Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
30% Oxygen in Helium, Gas Mix

Product Use
industrial.

Restrictions on Use
None known.

Details of the supplier of the safety data sheet
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 paragraph (d) of 29 CFR 1910.1200.
Oxidizing Gases - Category 1
Gases Under Pressure - Compressed gas
Specific Target Organ Toxicity - Single Exposure - Category 3 (respiratory system)
Simple Asphyxiant

GHS Label Elements
Symbol(s)

Signal Word
Danger

Hazard Statement(s)
May cause or intensify fire; oxidizer.
Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.
May cause respiratory irritation.

Precautionary Statement(s)
Prevention
Keep away from clothing and other combustible materials.
Keep reduction valves free from grease and oil.

Response
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

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

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.
Safety Data Sheet

Material Name: 30% Oxygen in Helium, Gas Mix

Other Hazards
Rapid release of compressed gas may cause frostbite.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-59-7</td>
<td>Helium</td>
<td>&lt;80</td>
</tr>
<tr>
<td>7782-44-7</td>
<td>Oxygen</td>
<td>&gt;20</td>
</tr>
</tbody>
</table>

### 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. Then get immediate medical attention.

**Ingestion**
If a large amount is swallowed, get medical attention.

**Most Important Symptoms/Effects**

**Acute**
frostbite, suffocation

**Delayed**
no information on significant adverse effects.

**Note to Physicians**
For inhalation, consider oxygen.

### Section 5 - FIRE FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media**
carbon dioxide, regular dry chemical

**Unsuitable Extinguishing Media**
None known.

**Special Hazards Arising from the Chemical**
Negligible fire hazard. May ignite or explode on contact with combustible materials. Containers may rupture or explode if exposed to 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. 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.

**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.

Methods and Materials for Containment and Cleaning Up
Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Stop leak if possible without personal risk. Avoid contact with combustible materials.

Environmental Precautions
Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
Keep away from heat, sparks and flame. Do not eat, drink or smoke when using this product. Do not breathe gas, fumes, vapor, or spray. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation.

Conditions for Safe Storage, Including any Incompatibilities
Store in a well-ventilated place. Protect from sunlight. Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Protect from sunlight. See original container for storage recommendations. Keep separated from incompatible substances.

Incompatible Materials
amines, bases, combustible materials, halo carbons, metal salts, metals, oxidizing materials, reducing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helium</td>
<td>7440-59-7</td>
</tr>
</tbody>
</table>

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
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.

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, but recommended. For the liquid: Wear appropriate protective, cold insulating clothing.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>colorless gas</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Physical State</td>
<td>gas</td>
</tr>
<tr>
<td>Color</td>
<td>colorless</td>
</tr>
</tbody>
</table>
Odor Threshold | 0.14 ppm (Recognition Arsine) | pH | Not available
---|---|---|---
Melting Point | Not available | Boiling Point | Not available
Boiling Point Range | Not available | Freezing point | Not available
Evaporation Rate | Not available | Flammability (solid, gas) | Not available
Autoignition Temperature | Not available | Flash Point | (Non-flammable)
Lower Explosive Limit | Not available | Decomposition temperature | Not available
Upper Explosive Limit | Not available | Vapor Pressure | Not available
Vapor Density (air=1) | Not available | Specific Gravity (water=1) | Not available
Water Solubility | Not available | Partition coefficient: n-octanol/water | Not available
Viscosity | Not available | Kinematic viscosity | Not available
Solubility (Other) | Not available | Density | Not available
Physical Form | compressed gas | Molecular Weight | Not available

### Section 10 - STABILITY AND REACTIVITY

**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. Avoid contact with combustible materials. Containers may rupture or explode if exposed to heat.

**Incompatible Materials**
amines, bases, combustible materials, halo carbons, metal salts, metals, oxidizing materials, reducing agents

**Hazardous decomposition products**
miscellaneous decomposition products

### 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.

**Product Toxicity Data**

**Acute Toxicity Estimate**
No data available.

**Immediate Effects**
### Safety Data Sheet

**Material Name:** 30% Oxygen in Helium, Gas Mix  
**SDS ID:** 00244254

#### Delayed Effects
No information on significant adverse effects.

**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 for the mixture.

**Tumorigenic Data**
No data available.

**Reproductive Toxicity**
No data available for the mixture.

**Specific Target Organ Toxicity - Single Exposure**
Respiratory system

**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 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. Subject to disposal regulations: U.S. U.S. EPA 40 CFR 262.

**Hazardous Waste Number(s):** D001.

**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, OXIDIZING, N.O.S., (Contains: Helium, Oxygen)

**Hazard Class:** 2.2

**UN/NA #:** UN3156

**Required Label(s):** 2.2 5.1
Safety Data Sheet

Material Name: 30% Oxygen in Helium, Gas Mix

IMDG Information:
Shipping Name: COMPRESSED GAS, OXIDIZING, N.O.S. (Contains: Helium, Oxygen)
Hazard Class: 2.2
UN#: UN3156
Required Label(s): 2.2 + 5.1

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 product’s 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) reporting categories
Gas Under Pressure; Oxidizer; Specific Target Organ Toxicity; Simple Asphyxiant

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
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</thead>
<tbody>
<tr>
<td>Helium</td>
<td>7440-59-7</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oxygen</td>
<td>7782-44-7</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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.

Component Analysis - Inventory
Helium (7440-59-7)

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<thead>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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Oxygen (7782-44-7)

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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

NFPA Ratings

Section 16 - OTHER INFORMATION
Safety Data Sheet

Material Name: 30% Oxygen in Helium, Gas Mix

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

Summary of Changes
New SDS: 09/09/2015

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Rail 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; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); 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; F - Background (for Venezuela Biological Exposure Indices); 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; Ne- Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL – Non-Domestic Substance List (Canada); 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; Sc - Semi-quantitative; 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); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

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