

## Nitrogen

AL188

**Warning****SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name : Nitrogen  
SDS Nr : AL188  
Chemical formula : N<sub>2</sub>

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : Industrial and professional. Perform risk assessment prior to use.  
Test gas / Calibration gas. Laboratory use Contact supplier for more uses information  
Use : Analytical chemistry. Industrial applications.

**1.3. Details of the supplier of the safety data sheet**

Company identification : Air Liquide Australia Limited  
Level 9 / 380 St. Kilda Road  
Melbourne VIC 3004 Australia  
Tel: + 61 3 9697 9888  
Fax: + 61 3 9690 7107  
ALAEquiries@AirLiquide.com

**1.4. Emergency telephone number**

Emergency telephone number : 1800 812 588

**SECTION 2. Hazards identification****2.1. Classification of the substance or mixture**

Hazard Class and Category Code Regulation EC 1272/2008 (CLP)

• Physical hazards : Gases under pressure - Compressed gas - Warning - (CLP : Press. Gas) - H280

Classification EC 67/548 or EC 1999/45

**2.2. Label elements**

Labelling Regulation EC 1272/2008 (CLP)

• Hazard pictograms



• Hazard pictograms code : GHS04  
• Signal word : Warning  
• Hazard statements : H280 - Contains gas under pressure; may explode if heated.  
• Supplemental hazard information : Asphyxiant in high concentrations.  
• Precautionary statements  
- Storage : P403 - Store in a well-ventilated place.

**2.3. Other hazards**

: Asphyxiant in high concentrations.

**Nitrogen****AL188****SECTION 3. Composition/information on ingredients****3.1. Substance / 3.2. Mixture****Substance.**

| Substance name | Contents | CAS No    | EC No     | Annex No | Classification                                      |
|----------------|----------|-----------|-----------|----------|-----------------------------------------------------|
| Nitrogen       | : 100 %  | 7727-37-9 | 231-783-9 | —        | *1<br>Not classified (DSD/DPD)<br>Press. Gas (H280) |

Contains no other components or impurities which will influence the classification of the product.

\* 1: Listed in Annex IV / V REACH, exempted from registration.

\* 2: Registration deadline not expired.

\* 3: Registration not required: Substance manufactured or imported < 1t/y

Full text of R-phrases see chapter 16. Full text of H-statements see chapter 16

**SECTION 4. First aid measures****4.1. Description of first aid measures****First aid measures**

- Inhalation : In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/ consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- Skin contact : Adverse effects not expected from this product.
- Eye contact : Adverse effects not expected from this product.
- Ingestion : Ingestion is not considered a potential route of exposure.

**4.2. Most important symptoms and effects, both acute and delayed**

: Refer to section 11.

**4.3. Indication of any immediate medical attention and special treatment needed**

: None.

**SECTION 5. Fire-fighting measures****5.1. Extinguishing media****Extinguishing media**

- Suitable extinguishing media : All known extinguishants can be used.

**5.2. Special hazards arising from the substance or mixture**

- Specific hazards : Exposure to fire may cause containers to rupture/explode.
- Hazardous combustion products : None.

**5.3. Advice for fire-fighters****Specific methods**

- : If possible, stop flow of product.  
Move away from the container and cool with water from a protected position.  
Coordinate fire measure to the surrounding fire. Cool endangered containers with water spray jet from a protected position. Do not empty contaminated fire water into drains.

**Special protective equipment for fire fighters**

- : In confined space use self-contained breathing apparatus.

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**SECTION 6. Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**
**Personal precautions**

- : Try to stop release.
- : Evacuate area.  
Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
- Ensure adequate air ventilation.

**6.2. Environmental precautions**

- : None.
- : Try to stop release.

**6.3. Methods and material for containment and cleaning up**
**Clean up methods**

- : None.
- : Ventilate area.

**6.4. Reference to other sections**

- : See also sections 8 and 13.

**SECTION 7. Handling and storage**
**7.1. Precautions for safe handling**
**Safe use of the product**

- : Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.  
Only experienced and properly instructed persons should handle gases under pressure.  
The product must be handled in accordance with good industrial hygiene and safety procedures.  
Do not smoke while handling product.  
Ensure the complete gas system was (or is regularly) checked for leaks before use.

**Safe handling of the gas receptacle**

- : Refer to supplier's container handling instructions.  
Do not allow backfeed into the container.  
Protect cylinders from physical damage; do not drag, roll, slide or drop.  
When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders.  
Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.  
If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.  
Never attempt to repair or modify container valves or safety relief devices.  
Damaged valves should be reported immediately to the supplier.  
Keep container valve outlets clean and free from contaminants particularly oil and water.  
Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.  
Close container valve after each use and when empty, even if still connected to equipment.  
Never attempt to transfer gases from one cylinder/container to another.  
Never use direct flame or electrical heating devices to raise the pressure of a container.  
Do not remove or deface labels provided by the supplier for the identification of the cylinder contents.

