Section 1. Identification

Product identifier : RGA Checkout Sample with Argon, Part Number 5190-0519
Part No. : 5190-0519

Relevant identified uses of the substance or mixture and uses advised against
Analytical chemistry.
Cylinder

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

H220  FLAMMABLE GASES - Category 1
H280  GASES UNDER PRESSURE - Compressed gas
H340  GERM CELL MUTAGENICITY - Category 1B
H350  CARCINOGENICITY - Category 1A
H360  TOXIC TO REPRODUCTION (Unborn child) - Category 1A
H373  SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5.5%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5.5%

GHS label elements

Hazard pictograms : 

Signal word : DANGER

Hazard statements : 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 the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 - Do not breathe gas.
Section 2. Hazard(s) identification

Response:
P314 - Get medical attention if you feel unwell.
P308 + P313 - IF exposed or concerned: Get medical attention.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.

Storage:
P405 - Store locked up.
P410 - Protect from sunlight.
P403 - Store in a well-ventilated place.

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification:
Acts as a simple asphyxiant. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

Section 3. Composition and ingredient information

Substance/mixture: Mixture

CAS number/other identifiers:

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>(v/v)</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon dioxide</td>
<td>≤5</td>
<td>124-38-9</td>
</tr>
<tr>
<td>Ethylene</td>
<td>≤3</td>
<td>74-85-1</td>
</tr>
<tr>
<td>Propane</td>
<td>≤3</td>
<td>74-98-6</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>≤3</td>
<td>630-08-0</td>
</tr>
<tr>
<td>Propylene</td>
<td>≤3</td>
<td>115-07-1</td>
</tr>
<tr>
<td>Propyne</td>
<td>≤3</td>
<td>74-99-7</td>
</tr>
<tr>
<td>Isobutane</td>
<td>≤1</td>
<td>75-28-5</td>
</tr>
<tr>
<td>Butane</td>
<td>≤1</td>
<td>106-97-8</td>
</tr>
<tr>
<td>But-1-ene</td>
<td>≤1</td>
<td>106-98-9</td>
</tr>
<tr>
<td>2-Methylpropene</td>
<td>≤1</td>
<td>115-11-7</td>
</tr>
<tr>
<td>(E)-But-2-ene</td>
<td>≤1</td>
<td>624-64-6</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>≤1</td>
<td>106-99-0</td>
</tr>
<tr>
<td>(Z)-But-2-ene</td>
<td>≤1</td>
<td>590-18-1</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures:

Eye contact:
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.

Inhalation:
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.
Section 4. First aid measures

Skin contact: 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.

Ingestion: As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation: At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

Skin contact: Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion: As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact: No specific data.

Inhalation: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Skin contact: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

Ingestion: Adverse symptoms may include the following:
- reduced foetal weight
- increase in foetal deaths
- skeletal malformations

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

Notes to physician: 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.

Specific treatments: No specific treatment.

Protection of first-aiders: 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. Firefighting measures

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: 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.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- carbon dioxide
- carbon monoxide
- nitrogen oxides
Section 5. Firefighting measures

Special protective actions for fire-fighters: 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.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Hazchem code: 2SE

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: 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.

For emergency responders: If specialised 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".

Environmental precautions: 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).

Methods and material for containment and cleaning up

Methods for cleaning up: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: 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 product residue and can be hazardous. Do not puncture or incinerate container.

Advice on general occupational hygiene: 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.

Conditions for safe storage, including any incompatibilities: Do not store above the following temperature: 51.667°C (125°F). 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.
Section 8. Exposure controls and personal protection

