



**MATHESON**

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## Safety Data Sheet

**Material Name: NITROGEN, COMPRESSED GAS**

**SDS ID: 00233301**

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

**Material Name**

NITROGEN, COMPRESSED GAS

**Synonyms**

MTG MSDS 67; DIATOMIC NITROGEN; DINITROGEN; NITROGEN; NITROGEN-14; NITROGEN GAS; UN 1066; N2

**Chemical Family**

inorganic, Gas

**Product Use**

Industrial and Specialty Gas Applications.

**Restrictions on Use**

None known.

**Details of the supplier of the safety data sheet**

MATHESON GAS PRODUCT KOREA

91-1 Samgeo-ri; Umbong-myun

Asan City, Korea

Phone: 041-539-7400 (day)

Emergency Phone #: 041-539-7488 (night/weekend/holiday)

Department in charge: SHE

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

**Classification in accordance with paragraph (d) of 29 CFR 1910.1200.**

Gases Under Pressure - Compressed gas

Simple Asphyxiant

**GHS Label Elements**

**Symbol(s)**



**Signal Word**

Warning

**Hazard Statement(s)**

Contains gas under pressure; may explode if heated.

May displace oxygen and cause rapid suffocation.

**Precautionary Statement(s)**

**Prevention**

None needed according to classification criteria.

**Response**

None needed according to classification criteria.

**Storage**

Protect from sunlight.

Store in a well-ventilated place.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.



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The rapid release of compressed gas may cause frostbite.

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

CAS	Component Name	Percent
7727-37-9	NITROGEN, COMPRESSED GAS	100

**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**

If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

**Eyes**

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

**Ingestion**

If swallowed, get medical attention.

**Most Important Symptoms/Effects****Acute**

suffocation, frostbite

**Delayed**

No data available.

**Note to Physicians**

For inhalation, consider oxygen.

**Section 5 - FIRE FIGHTING MEASURES****Extinguishing Media****Suitable Extinguishing Media**

Use extinguishing agents appropriate for surrounding fire.

**Unsuitable Extinguishing Media**

None known.

**Special Hazards Arising from the Chemical**

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

**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.

**Special Protective Equipment and Precautions for Firefighters**

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



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### Section 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment, see Section 8.

**Methods and Materials for Containment and Cleaning Up**

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. Ventilate closed spaces before entering. Damaged cylinders should be handled only by specialists. Do not touch or walk through spilled material. If possible, turn leaking containers so that gas escapes rather than liquid.

**Environmental Precautions**

Avoid release to the environment.

### Section 7 - HANDLING AND STORAGE

**Precautions for Safe Handling**

Avoid breathing dust/fume/gas/mist/vapors/spray. Use only with adequate ventilation.

**Conditions for Safe Storage, Including any Incompatibilities**

Protect from sunlight.

Store in a well-ventilated place.

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S.

OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

**Incompatible Materials**

metals, oxidizing materials

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**Component Exposure Limits**

<b>NITROGEN, COMPRESSED GAS</b>	<b>7727-37-9</b>
ACGIH:	(See Appendix F: Minimal Oxygen Content )

**ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)**

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

**Engineering Controls**

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

**Individual Protection Measures, such as Personal Protective Equipment****Eye/face protection**

For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety glasses.

Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin Protection**

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

**Respiratory Protection**

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

**Glove Recommendations**

For the gas: Protective gloves are not required. For the liquid: Wear appropriate protective, cold insulating clothing.

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Not available	<b>Physical State</b>	gas
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<b>Odor</b>	odorless	<b>Color</b>	colorless
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	-210 °C (-346 °F )	<b>Boiling Point</b>	-196 °C (-321 °F )
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition Temperature</b>	Not available	<b>Flash Point</b>	Not available
<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	760 mmHg @ -196 °C
<b>Vapor Density (air=1)</b>	0.967	<b>Specific Gravity (water=1)</b>	0.967
<b>Water Solubility</b>	1.6 % (@ 20 °C )	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	0.01787 cp	<b>Kinematic viscosity</b>	Not available
<b>Solubility (Other)</b>	Not available	<b>Density</b>	1.2506 g/L
<b>Log KOW</b>	0.67	<b>Physical Form</b>	gas
<b>Taste</b>	tasteless	<b>Volatility</b>	100 %
<b>Molecular Formula</b>	N <sub>2</sub>	<b>Molecular Weight</b>	28.0134

**Solvent Solubility****Soluble**

liquid ammonia

**Slightly Soluble**

alcohol

**Section 10 - STABILITY AND REACTIVITY****Reactivity**

No reactivity hazard is expected.