**Handling**

- : Suck back of water into the container must be prevented.  
Do not allow backfeed into the container.  
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.  
Refer to supplier's container handling instructions.

**7.2. Conditions for safe storage, including any incompatibilities**

- : Keep container below 50°C in a well ventilated place.  
Observe all regulations and local requirements regarding storage of containers.  
Containers should not be stored in conditions likely to encourage corrosion.  
Containers should be stored in the vertical position and properly secured to prevent toppling.  
Stored containers should be periodically checked for general condition and leakage.  
Container valve guards or caps should be in place.  
Store containers in location free from fire risk and away from sources of heat and ignition.  
Keep away from combustible materials.



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**SECTION 7. Handling and storage (continued)**

Storage : Keep container below 50°C in a well ventilated place.

**7.3. Specific end use(s)**

: None.

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

DNEL: Derived no effect level : None available.

PNEC: Predicted no effect concentration : None available.

**8.2. Exposure controls**

8.2.1. Appropriate engineering controls : Systems under pressure should be regularly checked for leakages. Provide adequate general and local exhaust ventilation. Consider work permit system e.g. for maintenance activities.

8.2.2. Individual protection measures, e.g. personal protective equipment : A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered.  
Wear safety glasses with side shields  
Wear leather safety gloves and safety shoes when handling cylinders.

Personal protection : Ensure adequate ventilation.

8.2.3. Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

**SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

## • Appearance

## Appearance

- Physical state at 20°C / 101.3kPa : Gas.

- Colour : Colourless gas.

## • Odour

Odour : No odour warning properties.

## • Odour threshold

Odour threshold : Odour threshold is subjective and inadequate to warn for overexposure.

## • pH

pH value : Not applicable for gas-mixtures.

Molar mass [g/mol] : Not applicable for gases and gas-mixtures.

## • Melting point / Freezing point

Melting point [°C] : -210

## • Initial boiling point - boiling range

Boiling point [°C] : -196

Critical temperature [°C] : -147

## • Flash point

Flash point [°C] : Not applicable for gas-mixtures.

## • Evaporation rate

Evaporation rate (ether=1) : Not applicable for gas-mixtures.

## • Flammability

Flammability range [vol% in air] : Not applicable for gas-mixtures.

## • Explosion limits (lower - upper)

## • Vapour pressure

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**SECTION 9. Physical and chemical properties (continued)**

|                                             |                                    |
|---------------------------------------------|------------------------------------|
| Vapour pressure [20°C]                      | : Not applicable.                  |
| • Vapour density                            |                                    |
| Relative density, gas (air=1)               | : 0.97                             |
| • Relative density                          |                                    |
| Relative density, liquid (water=1)          | : Not applicable.                  |
| • Solubility                                |                                    |
| Solubility in water [mg/l]                  | : 20                               |
| • Partition coefficient : n-octanol / water |                                    |
| Partition coefficient n-octanol/water       | : Not applicable for gas-mixtures. |
| • Auto-ignition temperature                 |                                    |
| • Thermal decomposition                     |                                    |
| • Viscosity                                 |                                    |
| Viscosity at 20°C [mPa.s]                   | : Not applicable.                  |
| • Explosive Properties                      |                                    |
| Explosive Properties                        | : Not applicable.                  |
| • Oxidising properties                      |                                    |

**9.2. Other information**

|                  |         |
|------------------|---------|
| Other data       | : None. |
| Molecular weight | : 28    |

**SECTION 10. Stability and reactivity****10.1. Reactivity**

|                          |                                                                                |
|--------------------------|--------------------------------------------------------------------------------|
|                          | : No reactivity hazard other than the effects described in sub-sections below. |
| Stability and reactivity | : Stable under normal conditions.                                              |

**10.2. Chemical stability**

: Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

: None.

**10.4. Conditions to avoid**

: None.

**10.5. Incompatible materials**

: None.