**Control parameters**

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
</table>
| Carbon dioxide  | Safe Work Australia (Australia, 1/2014).  
|                 | STEL: 54000 mg/m³ 15 minutes.  
|                 | STEL: 30000 ppm 15 minutes.  
|                 | TWA: 9000 mg/m³ 8 hours.  
|                 | TWA: 5000 ppm 8 hours.  
| Ethylene        | ACGIH TLV (United States, 3/2015).  
|                 | TWA: 200 ppm 8 hours.  
| Propane         | TRGS900 AGW (Germany, 3/2015).  
|                 | PEAK: 7200 mg/m³ 15 minutes.  
|                 | PEAK: 4000 ppm 15 minutes.  
|                 | TWA: 1800 mg/m³ 8 hours.  
|                 | TWA: 1000 ppm 8 hours.  
| Carbon monoxide | Safe Work Australia (Australia, 1/2014).  
|                 | TWA: 34 mg/m³ 8 hours.  
|                 | TWA: 30 ppm 8 hours.  
| Propylene       | ACGIH TLV (United States, 3/2015).  
|                 | TWA: 500 ppm 8 hours.  
| Propyne         | Safe Work Australia (Australia, 1/2014).  
|                 | TWA: 1640 mg/m³ 8 hours.  
|                 | TWA: 1000 ppm 8 hours.  
| Isobutane       | ACGIH TLV (United States, 3/2015).  
|                 | STEL: 1000 ppm 15 minutes.  
| Butane          | Safe Work Australia (Australia, 1/2014).  
|                 | TWA: 1900 mg/m³ 8 hours.  
|                 | TWA: 800 ppm 8 hours.  
| But-1-ene       | ACGIH TLV (United States, 3/2015).  
|                 | TWA: 250 ppm 8 hours.  
| 2-Methylpropene | ACGIH TLV (United States, 3/2015).  
|                 | TWA: 250 ppm 8 hours.  
| (E)-But-2-ene   | ACGIH TLV (United States, 3/2015).  
|                 | TWA: 250 ppm 8 hours.  
| 1,3-Butadiene   | Safe Work Australia (Australia, 1/2014).  
|                 | TWA: 22 mg/m³ 8 hours.  
|                 | TWA: 10 ppm 8 hours.  
| (Z)-But-2-ene   | ACGIH TLV (United States, 3/2015).  
|                 | TWA: 250 ppm 8 hours.  

**Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**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.
Section 8. Exposure controls and personal protection

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.

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: The gas can cause asphyxiation without warning by replacing the oxygen in the air. Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. If operating conditions cause high gas concentrations to be produced or any recommended or statutory exposure limit is exceeded, use an air-fed respirator or self-contained breathing apparatus. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Physical state: Gas.
Colour: Colourless.
Odour: Not available.
Odour threshold: Not available.
pH: Not available.
Melting point: Not available.
Boiling point: Not available.
Flash point: Not available.
Evaporation rate: Not available.
Flammability (solid, gas): Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Lower and upper explosive (flammable) limits: Not available.
Vapour pressure: Not available.
Vapour density: Not available.
Relative density: 1 [Air = 1]
Density: 1 g/cm³ [21.1°C (70°F)]
Solubility: Not available.
Partition coefficient: n-octanol/water: Not available.
Auto-ignition temperature: Not available.
Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous reactions: Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions to avoid: Avoid all possible sources of ignition (spark or flame). Do not pressurise, 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.

Incompatible materials: May react or be incompatible with oxidising materials.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>1900 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Gas.</td>
<td>Rat</td>
<td>1807 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>Isobutane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>658000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>Butane</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>658000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>2-Methylpropene</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>550000 mg/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>285 g/m³</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>128000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5480 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

Not available.

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)
Section 11. Toxicological information

### RGA Checkout Sample with Argon, Part Number 5190-0519

#### Information on likely routes of exposure

**Inhalation:**
At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen. As this product is a gas, refer to the inhalation section.

**Ingestion:**

**Skin contact:**
Contact with rapidly expanding gas may cause burns or frostbite.

**Eye contact:**
May cause damage to organs through prolonged or repeated exposure.

### Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Narcotic effects</td>
</tr>
<tr>
<td>Propyne</td>
<td>Category 3</td>
<td>Not applicable.</td>
<td>Respiratory tract irritation and Narcotic effects</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>Category 1</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Aspiration hazard**
Not available.

### Potential acute health effects

**Eye contact**
Contact with rapidly expanding gas may cause burns or frostbite.

**Inhalation**
At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.

**Skin contact**
Contact with rapidly expanding gas may cause burns or frostbite.

**Ingestion**
As this product is a gas, refer to the inhalation section.

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

**Eye contact**
No specific data.

**Inhalation**
Adverse symptoms may include the following: reduced foetal weight, increase in foetal deaths, skeletal malformations.

