

**Supplier And Product Information**

Diamond Diagnostics  
 Quality Assurance / Regulatory Affairs  
 333 Fiske St.  
 Holliston, MA. 01746 USA

**Emergency Telephone Number: 508-429-0450**



Personal Protective Equipment

Product: Non-Flammable Gas Mixture Containing CO<sub>2</sub>, N<sub>2</sub> and O<sub>2</sub>  
 Cat. No's: **DD-0018, RD-LG505D, and DD-0017**

**Composition**

Chemical Constituents :	Approximate % Volume:	CAS#
Nitrogen	70.5 - 99%	7727-37-9
Oxygen	1 – 19.5%	7782-44-7
Carbon Dioxide	0.5 - 20%	124-38-9

**Physical Data**

Boiling Point: Not Available Critical Temperature: lowest known value is - 146.9°C (-232.4°F) (Nitrogen)	Melting/freezing Point: -209.99°C Based on Data for Nitrogen Weighted Average: -211.4°C	Specific Volume: Not Applicable
Vapor Density: Highest known value is 1.53 (Air=1) (Carbon Dioxide). Weighted Average: 1.07	Gas Density(lb/ft <sup>3</sup> ): Weighted Average: 0.08	Physical State: Gas
Evaporation Rate: N/G	Solubility In Water: N/G	

**Fire And Explosion Data**

Flammability of the Product: Non-Flammable	Products of Combustion: These products are Carbon Oxides (CO, CO <sub>2</sub> ), Nitrogen Oxides (NO, NO <sub>2</sub> ...).
Extinguishing Media: Suitable for surrounding fire	
Special Fire Fighting Procedures: If involved in fire, shut off flow immediately if it can be done without risk. Apply water from a safe distance to cool container and protect surrounding area.	
Special Protective Equipment for Fire-Fighters: Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face piece operated in positive pressure mode.	

**Reactivity Data**

Stability and Reactivity:	The product is stable.
Incompatibility (materials to avoid):	The product is not considered to be reactive.

## Precautions For Safe Handling And Use

**In Case of Accidental Release:** Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment. Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

**Environmental Precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal:** Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State and Local regulation.

**Handling:** Avoid contact with eyes, skin and clothing. Keep container closed. Use only with adequate ventilation. Do not puncture or incinerate container. Wash thoroughly after handling. High pressure gas. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide or drop. Use a suitable hand truck for cylinder movement.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Cylinders should be stored upright, with valve protection cap in place and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52°C (125°F)



## Health And Hazard Data

**Threshold Limit Value (TLV):** N/G

**Signs-Symptoms of Overexposure:** Irritation of affected area.

**Chronic Effects on Humans:** Contains material which causes damage to the following organs: lungs, cardiovascular system, skin, central nervous system (CNS), eye, lens or cornea.

## Exposure Controls, Personal Protection

**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.

**Personal Protection:**

**Eyes:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory:** 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. The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

**Hands:** Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Chronic Effects on Humans:** Contains material which causes damage to the following organs: lungs, cardiovascular system, skin, central nervous system (CNS), eye, lens or cornea.

## Transport Information

**DOT Classification** – UN1956 – Compressed Gas, N.O.S. – Class 2.2

**TDG Classification** – UN1956 – Compressed Gas, N.O.S. – Class 2.2

**Mexico Classification** - UN1956 – Compressed Gas, N.O.S. – Class 2.2

**Emergency And First Aid Procedures**

Emergency Overview:	<p>Contents under pressure.          Contains material which causes damage to the following organs:          Lungs, Cardiovascular system, Skin, Central nervous system, Eye, Lens or Cornea.          May cause respiratory tract, eye and skin irritation.          Avoid contact with skin and clothing. Avoid breathing gas. Do not puncture or incinerate container. Keep container closed. Use only adequate ventilation. Wash thoroughly after handling.          Contact with rapidly expanding gases can cause frostbite.</p>
Routes of Entry:	Inhalation, Dermal and Eyes.
Ingestion:	Not a normal route of exposure for gases. If ingestion occurs, DO NOT INDUCE VOMITTING unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.
Inhalation:	Moderately irritating to the respiratory system. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin:	Moderately irritating to the skin. If contact occurs, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Eyes:	Moderately irritating to the eyes. If contact occurs, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Frostbite:	Try to warm up the frozen tissues and seek medical attention.
Medical Condition Alert:	Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

**Regulatory Information**

<u>United States</u>	
<u>U.S. Federal Regulations</u>	<p>TSCA 8(b) inventory: Nitrogen; Carbon Dioxide; Oxygen          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 – Oxygen, Nitrogen and Carbon Dioxide          SARA 311/312 MSDS distribution – chemical inventory – hazard identification:              Nitrogen: Sudden release of pressure;              Carbon Dioxide: Sudden release of pressure, Immediate (Acute) Health hazard, Delayed (Chronic) Health Hazard.              Oxygen: Fire Hazard, Sudden Release of pressure, Delayed (Chronic) Health Hazard          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.</p>
<u>State Regulations</u>	<p>Pennsylvania RTK: Nitrogen: (generic environmental hazard); Carbon Dioxide: (generic environmental hazard); Oxygen (general environmental hazard)          Massachusetts RTK: Nitrogen; Carbon Dioxide; Oxygen          New Jersey: Nitrogen; Carbon Dioxide; Oxygen</p>
<u>Canada -WHMIS</u>	<p>Class A: Compressed gas          Class D-2A: Material causing other toxic effects (very toxic)          CEPA DSL: Nitrogen; Carbon Dioxide: Oxygen</p>

**Other Information**

The information contained herein is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Diamond Diagnostics shall not be held liable for any changes resulting from handling or contact with the above product. See reverse side of invoice or packaging slip for additional terms and conditions of sale.

N/G = Not Given  
 N/A = Not Applicable or Not Available