**10.6. Hazardous decomposition products**

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

**SECTION 11. Toxicological information****11.1. Information on toxicological effects**

|                                   |                                                     |
|-----------------------------------|-----------------------------------------------------|
| Toxicity information              | : No known toxicological effects from this product. |
| Acute toxicity                    | : No known toxicological effects from this product. |
| Rat inhalation LC50 [ppm/4h]      | : No data available.                                |
| Skin corrosion/irritation         | : No known effects from this product.               |
| Serious eye damage/irritation     | : No known effects from this product.               |
| Respiratory or skin sensitisation | : No known effects from this product.               |

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**SECTION 11. Toxicological information (continued)**

|                                       |                                              |
|---------------------------------------|----------------------------------------------|
| Carcinogenicity                       | : No known effects from this product.        |
| Germ cell mutagenicity                | : No known effects from this product.        |
| Toxic for reproduction : Fertility    | : No known effects from this product.        |
| Toxic for reproduction : unborn child | : No known effects from this product.        |
| STOT-single exposure                  | : No known effects from this product.        |
| STOT-repeated exposure                | : No known effects from this product.        |
| Aspiration hazard                     | : Not applicable for gases and gas-mixtures. |

**SECTION 12. Ecological information**
**12.1. Toxicity**

: No data available.

**12.2. Persistence - degradability**

: No data available.

**12.3. Bioaccumulative potential**

: No data available.

**12.4. Mobility in soil**

: No data available.

**12.5. Results of PBT and vPvB assessment**

: No data available.

**12.6. Other adverse effects**

Ecological effects information : No known ecological damage caused by this product.

**SECTION 13. Disposal considerations**
**13.1. Waste treatment methods**

|         |                                                                                                                                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General | : May be vented to atmosphere in a well ventilated place.<br>Do not discharge into any place where its accumulation could be dangerous.<br>Refer to the code of practice of EIGA (Doc. 30/10 "Disposal of Gases, downloadable at <a href="http://www.eiga.org">http://www.eiga.org</a> ) for more guidance on suitable disposal methods<br>Contact supplier if guidance is required. |
|         | : Do not discharge into any place where its accumulation could be dangerous.<br>May be vented to atmosphere in a well ventilated place.<br>Contact supplier if guidance is required.                                                                                                                                                                                                 |

**13.2. Additional information**

: None.

**SECTION 14. Transport information**

|                           |        |
|---------------------------|--------|
| UN number                 | : 1066 |
| Labelling ADR, IMDG, IATA |        |



: 2.2 : Non flammable, non toxic gas.

**Land transport (ADR/RID)**
**Air Liquide Australia Limited**

Level 9 / 380 St. Kilda Road Melbourne VIC 3004 Australia  
 Tel: + 61 3 9697 9888  
 Fax: + 61 3 9690 7107  
 ALAEnquiries@AirLiquide.com

**In case of emergency : 1800 812 588**

**Nitrogen****AL188****SECTION 14. Transport information (continued)**

H.I. nr : 20  
UN proper shipping name : NITROGEN, COMPRESSED  
Transport hazard class(es) : 2  
Classification code : 1 A  
Packing Instruction(s) : P200  
Tunnel Restriction : E : Passage forbidden through tunnels of category E.  
HAZCHEM - Emergency Action Code : 2T  
: 2 = *Fine water spray.*  
: *T = Recommended personal protective equipment : Full fire kit and breathing apparatus.*  
: *Appropriate measures : dilute.*

**Sea transport (IMDG)**

Proper shipping name : NITROGEN, COMPRESSED  
Class : 2.2  
Emergency Schedule (EmS) - Fire : F-C  
Emergency Schedule (EmS) - Spillage : S-V  
Packing instruction : P200

**Air transport (ICAO-TI / IATA-DGR)**

Proper shipping name (IATA) : NITROGEN, COMPRESSED  
Class : 2.2  
Passenger and Cargo Aircraft : Allowed.  
Packing instruction - Passenger and Cargo Aircraft : 200  
Cargo Aircraft only : Allowed.  
Packing instruction - Cargo Aircraft only : 200

**Special precautions for user**

: Avoid transport on vehicles where the load space is not separated from the driver's compartment.  
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.  
Before transporting product containers :  
- Ensure there is adequate ventilation.  
- Ensure that containers are firmly secured.  
- Ensure cylinder valve is closed and not leaking.  
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.  
- Ensure valve protection device (where provided) is correctly fitted.

Labelling ADR : 2.2 : Non flammable, non toxic gas.

Other transport information : Avoid transport on vehicles where the load space is not separated from the driver's compartment.  
Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.  
Before transporting product containers :  
- Ensure that containers are firmly secured.  
- Ensure cylinder valve is closed and not leaking.  
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.  
- Ensure valve protection device (where provided) is correctly fitted.  
- Ensure there is adequate ventilation.  
- Compliance with applicable regulations.

- 14.1. UN Number
- 14.2. Proper shipping name
- 14.3. Transport Hazard Classification
- 14.4. Packing group
- 14.5. Environmental hazards



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**SECTION 14. Transport information (continued)**

14.7. Bulk transport - annex II Marpol  
73/78 - IBC

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**EU legislation

Seveso directive 96/82/EC : Not covered.

