



## Section 2. Hazards identification

### 2.2 GHS label elements

#### Hazard pictograms

: Praxair RGA Calibration Mix Cylinders



Universal Gas Mix



#### Signal word

: Praxair RGA Calibration Mix Cylinders  
Universal Gas Mix

Danger

Danger

#### Hazard statements

: Praxair RGA Calibration Mix Cylinders

H220 - Extremely flammable gas.

H280 - Contains gas under pressure; may explode if heated.

H340 - May cause genetic defects.

H350 - May cause cancer.

H360 - May damage fertility or the unborn child.

H372 - Causes damage to organs through prolonged or repeated exposure.

May displace oxygen and cause rapid suffocation.

Universal Gas Mix

H220 - Extremely flammable gas.

H280 - Contains gas under pressure; may explode if heated.

H360 - May damage fertility or the unborn child.

May displace oxygen and cause rapid suffocation.

### Precautionary statements

#### Prevention

: Praxair RGA Calibration Mix Cylinders

P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 - Do not breathe gas.

P270 - Do not eat, drink or smoke when using this product.

Universal Gas Mix

P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

#### Response

: Praxair RGA Calibration Mix Cylinders

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - In case of leakage, eliminate all ignition sources.

P308 + P313 - IF exposed or concerned: Get medical advice or attention.

Universal Gas Mix

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - In case of leakage, eliminate all ignition sources.

P308 + P313 - IF exposed or concerned: Get

## Section 2. Hazards identification

<b>Storage</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	medical advice or attention. P403 - Store in a well-ventilated place. P403 - Store in a well-ventilated place.
<b>Disposal</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Keep container tightly closed. Use only with adequate ventilation. Do not enter storage areas and confined spaces unless adequately ventilated. Keep container tightly closed. Use only with adequate ventilation. Do not enter storage areas and confined spaces unless adequately ventilated.
<b>2.3 Other hazards</b>		
<b>Hazards not otherwise classified</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	None known. None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Mixture Mixture
--------------------------	--	--------------------

Ingredient name	%	CAS number
<b>Praxair RGA Calibration Mix Cylinders</b>		
Ethylene	≤3	74-85-1
Carbon monoxide	≤3	630-08-0
Acetylene	≤3	74-86-2
Propyne	≤3	74-99-7
1,3-Butadiene	≤1	106-99-0
<b>Universal Gas Mix</b>		
Carbon monoxide	≤0.2	630-08-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	: Praxair RGA Calibration Mix Cylinders	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
	Universal Gas Mix	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
<b>Inhalation</b>	: Praxair RGA Calibration Mix Cylinders	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Universal Gas Mix	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	: Praxair RGA Calibration Mix Cylinders	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Universal Gas Mix	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Section 4. First aid measures

<b>Ingestion</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	As this product is a gas, refer to the inhalation section. As this product is a gas, refer to the inhalation section.
------------------	---	--

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Contact with rapidly expanding gas may cause burns or frostbite. Contact with rapidly expanding gas may cause burns or frostbite.
<b>Inhalation</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
<b>Skin contact</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Contact with rapidly expanding gas may cause burns or frostbite. Contact with rapidly expanding gas may cause burns or frostbite.
<b>Ingestion</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	As this product is a gas, refer to the inhalation section. As this product is a gas, refer to the inhalation section.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	No specific data.  No specific data.
<b>Inhalation</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	Adverse symptoms may include the following:  reduced fetal weight increase in fetal deaths skeletal malformations Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
<b>Skin contact</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	Adverse symptoms may include the following:  reduced fetal weight increase in fetal deaths skeletal malformations Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
<b>Ingestion</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	Adverse symptoms may include the following:  reduced fetal weight increase in fetal deaths skeletal malformations Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

## Section 4. First aid measures

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	No specific treatment.  No specific treatment.
<b>Protection of first-aiders</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.  No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	None known.  None known.

