# Safety Data Sheet

**Material Name: OXYGEN, COMPRESSED GAS** **SDS ID: 00232355**

## Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Material Name**
OXYGEN, COMPRESSED GAS
**Synonyms**
MTG MSDS 71; OXYGEN; DIOXYGEN; MOLECULAR OXYGEN; OXYGEN MOLECULE; PURE OXYGEN; UN 1072; LOX; HYPEROXIA; O2
**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**

SPECIALTY CHEMICAL PRODUCTS
1407 Pennsylvania Ave.
South Houston, TX 77587
General Information: 713-944-0900
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 1-703-527-3887 (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
**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 cause respiratory irritation.
**Precautionary Statement(s)**
**Prevention**
Keep valves and fittings free from oil and grease.
Keep/Store away from clothing/combustible materials.
Use only outdoors or in a well-ventilated area.
Avoid breathing dust/fume/gas/mist/vapors/spray.
**Response**

In case of fire: stop leak if safe to do so.
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.

**Storage**

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

**Disposal**

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

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| CAS | Component Name | Percent |
|---|---|---|
| 7782-44-7 | OXYGEN, COMPRESSED GAS | 100 |

## Section 4 - FIRST AID MEASURES

**Inhalation**

If adverse effects occur, remove to uncontaminated area. Get 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**

Contact with liquid: Immediately 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, respiratory system

**Delayed**

no information on significant adverse effects.

## Section 5 - FIRE FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media**

carbon dioxide, regular dry chemical, Large fires: Use regular foam or flood with fine water spray.

**Special Hazards Arising from the Chemical**

Negligible fire hazard. Oxidizer. May ignite or explode on contact with combustible materials. Containers may rupture or explode if exposed to heat.

**Hazardous Combustion Products**

miscellaneous decomposition products.

**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**
Stop leak if possible without personal risk. Avoid contact with combustible materials. Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.
**Methods and Materials for Containment and Cleaning Up**
Avoid contact with combustible materials. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Do not direct water at spill or source of leak. Keep unnecessary people away, isolate hazard area and deny entry. Isolate area until gas has dispersed. Ventilate closed spaces before entering.
**Environmental Precautions**
Avoid release to the environment.

## Section 7 - HANDLING AND STORAGE

**Precautions for Safe Handling**
Use only outdoors or in a well-ventilated area. Do not breathe gas. Wash thoroughly after handling. Keep away from clothing and other combustible materials. Keep reduction valves free from grease and oil.
**Conditions for Safe Storage, Including any Incompatibilities**
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight.
Store and handle in accordance with all current regulations and standards. Protect from physical damage. Avoid heat, flames, sparks and other sources of ignition. Store in a clean, cool, dry place. Store below 125 °F. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.
**Incompatible Materials**
combustible materials, halo carbons, metals, bases, reducing agents, amines, metal salts, oxidizing materials

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**Component Exposure Limits**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.
**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 ventilation system. Ensure compliance with applicable exposure limits.
**Individual Protection Measures, such as Personal Protective Equipment**
**Eye/face protection**
Wear splash resistant safety goggles. 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**
Wear insulated gloves.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Appearance** | Not available | **Physical State** | gas |
| **Odor** | odorless | **Color** | colorless |
| **Odor Threshold** | Not available | **pH** | Not available |
| **Melting Point** | -218.4 °C (-361 °F ) | **Boiling Point** | -182.96 °C (-297 °F ) |
| **Boiling Point Range** | Not available | **Freezing point** | Not available |
| **Evaporation Rate** | Not available | **Flammability (solid, gas)** | Not flammable |
| **Autoignition Temperature** | Not available | **Flash Point** | Not available |
| **Lower Explosive Limit** | Not available | **Decomposition temperature** | Not available |
| **Upper Explosive Limit** | Not available | **Vapor Pressure** | 760 mmHg @ -183 °C |
| **Vapor Density (air=1)** | 1.43 | **Specific Gravity (water=1)** | 1.14 at -183 °C |
| **Water Solubility** | 3.2 % (@ 25 °C ) | **Partition coefficient: n-octanol/water** | Not available |
| **Viscosity** | 0.02075 cp | **Kinematic viscosity** | Not available |
| **Solubility (Other)** | Not available | **Density** | 1.309 g/L at 25 °C |
| **Physical Form** | gas | **Taste** | tasteless |
| **Molecular Formula** | O2 | **Molecular Weight** | 31.9988 |

**Solvent Solubility**
**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**
Avoid contact with combustible materials. Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.
**Incompatible Materials**

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

**Hazardous decomposition products**

miscellaneous decomposition products

## Section 11 - TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Inhalation**

irritation, chest pain, cough, changes in body temperature, nausea, difficulty breathing, irregular heartbeat, dizziness, Disorientation, hallucinations, mood swings, pain in extremities, tremors, lung congestion, convulsions, lung damage

**Skin Contact**

frostbite, blisters

**Eye Contact**

irritation, 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**

Frostbite, suffocation, respiratory system

**Delayed Effects**

No information on significant adverse effects.

**Irritation/Corrosivity Data**

No data available.

**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**

No target organs identified.

**Specific Target Organ Toxicity - Repeated Exposure**

No target organs identified.

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

No data available.

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## 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**
No data available.

## Section 13 - DISPOSAL CONSIDERATIONS

**Disposal Methods**
Dispose of contents/container in accordance with local/regional/national/international 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:** OXYGEN, COMPRESSED
**Hazard Class:** 2.2
**UN/NA #:** UN1072
**Required Label(s):** 2.2, 5.1

**IMDG Information:**
**Shipping Name:** OXYGEN, COMPRESSED
**Hazard Class:** 2.2
**UN#:** UN1072
**Required Label(s):** 2.2, 5.1

**TDG Information:**
**Shipping Name:** OXYGEN, COMPRESSED
**Hazard Class:** 2.2
**UN#:** UN1072
**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
**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 |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| **OXYGEN, COMPRESSED GAS** | **7782-44-7** | No | Yes | No | Yes | Yes |

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**
Not listed under California Proposition 65.

**Component Analysis - Inventory**

**OXYGEN, COMPRESSED GAS (7782-44-7)**

| US | CA | AU | CN | EU | JP - ENCS | JP - ISHL | KR KECI - Annex 1 | KR KECI - Annex 2 |
|---|---|---|---|---|---|---|---|---|
| Yes | DSL | Yes | Yes | EIN | No | No | Yes | No |

| KR - REACH CCA | MX | NZ | PH | TH-TECI | TW | VN (Draft) |
|---|---|---|---|---|---|---|
| No | Yes | Yes | Yes | Yes | Yes | Yes |

## Section 16 - OTHER INFORMATION

**NFPA Ratings**
Health: 2 Fire: 0 Instability: 0 Other: OX
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Summary of Changes**
New SDS:01/19/2016

**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; 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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