty) they are not considered hazardous material or waste. Residual gas in this type of cylinder is not an issue because toxic gas mixtures are prohibited. Calibration gas mixture typically packaged in these cylinders are Nonflammable n.o.s., UN 1956. A small percentage of calibration gases packaged in DOT 39 cylinders are flammable or oxidizing gas mixtures. For disposal of used DOT-39 cylinders, it is acceptable to place them in a landfill if local laws permit. Their disposal is no different than that employed with other DOT containers such as spray paint cans, household aerosols, or disposable cylinders of propane (for camping, torch etc.). When feasible, we recommended recycling for scrap metal content.

MIXTURES: When two or more gases or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

PREPARED BY: Paul Eigbrett Global Safety Management, 10006 Cross Creek Blvd. Suite 440, Tampa, FL 33647