### 5.2 Special hazards arising from the substance or mixture

<b>Specific hazards arising from the chemical</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
---	---	--

## Section 5. Fire-fighting measures

<b>Hazardous thermal decomposition products</b>	: Praxair RGA Calibration Mix Cylinders	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
	Universal Gas Mix	Decomposition products may include the following materials: carbon dioxide carbon monoxide

### 5.3 Advice for firefighters

<b>Special protective actions for fire-fighters</b>	: Praxair RGA Calibration Mix Cylinders	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.
	Universal Gas Mix	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.
<b>Special protective equipment for fire-fighters</b>	: Praxair RGA Calibration Mix Cylinders	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Universal Gas Mix	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	: Praxair RGA Calibration Mix Cylinders	Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Universal Gas Mix	Accidental releases pose a serious fire or

## Section 6. Accidental release measures

		<p>explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.</p>
<p><b>For emergency responders</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p> <p>Universal Gas Mix</p>	<p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p>
<p><b>6.2 Environmental precautions</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p> <p>Universal Gas Mix</p>	<p>Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p> <p>Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</p>
<p><b>6.3 Methods and materials for containment and cleaning up</b></p> <p><b>Methods for cleaning up</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p> <p>Universal Gas Mix</p>	<p>Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.</p> <p>Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.</p>

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

<p><b>Protective measures</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p>	<p>Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain</p>
-----------------------------------	--	---



## Section 7. Handling and storage

	<p>Universal Gas Mix</p>	<p>product residue and can be hazardous. Do not puncture or incinerate container. Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container.</p>
<p><b>Advice on general occupational hygiene</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p> <p>Universal Gas Mix</p>	<p>Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p>
<p><b>7.2 Conditions for safe storage, including any incompatibilities</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p> <p>Universal Gas Mix</p>	<p>Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.</p> <p>Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.</p>
<p><b>7.3 Specific end use(s) Recommendations</b></p>	<p>: Praxair RGA Calibration Mix Cylinders</p> <p>Universal Gas Mix</p>	<p>Industrial applications, Professional applications.</p> <p>Industrial applications, Professional applications.</p>

## Section 7. Handling and storage

<b>Industrial sector specific solutions</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Not available.
---	--	----------------------------------

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>Praxair RGA Calibration Mix Cylinders</b> Ethylene  Carbon monoxide	<b>ACGIH TLV (United States, 1/2022).</b> TWA: 200 ppm 8 hours. <b>ACGIH TLV (United States, 1/2022).</b> TWA: 25 ppm 8 hours. TWA: 29 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 35 ppm 8 hours. TWA: 40 mg/m <sup>3</sup> 8 hours. CEIL: 200 ppm CEIL: 229 mg/m <sup>3</sup> <b>NIOSH REL (United States, 10/2020).</b> TWA: 35 ppm 10 hours. TWA: 40 mg/m <sup>3</sup> 10 hours. CEIL: 200 ppm CEIL: 229 mg/m <sup>3</sup> <b>OSHA PEL (United States, 5/2018).</b> TWA: 50 ppm 8 hours. TWA: 55 mg/m <sup>3</sup> 8 hours. <b>CAL OSHA PEL (United States, 5/2018).</b> C: 200 ppm TWA: 29 mg/m <sup>3</sup> 8 hours. TWA: 25 ppm 8 hours.
Acetylene	<b>ACGIH TLV (United States, 1/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.</b>  <b>NIOSH REL (United States, 10/2020).</b> CEIL: 2500 ppm CEIL: 2662 mg/m <sup>3</sup> <b>ACGIH TLV (United States, 1/2022).</b> <b>Explosive potential.</b> TWA: 1640 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>NIOSH REL (United States, 10/2020).</b> TWA: 1650 mg/m <sup>3</sup> 10 hours. TWA: 1000 ppm 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1650 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1650 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>CAL OSHA PEL (United States, 5/2018).</b> TWA: 1650 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours.
Propyne	<b>ACGIH TLV (United States, 1/2022).</b> TWA: 2 ppm 8 hours. TWA: 4.4 mg/m <sup>3</sup> 8 hours.
1,3-Butadiene	<b>ACGIH TLV (United States, 1/2022).</b> TWA: 2 ppm 8 hours. TWA: 4.4 mg/m <sup>3</sup> 8 hours.

