

# Precision Gas Products Inc.

2455 Cawthra Road, Unit 21 Mississauga, Ontario L5A 3P1

Tel: (905) 949-2626/1-888-730-8196 Fax: (905) 949-2688

Emergency Contact: Chemtrec (800) 424-9300

## Nitrogen Dioxide in Air 2 ppm to 500 ppm

# MATERIAL SAFETY DATA SHEET

### Identification

Revision Date 01-01-15

Products Name: NITROGEN DIOXIDE IN AIR 2 PPM TO 500 PPM

CAS Number: N/A

Chemical Family: Gas Mixture

Chemical formula: NO<sub>2</sub> in Air

Synonyms: Calgas, NO<sub>2</sub> in Air Mixture

MSDS identification Code/ Number: MSDS 146

### Composition/ Information on Ingredients

Ingredient Name	Concentration Percent by Weight
<b>NITROGEN DIOXIDE</b> CAS Number: 10102-44-0	0.0002 to 0.05
<b>Exposure Limits</b>	
• ACGIH TLV-TWA: 3 ppm	
• ACGIH TLV-STEL: 5 ppm	
• IDLH: 50 ppm	
• OSHA PEL-Ceiling: 5 ppm	
<b>AIR</b> CAS Number: N/A	99.995% to 99.998%

### Hazard Identification

No data given

### First Aid Measures

#### Eyes

Immediately flush with tepid water

#### Inhalation

Prompt medical attention is mandatory in all cases of overexposure. Rescue personnel should be equipped with self-contained breathing apparatus.

Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, and if breathing has stopped, administer artificial resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

### Fire Fighting Measures

#### Flammable Properties

Flash Point: N/A

Lower Explosive Limit (%): N/A

Upper Explosive Limit (%): N/A

- Fire and Explosion Hazards: None
- Extinguishing Media: This product is a nonflammable gas. Use any extinguishing media which is suitable for surrounding fire.

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**Accidental Release Measures**

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Evacuate all personnel from affected areas. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container or container valve, contact CHEMTREC location for emergency assistance.

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**Handling and Storage**

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- **Handling and Storage Precautions**

Use only in well – ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure-reducing regulator when connecting cylinder to lower pressure (<3000 psig) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the system.

Protect cylinders from physical damage. Store in cool, dry, well – ventilated area of noncombustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 130°F (54°C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Use a “first in, first out” inventory system to prevent full cylinders being stored for excessive periods of time. Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, asphyxiation or toxic exposure.

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**Exposure Controls/Personal Protection**

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Ventilation: Use local exhaust to prevent accumulation of high concentrations so as to reduce the oxygen level in the air to less than 19.5 molar percent.

Eye/Face Protection: Safety goggles or glasses.

Skin Protection: Protective gloves of any material

Respiratory Protection: Self-contained breathing apparatus should be available for emergency use.

Other/General Protection: Safety shoes

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**Physical & Chemical Properties**

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Appearance: A colorless gas.

Basic Physical Properties

Odor: Odorless gas.

Solubility (H2O): Very low solubility

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**Stability & Reactivity**

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Stability: Stable

Incompatible Materials: None

Hazardous Polymerization: Will not occur

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**Toxicological Information**

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- **Acute Inhalation Effects**

These mixtures are nontoxic, however, high concentrations of nitrogen dioxide vapors are a strong irritant to the pulmonary tract. Initial symptoms of inhalation may be moderate and include irritation of the eyes and throat, tightness of the chest, headache, nausea and gradual loss of strength. Severe symptoms may be delayed (possibly for 5 to 7 hours) and include cyanosis, increased difficulty in breathing, irregular respiration, lassitude and possible eventual death due to pulmonary edema in untreated cases.

Carcinogenicity – NTP: No

IARC: No

OSHA: No

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**Ecological Information**

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No data given

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**Disposal Considerations**

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Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place to Precision Gas Products for proper disposal.

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**Transport Information**

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Proper Shipping Name: Compressed Gas, N.O.S., (Air, Nitrogen Dioxide)  
Hazardous Class: 2.2  
CT (DOT) Identification Number: UN 1956  
CT (DOT) Shipping Label: Nonflammable Gas

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**Regulatory Information**

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**SARA Title III Notifications and Information**

**SARA Title III – Hazard Class:** Acute Health Hazard  
Sudden Release of Pressure Hazard

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**Other Information**

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Hazard Rating	Health: 1 High
	Fire: 0 Negligible
	Reactivity: 0 Negligible

MSDS Identification Code/Number: MSDS 146

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**Reference Documentation**

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Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipments of a compressed gas cylinder, which has not been filled by the owner or with his (written) consent is a violation of Federal Law (49CFR).

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**Disclaimer of Expressed & Implied Warranties**

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