

# Safety Data Sheet

Material Name: NITROGEN

SDS ID: 00233394

## \*\*\*Section 1 - PRODUCT AND COMPANY IDENTIFICATION\*\*\*

### Product Identifier: NITROGEN

#### Manufacturer Information

ADVANCED GAS TECHNOLOGIES  
1401 Stauffer Road  
Palm, PA 18070-0035

General Information: 1-800-416-2505  
Emergency #: 1-800-424-9300 (CHEMTREC)  
Outside the US: 703-527-3887 (Call collect)

#### Chemical Family

inorganic, gas

#### Synonyms

Diatomic nitrogen; Dinitrogen; Nitrogen; Nitrogen-14; Nitrogen gas; UN 1066; N2; RTECS: QW9700000

#### Product Use

industrial

#### Usage Restrictions

none known

## \*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*

#### EMERGENCY OVERVIEW

**Color:** colorless

**Physical Form:** gas

**Odor:** odorless

**Health Hazards:** difficulty breathing

**Physical Hazards:** Containers may rupture or explode if exposed to heat.

#### POTENTIAL HEALTH EFFECTS

##### Inhalation

**Short Term:** nausea, vomiting, tingling sensation, suffocation, convulsions, coma, headache, drowsiness, dizziness, loss of coordination, unconsciousness, fatigue, impairment of judgement, irregular heartbeat

**Long Term:** no information is available

##### Skin

**Short Term:** no information on significant adverse effects

**Long Term:** no information on significant adverse effects

##### Eye

**Short Term:** irritation

**Long Term:** no information on significant adverse effects

##### Ingestion

**Short Term:** ingestion of a gas is unlikely

**Long Term:** ingestion of a gas is unlikely

## \*\*\*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
7727-37-9	Nitrogen, compressed gas	100

# Safety Data Sheet

Material Name: NITROGEN

SDS ID: 00233394

## \*\*\*Section 4 - FIRST AID MEASURES\*\*\*

### Inhalation

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.

### Skin

Wash exposed skin with soap and water.

### Eyes

Flush eyes with plenty of water.

### Ingestion

If a large amount is swallowed, get medical attention.

### Note to Physicians

For inhalation, consider oxygen.

## \*\*\*Section 5 - FIRE FIGHTING MEASURES\*\*\*

See Section 9 for Flammability Properties

**NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0**

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

### Flammable Properties

Negligible fire hazard. Pressurized containers may rupture or explode if exposed to sufficient heat.

### Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

### Unsuitable Extinguishing Media

None known.

### Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

### Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

## \*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

### Occupational spill/release

Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

## \*\*\*Section 7 - HANDLING AND STORAGE\*\*\*

### Handling Procedures

Avoid breathing gas. Use only with adequate ventilation.

# Safety Data Sheet

Material Name: NITROGEN

SDS ID: 00233394

## Storage Procedures

Store and handle in accordance with all current regulations and standards. Protect from sunlight. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

## \* \* \*Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\* \* \*

### Component Analysis

ACGIH, OSHA and NIOSH have not developed exposure limits for any of this product's components.

### Component Biological Limit Values

There are no biological limit values for any of this product's components.

### Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

## PERSONAL PROTECTIVE EQUIPMENT

### Eyes/Face

Eye protection not required, but recommended.

### Protective Clothing

Protective clothing is not required.

### Glove Recommendations

Protective gloves are not required.

### Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

## \* \* \*Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\* \* \*

<b>Physical State:</b>	Gas	<b>Appearance:</b>	Not available
<b>Color:</b>	colorless	<b>Physical Form:</b>	gas
<b>Odor:</b>	odorless	<b>Odor Threshold:</b>	Not available
<b>Taste:</b>	tasteless	<b>pH:</b>	Not available
<b>Melting/Freezing Point:</b>	-210 °C	<b>Boiling Point:</b>	-196 °C
<b>Flash Point:</b>	not combustible	<b>Decomposition:</b>	Not available
<b>Evaporation Rate:</b>	Not available	<b>LEL:</b>	Not applicable
<b>UEL:</b>	Not applicable	<b>Vapor Pressure:</b>	760 mmHg @ -196 °C
<b>Vapor Density (air = 1):</b>	0.967	<b>Density:</b>	1.2506 g/L
<b>Specific Gravity (water=1):</b>	0.967	<b>Water Solubility:</b>	1.6 % @ 20 °C
<b>Log KOW:</b>	0.67	<b>Auto Ignition:</b>	Not applicable
<b>Viscosity:</b>	0.01787 cP @27 °C	<b>Volatility:</b>	100 %
<b>Molecular Weight:</b>	28.0134	<b>Molecular Formula:</b>	N2

### Solvent Solubility

**Soluble:** liquid ammonia

**Slightly Soluble:** alcohol

# Safety Data Sheet

Material Name: NITROGEN

SDS ID: 00233394

## \*\*\*Section 10 - STABILITY AND REACTIVITY\*\*\*

### Chemical Stability

Stable at normal temperatures and pressure.

### Conditions to Avoid

Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

### Materials to Avoid

metals, oxidizing materials

### Decomposition Products

oxides of nitrogen

### Possibility of Hazardous Reactions

Will not polymerize.

### Hazardous Reactions

Will not polymerize.

## \*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

### Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

### Irritation

No animal testing data available for skin or eyes.

### Medical Conditions Aggravated by Exposure

None known.

### Tumorigenic

No data available.

### Mutagenic

No data available.

### Reproductive Effects

No data available.

### Additional Data

TARGET ORGANS: simple asphyxiant

## \*\*\*Section 12 - ECOLOGICAL INFORMATION\*\*\*

### Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

## \*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\*

### Disposal Methods

Dispose in accordance with all applicable regulations.

### Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

# Safety Data Sheet

Material Name: NITROGEN

SDS ID: 00233394

## \*\*\*Section 14 - TRANSPORT INFORMATION\*\*\*

### US DOT Information

Shipping Name: Nitrogen, compressed

UN/NA #: UN1066 Hazard Class: 2.2

Required Label(s): 2.2

### TDG Information

Shipping Name: Nitrogen, compressed

UN #: UN1066 Hazard Class: 2.2

Required Label(s): 2.2

## \*\*\*Section 15 - REGULATORY INFORMATION\*\*\*

### U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA 311/312

Acute Health: Yes Chronic Health: No Fire: No Pressure: Yes Reactive: No

### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Nitrogen, compressed gas	7727-37-9	No	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

### Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Nitrogen, compressed gas	7727-37-9	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes

# Safety Data Sheet

Material Name: NITROGEN

SDS ID: 00233394

## \*\*\*Section 16 - OTHER INFORMATION\*\*\*

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

### Other Information

Advanced Gas Technologies makes no express or implied warranties, guarantees or representations regarding the product or the information herein, including but not limited to any implied warranty or merchantability or fitness for use. Advanced Gas Technologies shall not be liable for any personal injury, property or other damages of any nature, whether compensatory, consequential, exemplary, or otherwise, resulting from any publication, use or reliance upon the information herein.

End of Sheet 00233394