## Section 8. Exposure controls/personal protection

<p><b>Universal Gas Mix</b> Carbon monoxide</p>	<p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.</p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.</p> <p><b>CAL OSHA PEL (United States, 5/2018).</b> STEL: 11 mg/m<sup>3</sup> 15 minutes. STEL: 5 ppm 15 minutes. TWA: 2.2 mg/m<sup>3</sup> 8 hours. TWA: 1 ppm 8 hours.</p> <p><b>ACGIH TLV (United States, 1/2022).</b> TWA: 25 ppm 8 hours. TWA: 29 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 35 ppm 8 hours. TWA: 40 mg/m<sup>3</sup> 8 hours. CEIL: 200 ppm CEIL: 229 mg/m<sup>3</sup></p> <p><b>NIOSH REL (United States, 10/2020).</b> TWA: 35 ppm 10 hours. TWA: 40 mg/m<sup>3</sup> 10 hours. CEIL: 200 ppm CEIL: 229 mg/m<sup>3</sup></p> <p><b>OSHA PEL (United States, 5/2018).</b> TWA: 50 ppm 8 hours. TWA: 55 mg/m<sup>3</sup> 8 hours.</p> <p><b>CAL OSHA PEL (United States, 5/2018).</b> C: 200 ppm TWA: 29 mg/m<sup>3</sup> 8 hours. TWA: 25 ppm 8 hours.</p>
---	---

### [Biological exposure indices](#)

Ingredient name	Exposure indices
<p><b>Praxair RGA Calibration Mix Cylinders</b></p> <p>Carbon monoxide</p> <p>1,3-Butadiene</p>	<p><b>ACGIH BEI (United States, 1/2022)</b> BEI: 3.5 % of hemoglobin, carboxyhemoglobin [in blood]. Sampling time: end of shift. BEI: 20 ppm, carbon monoxide [in end-exhaled air]. Sampling time: end of shift.</p> <p><b>ACGIH BEI (United States, 1/2022)</b> BEI: 2.5 mg/l [Semi-quantitative: The determinant is an indicator of exposure to the chemical, but the quantitative interpretation of the measurement is ambiguous. These determinants should be used as a screening test if a quantitative test is not practical or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], 1,2 dihydroxy-4-(N-acetylcysteinyl)-butane [in urine]. Sampling time: end of shift. BEI: 2.5 pmol/g hemoglobin [Semi-quantitative: The determinant is an indicator of</p>

## Section 8. Exposure controls/personal protection

<p><b>Universal Gas Mix</b></p> <p>Carbon monoxide</p>	<p>exposure to the chemical, but the quantitative interpretation of the measurement is ambiguous. These determinants should be used as a screening test if a quantitative test is not practical or as a confirmatory test if the quantitative test is not specific and the origin of the determinant is in question.], mixture of N-1- and N-2-(hydroxybutenyl)valine hemoglobin (Hb) adducts [in blood]. Sampling time: not critical.</p> <p><b>ACGIH BEI (United States, 1/2022)</b>                  BEI: 3.5 % of hemoglobin, carboxyhemoglobin [in blood]. Sampling time: end of shift.                  BEI: 20 ppm, carbon monoxide [in end-exhaled air]. Sampling time: end of shift.</p>
--	---

### 8.2 Exposure controls

#### Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

##### Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

##### Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

## Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

<b>Physical state</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Gas. Gas.
<b>Color</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Colorless.
<b>Odor</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Odorless.
<b>Odor threshold</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Not available.
<b>pH</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not applicable. Not applicable.
<b>Melting point/freezing point</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not applicable. Not applicable.
<b>Boiling point, initial boiling point, and boiling range</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Not available.
<b>Flash point</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not applicable. Closed cup: -188°C (-306.4°F)
<b>Evaporation rate</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Not available.
<b>Flammability</b>	: Praxair RGA Calibration Mix Cylinders  Universal Gas Mix	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
<b>Lower and upper explosion limit/flammability limit</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Lower: 5% Upper: 15.4%
<b>Vapor pressure</b>	: Not available.	
<b>Relative vapor density</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Not available. Not available.

