MATHESON
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Safety Data Sheet

Material Name: HELIUM **SDS ID: MAT10640**

* * * Section 1 - IDENTIFICATION* * *

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)

Product Identifier: HELIUM

Trade Names/Synonyms

MTG MSDS 48; HELIUM GAS; HELIUM COMPRESSED; HELIUM-4; ATOMIC HELIUM; UN 1046; He; RTECS: MH6520000

Chemical Family

inorganic, gas

Product Use

industrial

Restrictions on Use

None known.

* * * Section 2 - HAZARDS IDENTIFICATION* * *

GHS Classification

Gas under pressure, Compressed gas

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

WARNING

Hazard Statement(s)

Contains gas under pressure; may explode if heated

Precautionary Statement(s)

Protect from sunlight. Store in a well-ventilated place.

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

CAS#	Component	Percent
7440-59-7	HELIUM	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

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.

Symptoms: Immediate

suffocation

Symptoms: Delayed

No data available.

* * * Section 5 - FIRE FIGHTING MEASURES* * *

See Section 9 for Flammability Properties

Specific Hazards Arising from the Chemical

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

Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Large fires: Use water spray to keep containers cool.

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).

Hazardous Combustion Products

Combustion: Not applicable

* * * Section 6 - ACCIDENTAL RELEASE MEASURES* * *

Personal Precautions

Wear personal protective clothing and equipment, see Section 8.

Environmental Precautions

Avoid release to the environment.

Methods for Containment

Do not extinguish, unless leak can be stopped safely. Reduce vapors with water spray. Eliminate all ignition sources if safe to do so. Keep unnecessary people away, isolate hazard area and deny entry.

Cleanup Methods

Avoid heat, flames, sparks and other sources of ignition. Ventilate closed spaces before entering. Damaged cylinders should be handled only by specialists.

* * * Section 7 - HANDLING AND STORAGE* * *

Handling Procedures

Avoid breathing gas. Use only with adequate ventilation.

Storage Procedures

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

Incompatibilities No data available.

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

Component Exposure Limits

HELIUM (7440-59-7)

ACGIH: Simple asphyxiant

Component Biological Limit Values

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

Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. 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.

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:**	Not available
Color:	colorless	**Physical Form:**	gas
Odor:	odorless	**Odor Threshold:**	odorless
Taste:	tasteless	**pH:**	Not available
Melting/Freezing Point:	-272 °C @26 atm	**Boiling Point:**	-269 °C
Decomposition:	Not available	**Evaporation Rate:**	Not available
Vapor Pressure:	1719 mmHg @ -268 °C	**Vapor Density (air = 1):**	0.138
Density:	0.1785 g/L @ 0 °C	**Water Solubility:**	0.94 % @ 0 °C
Log KOW:	Not available	**Auto Ignition:**	Not available
Viscosity:	0.02012 cP @26.8 °C	**Molecular Weight:**	4.0026
Molecular Formula:	He		

Solvent Solubility

Insoluble: alcohol

* * * 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. Avoid inhalation of material or combustion by-products.

Possibility of Hazardous Reactions

Will not polymerize.

Incompatible Materials

No data available.

Hazardous Decomposition

Combustion: Not applicable

* * * 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 no data as of the date on this document.

Immediate Effects

suffocation

Delayed Effects

No data available.

Irritation/Corrosivity Data

No animal testing data available for skin or eyes.

RTECS Irritation

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

Respiratory Sensitizer

No data available.

Dermal Sensitizer

No data available.

Carcinogenicity

Component Carcinogenicity

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

Mutagenic Data

No data available.

Reproductive Effects Data

No data available.

Tumorigenic Data

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

No data available.

Bioaccumulative Potential

No data available.

Mobility in Environmental Media

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* * *

US DOT Information

Shipping Name: Helium, compressed
UN/NA #: UN1046 **Hazard Class:** 2.2
Required Label(s): 2.2

IMDG Information

Shipping Name: Helium, compressed
UN #: UN1046 **Hazard Class:** 2.2

* * * 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
HELIUM	7440-59-7	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
HELIUM	7440-59-7	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes

* * * Section 16 - OTHER INFORMATION* * *

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

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

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; IDLH - Immediately Dangerous to Life and Health; 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

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