**Chemical Stability**

Stable at normal temperatures and pressure.

**Possibility of Hazardous Reactions**

Will not polymerize.

**Conditions to Avoid**

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

**Incompatible Materials**

metals, oxidizing materials

**Hazardous decomposition products**

oxides of nitrogen



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

#### **Information on Likely Routes of Exposure**

##### **Inhalation**

nausea, vomiting, tingling sensation, suffocation, convulsions, coma, headache, drowsiness, dizziness, loss of coordination, Unconsciousness, fatigue, impairment of judgement, irregular heartbeat

##### **Skin Contact**

blisters, frostbite

##### **Eye Contact**

frostbite, blurred vision

##### **Ingestion**

ingestion of a gas is unlikely

##### **Acute and Chronic Toxicity**

##### **Component Analysis - LD50/LC50**

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

##### **Product Toxicity Data**

##### **Acute Toxicity Estimate**

No data available.

##### **Immediate Effects**

suffocation, frostbite

##### **Delayed Effects**

No data available.

##### **Irritation/Corrosivity Data**

No animal testing data available for skin or eyes.

##### **Respiratory Sensitization**

No data available.

##### **Dermal Sensitization**

No data available.

##### **Component Carcinogenicity**

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

##### **Germ Cell Mutagenicity**

No data available.

##### **Tumorigenic Data**

No data available

##### **Reproductive Toxicity**

No data available.

##### **Specific Target Organ Toxicity - Single Exposure**

Simple Asphyxiant

##### **Specific Target Organ Toxicity - Repeated Exposure**

No data available.

##### **Aspiration hazard**

Not applicable.

##### **Medical Conditions Aggravated by Exposure**

None known.

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

#### **Component Analysis - Aquatic Toxicity**

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

#### **Persistence and Degradability**



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No data available.

**Bioaccumulative Potential**

No data available.

**Mobility**

No data available.

**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.

**Section 14 - TRANSPORT INFORMATION****Component Marine Pollutants (IMDG)**

Not a marine pollutant.

**US DOT Information:****Shipping Name:** NITROGEN, COMPRESSED**Hazard Class:** 2.2**UN/NA #:** UN1066**Required Label(s):** 2.2**IMDG Information:****Shipping Name:** NITROGEN, COMPRESSED**Hazard Class:** 2.2**UN#:** UN1066**Required Label(s):** 2.2**International Bulk Chemical Code**

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

**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 Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories****Acute Health:** Yes **Chronic Health:** No **Fire:** No **Pressure:** Yes **Reactivity:** No**SARA Section 311/312 (40 CFR 370 Subparts B and C) 2017 reporting categories**

Gas Under Pressure; Simple Asphyxiant

**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
<b>NITROGEN, COMPRESSED GAS</b>	<b>7727-37-9</b>	No	Yes	Yes	Yes	Yes

**Not listed under California Proposition 65****Canada Regulations****Canadian WHMIS Ingredient Disclosure List (IDL)**

The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.

**WHMIS Classification**

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**Component Analysis - Inventory****NITROGEN, COMPRESSED GAS (7727-37-9)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes

**Section 16 - OTHER INFORMATION****NFPA Ratings**

Health: 0 Fire: 0 Reactivity: 0 Other: SA

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

**Summary of Changes**

New SDS: 12/13/2016

**Key / Legend**

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; 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; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR - Korea; LD50/LC50 - Lethal Dose/Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; NDSL - Non-Domestic Substance List (Canada); 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; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

**Other Information****Disclaimer:**

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