## Section 9. Physical and chemical properties and safety characteristics

<b>Relative density</b>	: Praxair RGA Calibration Mix Cylinders	Not applicable.
	: Universal Gas Mix	Not applicable.
<b>Solubility(ies)</b>	: Not available.	
<b>Partition coefficient: n-octanol/water</b>	: Praxair RGA Calibration Mix Cylinders	Not applicable.
	: Universal Gas Mix	Not applicable.
<b>Auto-ignition temperature</b>	: Universal Gas Mix	540°C (1004°F)

Ingredient name	°C	°F	Method
<b>Praxair RGA Calibration Mix Cylinders</b>			
Methane	287	548.6	-
Ethane	287	548.6	-

<b>Decomposition temperature</b>	: Praxair RGA Calibration Mix Cylinders	Not available.
	: Universal Gas Mix	Not available.
<b>Viscosity</b>	: Praxair RGA Calibration Mix Cylinders	Not applicable.
	: Universal Gas Mix	Not applicable.

### Particle characteristics

<b>Median particle size</b>	: Praxair RGA Calibration Mix Cylinders	Not applicable.
	: Universal Gas Mix	Not applicable.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: Praxair RGA Calibration Mix Cylinders	No specific test data related to reactivity available for this product or its ingredients.
	: Universal Gas Mix	No specific test data related to reactivity available for this product or its ingredients.

<b>10.2 Chemical stability</b>	: Praxair RGA Calibration Mix Cylinders	The product is stable.
	: Universal Gas Mix	The product is stable.

<b>10.3 Possibility of hazardous reactions</b>	: Praxair RGA Calibration Mix Cylinders	Under normal conditions of storage and use, hazardous reactions will not occur.
	: Universal Gas Mix	Under normal conditions of storage and use, hazardous reactions will not occur.

<b>10.4 Conditions to avoid</b>	: Praxair RGA Calibration Mix Cylinders	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.
	: Universal Gas Mix	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.

## Section 10. Stability and reactivity

**10.5 Incompatible materials** : Praxair RGA Calibration Mix Cylinders  
 Universal Gas Mix  
 May react or be incompatible with oxidizing materials.  
 May react or be incompatible with oxidizing materials.

**10.6 Hazardous decomposition products** : Praxair RGA Calibration Mix Cylinders  
 Universal Gas Mix  
 Under normal conditions of storage and use, hazardous decomposition products should not be produced.  
 Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	
<b>Praxair RGA Calibration Mix Cylinders</b> Carbon monoxide	LC50 Inhalation Gas.	Rat	1900 mg/m <sup>3</sup>	4 hours	
	LC50 Inhalation Gas.	Rat	1807 ppm	4 hours	
	1,3-Butadiene	LC50 Inhalation Gas.	Rat	128000 ppm	4 hours
		LC50 Inhalation Vapor	Rat	285 g/m <sup>3</sup>	4 hours
		LD50 Oral	Rat	5480 mg/kg	-
<b>Universal Gas Mix</b> Carbon monoxide	LC50 Inhalation Gas.	Rat	1900 mg/m <sup>3</sup>	4 hours	
	LC50 Inhalation Gas.	Rat	1807 ppm	4 hours	

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
<b>Praxair RGA Calibration Mix Cylinders</b> Ethylene	-	3	-
	-	1	Known to be a human carcinogen.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
<b>Praxair RGA Calibration Mix Cylinders</b> Ethylene Acetylene Propyne	Category 3 Category 3 Category 3	- - -	Narcotic effects Narcotic effects Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>Praxair RGA Calibration Mix Cylinders</b> Carbon monoxide	Category 1	inhalation	heart
<b>Universal Gas Mix</b> Carbon monoxide	Category 1	inhalation	heart

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Praxair RGA Calibration Mix Cylinders Routes of entry anticipated: Inhalation.  
Universal Gas Mix Routes of entry anticipated: Inhalation.

