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

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	**NON-FLAMMABLE GAS MIXTURE Containing 2,2-dichloro-1,1,1-trifluoroethane (hcfc-123) 50ppm-1% in a Nitrogen Balance Gas**
SYNONYMS:	Not Applicable
CHEMICAL FAMILY NAME:	Not Applicable
FORMULA:	Not Applicable
PRODUCT USE:	Synthetic/Analytical chemistry
DOCUMENT NUMBER:	MSDS 1091 (99-0282)
U.N. NUMBER:	UN 1956
U.N. DANGEROUS GOODS 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: +1 813 248 0585
	Australian Poison Control: 13 11 26
	Australian Fire Brigade: 000
BUSINESS PHONE:	(713) 928-6477 General MSDS Info
DATE OF PREPARATION:	Nov 2012
DATE OF LAST REVISION:	Nov 2012

SECTION 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Warning! CONTENTS UNDER PRESSURE. MAY CAUSE EYE IRRITATION. Avoid contact with eyes. Do not puncture or incinerate container. Wash thoroughly after handling. Contact with rapidly expanding gases can cause frostbite.

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

EC# 206-190-3 This substance is not classified in the Annex I of Directive 67/548/EEC

EC# 231-783-9 This substance is not classified in the Annex I of Directive 67/548/EEC

Pressurized Gas

According to European Directive 67/548/EEC as amended.

Harmful by inhalation;
Pressurized gas

Hazard Statement(s):

H280: Contains gas under pressure, may explode if heated.

Precautionary Statement(s):

P210: Keep away from heat/sparks/open flames/hot surfaces
P261: Avoid breathing gas.
P271: Use only in well-ventilated area.
P281: Use personal protective equipment as required.
P314: Get medical advice/attention if you feel unwell
P403: Store in a well-ventilated place.

Hazard Symbol(s):

None

Risk Phrases:
R67: May cause drowsiness or dizziness.

Safety Phrases:
S9: Keep container in a well-ventilated area.
S23: Do not breathe gas.
S45: In case of an accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure— obtain special instructions before use.

HEALTH HAZARDS OR RISKS FROM EXPOSURE:

ACUTE: Eyes: Moderately irritating to the eyes. **Skin:** Slightly irritating to the skin. **Inhalation:** Acts as a simple asphyxiant. **Ingestion:** Ingestion is not a normal route of exposure for gases

CHRONIC: Chronic exposure to oxygen-deficient atmospheres (below 18% oxygen in air) may affect the heart and nervous system.

TARGET ORGANS: ACUTE: Respiratory system, eyes. CHRONIC: Heart, cardiovascular system, central nervous system, reproductive system.

SECTION 3 - COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	% Vol	HAZARD CLASSIFICATION; RISK PHRASES
1,1-Dichloro-2,2,2,-Trifluoroethane (Halocarbon R-123)	306-83-2	206-190-3	1343	0.005 - 1%	HAZARD CLASSIFICATION: None RISK PHRASES: None
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 GAS MIXTURE WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. If necessary, Self-Contained Breathing Apparatus must be worn. No unusual health effects are anticipated after exposure to this gas mixture, due to the small cylinder size. If any adverse symptom develops after over-exposure to this gas mixture, remove victim(s) to fresh air as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation if necessary. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Acute or chronic respiratory conditions may be aggravated by over-exposure to the components of this gas mixture.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and reduce over-exposure.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASH POINT: Non-Flammable
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS (in air by volume, %): Lower (LEL): Not Applicable Upper (UEL): Not Applicable

FIRE EXTINGUISHING MATERIALS: Non-flammable gas. Use extinguishing media appropriate for surrounding fire. In the event of fire, cool containers of this product with water to prevent failure. Use a water spray or fog to reduce or direct vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This gas mixture is not flammable; however, containers, when involved in fire, may rupture or burst in the heat of the fire. Additionally, mixtures of this gas for which Air is the balance gas, can support combustion.

Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES: Structural fire-fighters must wear Self-Contained Breathing Apparatus and full protective equipment.

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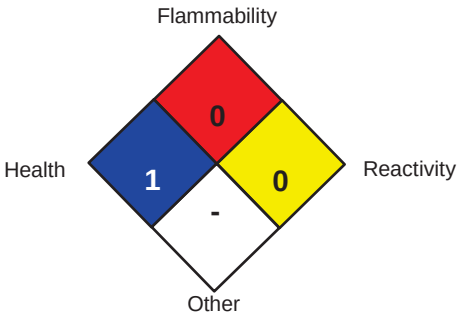
NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE)	1
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: Due to the small size and content of the cylinder, an accidental release of this gas mixture presents significantly less risk of an oxygen-deficient environment and other safety hazards than a similar release from a larger cylinder. However, as with any chemical release, extreme caution must be used during emergency response procedures. In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel. Allow the gas mixture to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for oxygen. Oxygen levels must be above 19.5% before non-emergency personnel are allowed to re-enter area. If leaking incidentally from the cylinder, contact your supplier.

SECTION 7 - HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly-ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to oxygen deficiency. Do not attempt to repair, adjust, or in any other way modify cylinders containing this gas mixture. If there is a malfunction or another type of operational problem, contact nearest distributor immediately.

STORAGE AND HANDLING PRACTICES: Cylinders should be firmly secured to prevent falling or being knocked-over. Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21°C [70°F]). Cylinders should be stored in dry, well-ventilated areas, away from sources of heat, ignition, and direct sunlight. Protect cylinders against physical damage. 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. These cylinders are not refillable. WARNING! Do not refill DOT 39 cylinders. To do so may cause personal injury or property damage.

SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS:

WARNING! Before Use: Move cylinders with a suitable hand-truck. Do not drag, slide or roll cylinders. Do not drop cylinders or permit them to strike each other. Secure cylinders firmly. Leave the valve protection cap (where provided) in-place until cylinder is ready for use. **During Use:** Use designated CGA fittings and other support equipment. Do not use adapters. Do not heat cylinder by any means to increase the discharge rate of the product from the cylinder. Do not use oils or grease on gas-handling fittings or equipment. Leak-check system with leak detection solution, never with flame. Immediately contact the supplier if there are any difficulties associated with operating cylinder valve. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing a leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Never strike an arc, on a compressed gas cylinder or make a cylinder part of an electric circuit. **After Use:** Close main cylinder valve. Replace valve protection cap. Mark empty cylinders “EMPTY”. **NOTE:** Use only DOT or ASME code containers. Earth-ground and bond all lines and equipment associated with this product. Close valve after each use and when empty.

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. Purge gas handling equipment with inert gas (i.e. nitrogen) before attempting repairs. Always use product in areas where adequate ventilation is provided.

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SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/GUIDELINES:

Chemical Name	CAS#	ACGIH TWA	OSHA TWA	SWA
1,1-Dichloro-2,2,2,-Trifluoroethane (Halocarbon R-123)	306-83-2	50 ppm	50 ppm	Not Listed
Nitrogen	7727-37-9	Simple Asphyxiant	Simple Asphyxiant	Simple Asphyxiant

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: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If respiratory protection is required, follow the requirements of the Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, or the applicable regulations of Canada and its Provinces.

EYE PROTECTION: Safety glasses. 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. Otherwise, wear glove protection appropriate to the specific operation for which this gas mixture is used. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: Use body protection appropriate for task. Safety shoes are recommended when handling cylinders.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

The following information is for Nitrogen, the main component of this gas mixture.

GAS DENSITY@32°F (0°C) and 1 atm:	0.072 lb/ ft^3 (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):	0.906
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:	Not applicable. Odorless.
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:	Colorless, odorless gas mixture.
HOW TO DETECT THIS SUBSTANCE (warning properties):	There are no unusual warning properties associated with a release of this product.

SECTION 10 - STABILITY and REACTIVITY

STABILITY: Normally stable

DECOMPOSITION PRODUCTS: These products are halogenated compounds, hydrogen chloride, hydrogen fluoride.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Not considered to be reactive according to our database.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Cylinders exposed to high temperatures or direct flame can rupture or burst.

SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following toxicology data are available for the components of this gas mixture: These products are carbon oxides (CO, CO 2) and water, nitrogen oxides (NO, NO2), halogenated compounds.

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

SUSPECTED CANCER AGENT: The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: Contact with rapidly expanding gases can cause frostbite and damage to exposed skin and eyes.

SENSITIZATION OF PRODUCT: The components of this gas mixture are not known to cause sensitization in humans.

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 have been described for the components of this gas mixture. Embryotoxcity: No embryotoxic effects have been described for the components this gas mixture. Teratogenicity: No teratogenicity effects have been described for the components of this gas mixture. Reproductive Toxicity: No reproductive toxicity effects have been described for the components of gas mixture.

BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, Biological Exposure Indices (BEIs) are not applicable for the components of this gas mixture.

CHEMICAL DETERMINANT	SAMPLING TIME	BEI

SECTION 12 - ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: These products are carbon oxides (CO, CO 2) and water, nitrogen oxides (NO, NO2...), halogenated compounds.

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

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No adverse effect is anticipated to occur to animals or plant-life, except for frost produced in the presence of rapidly expanding gases.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence of an adverse effect of this gas mixture on aquatic life is currently available.

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.

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

UN IDENTIFICATION NUMBER: UN 1956

PACKING GROUP: Not applicable.

DOT LABEL(S) REQUIRED: Class 2.2 (Non-Flammable Gas)

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): 126

MARINE POLLUTANT: The components of this gas mixture are not classified by the DOT as a Marine Pollutant (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 present serious safety hazards and should be discouraged.

NOTE: Shipment of compressed gas cylinders which have not been filled with the owner's consent is a violation of Federal law (49 CFR, Part 173.301 (b)

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.

PROPER SHIPPING NAME: Compressed gases, n.o.s.
HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)
UN IDENTIFICATION NUMBER: UN 1956
PACKING GROUP: Not Applicable
HAZARD LABEL: Class 2.2 (Non-Flammable Gas)
SPECIAL PROVISIONS: None
EXPLOSIVE LIMIT AND LIMITED QUANTITY INDEX: 0.12
ERAP INDEX: None
PASSENGER CARRYING SHIP INDEX: None
PASSENGER CARRYING ROAD VEHICLE OR PASSENGER CARRYING RAILWAY VEHICLE INDEX: 75
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): 126

NOTE: Shipment of compressed gas cylinders via Public Passenger Road Vehicle is a violation of Canadian law (Transport Canada Transportation of Dangerous Goods Act, 1992)

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: This gas is not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act., as follows: None

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: No Fire: No Reactivity: No

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this gas. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

OTHER U.S. FEDERAL REGULATIONS: United States U.S. Federal regulations: TSCA 8(b) inventory: nitrogen; 2,2-dichloro-1,1,1-trifluoroethane (hcfc-123) SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: nitrogen SARA 311/312 MSDS distribution - chemical inventory - hazard identification: nitrogen: Sudden Release of Pressure Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean air act (CAA) 112 accidental release prevention: No products were found. Clean air act (CAA) 112 regulated flammable substances: No products were found. Clean air act (CAA) 112 regulated toxic substances: No products were found.

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

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

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

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, 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