



MATHESON

ask...The Gas Professionals™

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Section 1 - IDENTIFICATION

Product Identifier: Argon/CO2 Mixture

Recommended Use

Industrial and Specialty Gas Applications

Restrictions on Use

None known.

Manufacturer Information

MATHESON TRI-GAS, INC.
150 Allen Road, Suite 302
Basking Ridge, NJ 07920

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

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with 29 CFR 1910.1200

Gas under pressure, Compressed gas

Specific Target Organ Toxicity - Single Exposure, Category 3 (central nervous system)

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

WARNING

Hazard Statement(s)

Contains gas under pressure; may explode if heated

May cause drowsiness and dizziness

May displace oxygen and cause rapid suffocation.

Precautionary Statement(s)

Prevention

Avoid breathing gas. Use only outdoors or in a well-ventilated area.

Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

Protect from sunlight. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose in accordance with all applicable regulations.

Hazard(s) Not Otherwise Classified

May cause asphyxia. May cause frostbite upon sudden release of compressed gas.

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent
7440-37-1	Argon	80
124-38-9	Carbon dioxide	20

Section 4 - FIRST AID MEASURES

Description of Necessary 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

Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion

If swallowed, get medical attention.

Most Important Symptoms/Effects

Acute

frostbite, suffocation, central nervous system depression

Delayed

No information on significant adverse effects.

Indication of Immediate Medical Attention and Special Treatment

For inhalation, consider oxygen.

Section 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media

carbon dioxide, regular dry chemical

Unsuitable Extinguishing Media

Do not direct water at source of leak or safety devices; icing may occur.

Specific Hazards Arising from the Chemical

Negligible fire hazard. Containers may rupture or explode if exposed to heat.

Hazardous Combustion Products

Combustion: oxides of carbon, oxides of argon

Fire Fighting Measures

Move container from fire area if it can be done without risk. Damaged cylinders should be handled only by specialists. 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 fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Use extinguishing agents appropriate for surrounding fire. Cool containers with water. Apply water from a protected location or from a safe distance.

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Special Protective Equipment and Precautions for Firefighters

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

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

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. Ventilate closed spaces before entering. Stay upwind and keep out of low areas.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Avoid breathing gas. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Conditions for Safe Storage, including any Incompatibilities

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep container tightly closed. Store locked up. Protect from sunlight. Protect from physical damage. Store in a cool, dry place. Store below 125 F (52 C). Cylinders should be stored upright (with valve protection cap in place). See original container for storage recommendations. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

Incompatibilities bases, combustible materials, metal carbide, metal salts, metals, oxidizing materials, reducing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Argon (7440-37-1)

ACGIH: Simple asphyxiant (See Appendix F: Minimal Oxygen Content)

Carbon dioxide (124-38-9)

ACGIH: 5000 ppm TWA
30000 ppm STEL

Europe: 5000 ppm TWA; 9000 mg/m3 TWA

OSHA (Final): 5000 ppm TWA; 9000 mg/m3 TWA

OSHA (Vacated): 10000 ppm TWA; 18000 mg/m3 TWA
30000 ppm STEL; 54000 mg/m3 STEL

NIOSH: 5000 ppm TWA; 9000 mg/m3 TWA
30000 ppm STEL; 54000 mg/m3 STEL

Component Biological Limit Values

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

Appropriate Engineering Controls

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

Individual Protection Measures, such as Personal Protective Equipment

Eyes/Face Protection

For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles with a faceshield. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Skin Protection

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

Glove Recommendations

For the gas: Protective gloves are not required, but recommended. For the liquid: Wear insulated gloves.