### Potential acute health effects

**Eye contact** : Praxair RGA Calibration Mix Cylinders Contact with rapidly expanding gas may cause burns or frostbite.  
Universal Gas Mix Contact with rapidly expanding gas may cause burns or frostbite.

**Inhalation** : Praxair RGA Calibration Mix Cylinders At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.  
Universal Gas Mix At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

**Skin contact** : Praxair RGA Calibration Mix Cylinders Contact with rapidly expanding gas may cause burns or frostbite.  
Universal Gas Mix Contact with rapidly expanding gas may cause burns or frostbite.

**Ingestion** : Praxair RGA Calibration Mix Cylinders As this product is a gas, refer to the inhalation section.  
Universal Gas Mix As this product is a gas, refer to the inhalation section.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Praxair RGA Calibration Mix Cylinders No specific data.  
Universal Gas Mix No specific data.

**Inhalation** : Praxair RGA Calibration Mix Cylinders Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
Universal Gas Mix Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations



## Section 11. Toxicological information

<b>Skin contact</b>	: Praxair RGA Calibration Mix Cylinders	Adverse symptoms may include the following:  reduced fetal weight increase in fetal deaths skeletal malformations
	Universal Gas Mix	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
<b>Ingestion</b>	: Praxair RGA Calibration Mix Cylinders	Adverse symptoms may include the following:  reduced fetal weight increase in fetal deaths skeletal malformations
	Universal Gas Mix	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

<b>General</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	Causes damage to organs through prolonged or repeated exposure. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	May cause cancer. Risk of cancer depends on duration and level of exposure. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	May cause genetic defects.  No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: Praxair RGA Calibration Mix Cylinders Universal Gas Mix	May damage fertility or the unborn child.  May damage fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)

## Section 11. Toxicological information

<b>Praxair RGA Calibration Mix Cylinders</b>					
Praxair RGA Calibration Mix Cylinders	N/A	N/A	128297.0	N/A	N/A
Carbon monoxide	N/A	N/A	1807	N/A	N/A
1,3-Butadiene	5480	N/A	128000	285	N/A
<b>Universal Gas Mix</b>					
Carbon monoxide	N/A	N/A	1807	N/A	N/A

## Section 12. Ecological information

### 12.1 Toxicity

Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>Praxair RGA Calibration Mix Cylinders</b> Acetylene	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>Praxair RGA Calibration Mix Cylinders</b>			
Ethylene	1.13	-	Low
Acetylene	0.37	-	Low
Propyne	0.94	-	Low
1,3-Butadiene	1.99	-	Low

### 12.4 Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.






## Section 13. Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	UN1954	UN1954	UN1954	UN1954	UN1954
<b>UN proper shipping name</b>	Compressed gas, flammable, n.o.s. (Hydrogen, Methane)	COMPRESSED GAS, FLAMMABLE, N. O.S. (Hydrogen, Methane)	GAS COMPRIMIDO INFLAMABLE, N. E.P. (Hydrogen, Methane)	COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Methane)	Compressed gas, flammable, n.o.s. (Hydrogen, Methane)
<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.

### Additional information

#### DOT Classification

: **Reportable quantity** 6666.7 lbs / 3026.7 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

**Limited quantity** Yes.

**Packaging instruction** Exceptions: 306. Non-bulk: 302, 305. Bulk: 314, 315.

**Quantity limitation** Passenger aircraft/rail: Forbidden. Cargo aircraft: 150 kg.

#### TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).

**Explosive Limit and Limited Quantity Index** 0.125

**ERAP Index** 3000

**Passenger Carrying Vessel Index** Forbidden

**Passenger Carrying Road or Rail Index** Forbidden

**Special provisions** 16

#### Mexico Classification

: **Special provisions** 274

#### IMDG

: **Emergency schedules** F-D, S-U

**Special provisions** 274, 392

#### IATA

: **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Packaging instructions: Forbidden. Cargo Aircraft Only: 150 kg. Packaging instructions: 200. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.

