

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 06/21/2020

Reviewed on 06/21/2020

* 1 Identification

· **Product Identifier**

· **Trade Name: Precision Calibration Gas Mixture**

· **Product Number:** G-14815

· **Relevant identified uses of the substance or mixture and uses advised against:**

Used for calibration of gas measuring devices. Not suitable for human consumption.

· **Product Description:** Calibration gas mixture consisting of Hydrogen Sulfide and Air.

· **Application of the substance / the mixture:** Pressurized gas, requires appropriate regulator to dispense.

· **Details of the Supplier of the Safety Data Sheet:**

· **Manufacturer/Supplier:**

Gasco Affiliates, LLC

320 Scarlett Blvd.

Oldsmar, FL 34677

TELEPHONE NUMBER: (800) 910-0051

FAX NUMBER: (866) 755-8920

E-MAIL: info@gascogas.com

· **Emergency telephone number:**

Inside the US: 1-833-723-3267 (Chemtrec, 24 hours)

Outside the US: 1-703-527-3887 (Chemtrec, 24 hours)

2 Hazard(s) Identification

· **Classification of the substance or mixture:**



Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.



Acute Tox. 4 H332 Harmful if inhaled.

· **Label elements:**

· **Hazard pictograms:**



· **Signal word:** Warning

· **Hazard statements:**

H280 Contains gas under pressure; may explode if heated.

H332 Harmful if inhaled.

· **Precautionary statements:**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P271 Use only outdoors or in a well-ventilated area.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a poison center/doctor if you feel unwell.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

· **Unknown acute toxicity:**

99.5 % of the mixture consists of component(s) of unknown toxicity.

(Contd. on page 2)

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

| | | |
|------------|---|---------------------|
| HEALTH | 1 | Health = 1 |
| FIRE | 0 | Fire = 0 |
| REACTIVITY | 0 | Physical Hazard = 0 |

- **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

| | | |
|-------------------------------------|--|-------------------|
| CAS: 7727-37-9 RTECS: QW 9700000 | Nitrogen ⚠ Press. Gas, H280; Simple Asphyxiant | 76.59-80.4999995% |
| CAS: 7783-06-4 | Hydrogen Sulfide ⚠ Flam. Gas 1, H220; ⚠ Press. Gas, H280; ⚠ Acute Tox. 2, H330; ⚠ Aquatic Acute 1, H400 | 0.0000005-0.01% |
| CAS: 7782-44-7 | Oxygen ⚠ Oxid. Gas 1, H270; ⚠ Press. Gas, H280 | 19.5-23.4% |

* 4 First-Aid Measures

- **Description of first aid measures**
- **After inhalation:**
Get medical attention immediately. Move person to fresh air. If it is expected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
In case of unconsciousness place patient stably in the side position for transportation.
- **After skin contact:** Generally, the product does not irritate the skin.
- **After eye contact:** Not anticipated under normal use.
- **After swallowing:** Not a normal route of entry.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
No further relevant information available.

* 5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Use fire fighting measures that suit the environment.
Use water spray to cool fire-exposed containers.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information is available.
- **Special hazards arising from the substance or mixture:**
If incinerated, product will release the following toxic fumes: Oxides of Nitrogen (NO_x) and Sulfur.

(Contd. on page 3)

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Issue date 06/21/2020

Reviewed on 06/21/2020

Trade Name: Precision Calibration Gas Mixture

- **Advice for firefighters**
- **Special protective equipment for firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources
Keep people at a distance and stay upwind.
- **Environmental precautions:** Inform authorities in case of gas release.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Dispose of contaminated material as waste according to section 13.
- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
Keep protective respiratory device available.
Do not spray on a naked flame or any incandescent material.
- **Conditions for safe storage, including any incompatibilities**
Store away from strong oxidizing agents, strong bases, phosphorous, organic materials and powdered metals.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational 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 remaining constituents have no known exposure limits.

7727-37-9 Nitrogen

TLV | withdrawn TLV, see App. F; simple asphyxiant

(Contd. on page 4)

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OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 06/21/2020

Reviewed on 06/21/2020

Trade Name: Precision Calibration Gas Mixture

7783-06-4 Hydrogen Sulfide

| | |
|-----|---|
| PEL | Ceiling limit value: 20; 50* ppm *10-min peak; once per 8-hr shift |
| REL | Ceiling limit value: 15* mg/m ³ , 10* ppm *10-min |
| TLV | Short-term value: 7 mg/m ³ , 5 ppm Long-term value: 1.4 mg/m ³ , 1 ppm |

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls:**

· **Personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Breathing equipment:**



Suitable respiratory protective device recommended.

· **Protection of hands:** Not required.

· **Material of gloves:** Not applicable.

· **Penetration time of glove material:** Not applicable.

· **Eye protection:** Not necessary under normal conditions.

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Gaseous

Color: Clear, colorless

· **Odor:** Rotten

· **Odor threshold:** Not determined.

· **pH-value:** Acidic

· **Change in condition**

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

· **Flash point:** None

· **Flammability (solid, gaseous):** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

(Contd. on page 5)

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OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 06/21/2020

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- **Vapor pressure:** Not determined.
- **Density:**
 - Relative density:** Not determined.
 - Vapor density:** Not determined.
 - Evaporation rate:** Not applicable.
- **Solubility in / Miscibility with:**
 - Water:** Not miscible or difficult to mix.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **Solvent content:**
 - Organic solvents:** 0.0 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** Stable under normal conditions.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Heat, flame and ignition sources.
- **Incompatible materials:**
 - Strong oxidizing agents, strong bases, phosphorous, organic materials and powdered metals.
- **Hazardous decomposition products:** Oxides of Nitrogen (NOx) and Sulfur.