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.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

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* * *

Physical State:	gas	Appearance:	Colorless gas
Color:	colorless	Physical Form:	compressed gas
Odor:	odorless	Odor Threshold:	Not available
pH:	Not available	Melting/Freezing Point:	Not available
Boiling Point:	Not available	Flash Point:	non-flammable
Decomposition:	Not available	Evaporation Rate:	Not available
LEL:	Not available	UEL:	Not available
Vapor Pressure:	Not available	Vapor Density (air = 1):	Not available
Specific Gravity (water=1):	Not available	Water Solubility:	Not available
Log KOW:	Not available	Coeff. Water/Oil Dist:	Not available
Auto Ignition:	Not available	Viscosity:	Not available

Other Property Information

No additional information is available.

* * *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

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

Incompatible Materials

bases, combustible materials, metal carbide, metal salts, metals, oxidizing materials, reducing agents

Hazardous Decomposition

Combustion: oxides of carbon, oxides of argon

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Section 11 - TOXICOLOGICAL INFORMATION

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.

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Carbon dioxide (124-38-9)

Inhalation: 361 gm/m³/2 hour Inhalation Mouse LC50; 200000 ppm/2 hour Inhalation Mouse LC50

Acute Toxicity Level

Carbon dioxide (124-38-9)

Non Toxic: inhalation

Information on Likely Routes of Exposure

Inhalation

sensitivity to light, changes in blood pressure, nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, unconsciousness, disorientation, mood swings, dizziness, loss of coordination, sleep disturbances, emotional disturbances, tingling sensation, tremors, muscle cramps, visual disturbances, suffocation, convulsions, coma, blood disorders

Ingestion

ingestion of a gas is unlikely

Skin Contact

frostbite, blisters

Eye Contact

frostbite, blurred vision, irritation

Immediate Effects

frostbite, suffocation, central nervous system depression

Delayed Effects

No information on significant adverse effects.

Medical Conditions Aggravated by Exposure

heart or cardiovascular disorders, respiratory disorders

Irritation/Corrosivity Data

No data available.

RTECS Irritation

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Target Organs

Carbon dioxide (124-38-9)

central nervous system

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Carcinogenicity

Component Carcinogenicity

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

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Mutagenic Data

No data available for the mixture.

Reproductive Effects Data

No data available for the mixture.

RTECS Reproductive Effects

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Carbon dioxide (124-38-9)

55 pph Inhalation Mouse TClO (4 hour, 6 day(s)); 55 pph Inhalation Mouse TClO (2 hour, 3 day(s)); 2 pph Inhalation Mouse TClO (8 hour, pregnant 10 day(s)); 13 pph Inhalation Rabbit TClO (4 hour, pregnant 9-12 day(s)); 6 pph Inhalation Rat TClO (24 hour, pregnant 10 day(s)); 6 pph Inhalation Rat TClO (24 hour, pregnant 10 day(s))

Tumorigenic Data

No data available for the mixture.

Specific Target Organ Toxicity - Single Exposure

central nervous system

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

Not applicable.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

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

Persistence and Degradability

No data available for the mixture.

Bioaccumulative Potential

No data available for the mixture.

Mobility

No data available for the mixture.

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

US DOT Information

Shipping Name: Compressed gas, n.o.s. (Contains: Argon, Carbon dioxide)

UN/NA #: UN1956 **Hazard Class:** 2.2

Required Label(s): 2.2

IMDG Information

Shipping Name: Compressed gas, n.o.s. (Contains: Argon, Carbon dioxide)

UN #: UN1956 **Hazard Class:** 2.2

Required Label(s): 2.2

Safety Data Sheet

Material Name Argon/CO2 Mixture

SDS ID: 00244526

Section 15 - REGULATORY INFORMATION

Component Analysis

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 Hazardous Categories

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
Argon	7440-37-1	No	Yes	Yes	Yes	Yes
Carbon dioxide	124-38-9	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Argon	7440-37-1	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes
Carbon dioxide	124-38-9	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

NFPA Ratings: Health: 2 Fire: 0 Reactivity: 0

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

New SDS: 06/19/2013

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

Safety Data Sheet

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SDS ID: 00244526

Other Information

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