**Special provisions** A1, A807

## Section 14. Transport information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**U.S. Federal regulations** : **TSCA 8(a) PAIR:** pentane; Heptane  
**TSCA 8(a) CDR Exempt/Partial exemption:** Not determined  
 **Clean Air Act (CAA) 112 regulated flammable substances:** Methane; Hydrogen; Ethane; Ethylene; Propane

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

#### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

#### SARA 311/312

<b>Classification</b>	: Praxair RGA Calibration Mix Cylinders	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS GERM CELL MUTAGENICITY - Category 1 CARCINOGENICITY - Category 1A TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE)- Category 1 FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS TOXIC TO REPRODUCTION - Category 1A
	Universal Gas Mix	

#### Composition/information on ingredients

Name	%	Classification
<b>Praxair RGA Calibration Mix Cylinders</b>		
Nitrogen	≥50 - ≤75	GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Hydrogen	≥10 - ≤25	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Methane	≤10	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Ethane	≤5	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS

## Section 15. Regulatory information

Carbon dioxide	≤5	GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Ethylene	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Propane	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Carbon monoxide	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS ACUTE TOXICITY (inhalation) - Category 3 TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
Acetylene	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Propyne	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Propylene	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Allene	≤3	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
1,3-Butadiene	≤1	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A
<b>Universal Gas Mix</b>		
Methane	≥90	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS
Carbon monoxide	≤0.2	FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS ACUTE TOXICITY (inhalation) - Category 3 TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	<b>Praxair RGA Calibration Mix Cylinders</b>		
	Ethylene	74-85-1	≤3
	Propylene	115-07-1	≤3
	1,3-Butadiene	106-99-0	≤1
<b>Supplier notification</b>	<b>Praxair RGA Calibration Mix Cylinders</b>		
	Ethylene	74-85-1	≤3
	Propylene	115-07-1	≤3
	1,3-Butadiene	106-99-0	≤1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

#### Massachusetts

: The following components are listed: METHANE; NITROGEN; HYDROGEN; ETHANE; CARBON DIOXIDE; ETHYLENE; PROPANE

#### New York

: None of the components are listed.

#### New Jersey

: The following components are listed: METHANE; NITROGEN; HYDROGEN; ETHANE; CARBON DIOXIDE; ETHYLENE; PROPANE; CARBON MONOXIDE; 1,3-BUTADIENE

## Section 15. Regulatory information

**Pennsylvania** : The following components are listed: METHANE; NITROGEN; HYDROGEN; ETHANE; CARBON DIOXIDE; ETHENE; PROPANE

### California Prop. 65

**⚠ WARNING:** This product can expose you to chemicals including 1,3-butadiene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Carbon monoxide and n-hexane, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
<b>Praxair RGA Calibration Mix Cylinders</b> Carbon monoxide 1,3-butadiene n-hexane	- Yes. -	- - Yes.
<b>Universal Gas Mix</b> Carbon monoxide n-hexane	- -	- Yes.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : Not determined.  
**Canada** : All components are listed or exempted.  
**China** : Not determined.  
**Japan** : **Japan inventory (CSCL):** Not determined.  
**Japan inventory (ISHL):** All components are listed or exempted.  
**New Zealand** : Not determined.  
**Philippines** : Not determined.  
**Republic of Korea** : All components are listed or exempted.  
**Taiwan** : All components are listed or exempted.  
**Thailand** : All components are listed or exempted.  
**Turkey** : Not determined.  
**United States** : All components are active or exempted.  
**Viet Nam** : All components are listed or exempted.

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
<b>Praxair RGA Calibration Mix Cylinders</b> FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS GERM CELL MUTAGENICITY - Category 1 CARCINOGENICITY - Category 1A TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method On basis of test data Expert judgment Calculation method Calculation method Calculation method Calculation method
<b>Universal Gas Mix</b> FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Compressed gas SIMPLE ASPHYXIANTS TOXIC TO REPRODUCTION - Category 1A	On basis of test data On basis of test data Expert judgment Calculation method

### History

**Date of issue/Date of revision** : 06/29/2023

**Date of previous issue** : 06/28/2020

**Version** : 7

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 UN = United Nations

☑ Indicates information that has changed from previously issued version.

### Notice to reader

**Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.**