**Skin contact**
Adverse symptoms may include the following: reduced foetal weight, increase in foetal deaths, skeletal malformations.

**Ingestion**
Adverse symptoms may include the following: reduced foetal weight, increase in foetal deaths, skeletal malformations.

### Delayed and immediate effects as well as 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

**General**
May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity**
May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity**
May cause genetic defects.

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**Date of issue/Date of revision:** 31/05/2016  **Date of previous issue:** 22/09/2014  **Version:** 4
Section 11. Toxicological information

Teratogenicity: May damage the unborn child.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation (gases)</td>
<td>120466.7 ppm</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

Toxicity
Not available.

Persistence and degradability
Not available.

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon dioxide</td>
<td>0.83</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Ethylene</td>
<td>1.13</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Propane</td>
<td>1.09</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Propylene</td>
<td>1.77</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Propane</td>
<td>0.94</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Isobutane</td>
<td>2.8</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Butane</td>
<td>2.89</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>But-1-ene</td>
<td>2.4</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>2-Methylpropene</td>
<td>2.34</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>(E)-But-2-ene</td>
<td>2.31</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>1,3-Butadiene</td>
<td>1.99</td>
<td>10</td>
<td>low</td>
</tr>
<tr>
<td>(Z)-But-2-ene</td>
<td>2.33</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

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

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

Section 13. Disposal considerations

Disposal methods
The generation of waste should be avoided or minimised 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. Empty pressure vessels should be returned to the supplier. 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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.
### Section 14. Transport information

<table>
<thead>
<tr>
<th>Additional information</th>
<th>ADG</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UN number</strong></td>
<td>UN1954</td>
<td>UN1954</td>
<td>UN1954</td>
</tr>
<tr>
<td><strong>UN proper shipping name</strong></td>
<td>COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Methane)</td>
<td>COMPRESSED GAS, FLAMMABLE, N.O.S. (Hydrogen, Methane)</td>
<td>Compressed gas, flammable, n.o.s. (Hydrogen, Methane)</td>
</tr>
<tr>
<td><strong>Transport hazard class(es)</strong></td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Packing group</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Environmental hazards</strong></td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>
| **Additional information**                  | Hazchem code: 2SE  
Special provisions: 274 | Emergency schedules (EmS): F-D, S-U  
Special provisions: 274 | Passenger and Cargo Aircraft: Quantity limitation: Forbidden  
Packaging instructions: Forbidden  
Cargo Aircraft Only: Quantity limitation: 150 kg  
Packaging instructions: 200 Limited Quantities - Passenger Aircraft: Quantity limitation: Forbidden  
Packaging instructions: Forbidden  
Special provisions A1  
Remarks: Requires Shipper’s Declaration of Dangerous Goods |

#### 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 knows what to do in the event of an accident or spillage.

#### Transport in bulk according to Annex II of Marpol and the IBC Code
- Not available.

### Section 15. Regulatory information

**Standard Uniform Schedule of Medicine and Poisons**
- Not regulated.

**Model Work Health and Safety Regulations - Scheduled Substances**
- No listed substance

**Australia inventory (AICS)**
- Not determined.

**International regulations**
- Not determined.

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**Version**: 4  
**10/12**
Section 15. Regulatory information

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)
Not listed.

Stockholm Convention on Persistent Organic Pollutants
Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)
Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals
Not listed.

International lists

National inventory

Canada: All components are listed or exempted.
China: Not determined.
Europe: All components are listed or exempted.
Japan:
  Japan inventory (ENCS): Not determined.
  Japan inventory (ISHL): Not determined.
Malaysia: Not determined.
New Zealand: Not determined.
Philippines: Not determined.
Republic of Korea: All components are listed or exempted.
Taiwan: All components are listed or exempted.
Turkey: Not determined.
United States: All components are listed or exempted.

Section 16. Any other relevant information

History

Date of issue/Date of revision: 31/05/2016
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Version: 4

Key to abbreviations:
ADG = Australian Dangerous Goods
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
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification
Section 16. Any other relevant information

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Gas 1, H220</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Press. Gas Comp. Gas, H280</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Muta. 1B, H340</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 1A, H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 1A, H360 (Unborn child)</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

References: Not available.

Indicates information that has changed from previously issued version.

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