11 Toxicological Information

- **Information on toxicological effects:**
- **Acute toxicity:**

LD/LC50 values that are relevant for classification:

7783-06-4 Hydrogen Sulfide

| | | |
|------------|---------------|-------------------------|
| Inhalative | LC50/4 h | 634 mg/l (Mouse) |
| | | 444 mg/l (Rat) |
| | LC50/96 hours | 0.016 mg/l (Pimephales) |

- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** No irritating effect.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
 - Group 1 - Carcinogenic to humans
 - Group 2A - Probably carcinogenic to humans
 - Group 2B - Possibly carcinogenic to humans
 - Group 3 - Not classifiable as to its carcinogenicity to humans
 - Group 4 - Probably not carcinogenic to humans

(Contd. on page 6)

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OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 06/21/2020

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None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

- **Toxicity:** The hazards for the aquatic environment are unknown.
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.
- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

*13 Disposal Considerations

- **Waste treatment methods**
- **Recommendation:**
Release all residual gas pressure in a well ventilated area. Verify the cylinder is completely empty (0 PSIG). Remove or cover any hazard labels. Return empty cylinder for recycling.
NOTE: Check with the local waste authority before placing any gas cylinder into waste container for pickup. GASCO encourages the consumer to return all cylinders.
- **Waste disposal key:** The U.S. EPA has not published waste numbers for this product's components.
- **Uncleaned packaging**
- **Recommendation:** Return cylinder and unused product to supplier.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, IMDG, IATA** UN1956
- **UN proper shipping name:**
- **DOT, IATA** Compressed gas, n.o.s.
- **ADR/ADN** UN1956 Compressed gas, n.o.s.
- **IMDG** COMPRESSED GAS, N.O.S.
- **Transport hazard class(es):**
- **DOT**



- **Class:** 2.2

(Contd. on page 7)

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OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 06/21/2020

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Trade Name: Precision Calibration Gas Mixture· **Label:** 2.2· **ADR/ADN**· **Class:** 2.2 1A· **Label:** 2.2· **IMDG, IATA**· **Class:** 2.2· **Label:** 2.2· **Packing group:** -· **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material· **Environmental hazards:** Not applicable.· **Special precautions for user:** Not applicable.· **Hazard identification number (Kemler code):** 20· **EMS Number:** F-C,S-V· **Stowage Category** A· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.· **Transport/Additional information:**· **DOT**· **Quantity limitations:** On passenger aircraft/rail: 75 kg
On cargo aircraft only: 150 kg· **ADR/ADN**· **Excepted quantities (EQ):** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml· **IMDG**· **Limited quantities (LQ):** 120 ml· **Excepted quantities (EQ):** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml· **UN "Model Regulation":** UN 1956 COMPRESSED GAS, N.O.S., 2.2**15 Regulatory Information**· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA (Superfund Amendments and Reauthorization):**· **Section 355 (extremely hazardous substances):**

7783-06-4 Hydrogen Sulfide

· **Section 313 (Specific toxic chemical listings):**

7783-06-4 Hydrogen Sulfide

(Contd. on page 8)


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| | |
|---|--|
| · TSCA (Toxic Substances Control Act): | |
| 7727-37-9 | Nitrogen |
| 7782-44-7 | Oxygen |
| 74-82-8 | Methane |
| 630-08-0 | Carbon Monoxide |
| 7783-06-4 | Hydrogen Sulfide |
| · California Proposition 65: | |
| · Chemicals known to cause cancer: | |
| None of the ingredients are listed. | |
| · Chemicals known to cause reproductive toxicity for females: | |
| None of the ingredients are listed. | |
| · Chemicals known to cause reproductive toxicity for males: | |
| None of the ingredients are listed. | |
| · Chemicals known to cause developmental toxicity: | |
| 630-08-0 | Carbon Monoxide |
| · Carcinogenic categories: | |
| · EPA (Environmental Protection Agency): | |
| 7783-06-4 | Hydrogen Sulfide |
| · TLV (Threshold Limit Value established by ACGIH): | |
| None of the ingredients are listed. | |
| · NIOSH-Ca (National Institute for Occupational Safety and Health): | |
| None of the ingredients are listed. | |
| · GHS label elements | |
| The product is classified and labeled according to the Globally Harmonized System (GHS). | |
| · Hazard pictograms: | |
|  | |
| · Signal word: Warning | |
| · Hazard statements: | |
| H280 Contains gas under pressure; may explode if heated. | |
| H332 Harmful if inhaled. | |
| · Precautionary statements: | |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P312 | Call a poison center/doctor if you feel unwell. |
| P410+P403 | Protect from sunlight. Store in a well-ventilated place. |
| · National regulations: | |
| None of the ingredients are listed. | |
| · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. | |

(Contd. on page 9)

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Issue date 06/21/2020

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* 16 Other Information

· **Relevant phrases:**

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· **Date of last revision/ revision number:** 06/21/2020 / -

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety and Health
 OSHA: Occupational Safety & Health Administration
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 Flam. Gas 1: Flammable gases – Category 1
 Oxid. Gas 1: Oxidizing gases – Category 1
 Press. Gas: Gases under pressure – Compressed gas
 Press. Gas: Gases under pressure – Dissolved gas
 Acute Tox. 2: Acute toxicity – Category 2
 Acute Tox. 4: Acute toxicity – Category 4
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

· *** Data compared to the previous version altered.**

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