National legislation

: Ensure all national/local regulations are observed.

**15.2. Chemical Safety Assessment**

: A CSA does not need to be carried out for this product.

**SECTION 16. Other information****Indication of changes**

: Revised safety data sheet in accordance with commission regulation (EU) No 453/2010

**Training advice**

: Asphyxiant in high concentrations.  
Keep container in a well-ventilated place.  
Do not breathe the gas.  
Ensure all national/local regulations are observed.  
The hazard of asphyxiation is often overlooked and must be stressed during operator training.  
Receptacle under pressure.

**List of full text of H-statements in section 3.**

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

**Further information**

: Classification in accordance with calculation methods of regulation (EC) 1272/2008 CLP / (EC) 1999/45 DPD.  
This Safety Data Sheet has been established in accordance with the applicable European Union legislation.

**Note**

: This Safety Data Sheet has been established in accordance with the applicable European Union legislation.

**DISCLAIMER OF LIABILITY**

: Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.  
Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

The contents and format of this SDS are in accordance with EC Commission Directive 2001/58/EC.

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document



# SAFETY DATA SHEET

**Airgas**

an Air Liquide company

Carbon Dioxide

## Section 1. Identification

**GHS product identifier** : Carbon Dioxide  
**Chemical name** : Carbon dioxide  
**Other means of identification** : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744, Carbon Dioxide JSP  
**Product use** : Synthetic/Analytical chemistry and Medical use.  
**Synonym** : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744, Carbon Dioxide JSP  
**SDS #** : 001013  
**Supplier's details** : Airgas USA, LLC and its affiliates  
259 North Radnor-Chester Road  
Suite 100  
Radnor, PA 19087-5283  
1-610-687-5253  
**24-hour telephone** : 1-866-734-3438

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Classification of the substance or mixture** : GASES UNDER PRESSURE - Liquefied gas  
Simple asphyxiant.

### GHS label elements

**Hazard pictograms** :



**Signal word** :

Warning

**Hazard statements** :

Contains gas under pressure; may explode if heated.  
May cause frostbite.  
May displace oxygen and cause rapid suffocation.  
May increase respiration and heart rate.

### Precautionary statements

**General** :

Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position.

**Prevention** :

Use and store only outdoors or in a well ventilated place.

**Response** :

Not applicable.

**Storage** :

Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

**Disposal** :

Not applicable.

**Hazards not otherwise classified** :

In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.  
May cause frostbite.

### Section 3. Composition/information on ingredients

Substance/mixture : Substance  
Chemical name : Carbon dioxide  
Other means of identification : Carbonic, Carbon Dioxide, Carbonic Anhydride, R744, Carbon Dioxide USP

#### CAS number/other identifiers

CAS number : 124-38-9  
Product code : 001013

| Ingredient name | %   | CAS number |
|-----------------|-----|------------|
| Carbon Dioxide  | 100 | 124-38-9   |

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 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 if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. 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.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Frostbite** : Try to warm up the frozen tissues and seek medical attention.  
**Ingestion** : As this product is a gas, refer to the inhalation section.

##### Over-exposure signs/symptoms

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
**Specific treatments** : No specific treatment.

## Section 4. First aid measures

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting 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. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

**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.

**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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. 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 materials for containment and cleaning up

**Small spill** : Immediately contact emergency personnel. Stop leak if without risk.

**Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 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 contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

## Section 7. Handling and storage

**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** : 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). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

## Section 8. Exposure controls/personal protection

### Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Carbon Dioxide  | <b>ACGIH TLV (United States, 3/2015). Oxygen Depletion [Asphyxiant].</b><br>STEL: 54000 mg/m <sup>3</sup> 15 minutes.<br>STEL: 30000 ppm 15 minutes.<br>TWA: 9000 mg/m <sup>3</sup> 8 hours.<br>TWA: 5000 ppm 8 hours.<br><b>NIOSH REL (United States, 10/2013).</b><br>STEL: 54000 mg/m <sup>3</sup> 15 minutes.<br>STEL: 30000 ppm 15 minutes.<br>TWA: 9000 mg/m <sup>3</sup> 10 hours.<br>TWA: 5000 ppm 10 hours.<br><b>OSHA PEL (United States, 2/2013).</b><br>TWA: 9000 mg/m <sup>3</sup> 8 hours.<br>TWA: 5000 ppm 8 hours.<br><b>OSHA PEL 1989 (United States, 3/1989).</b><br>STEL: 54000 mg/m <sup>3</sup> 15 minutes.<br>STEL: 30000 ppm 15 minutes.<br>TWA: 18000 mg/m <sup>3</sup> 8 hours.<br>TWA: 10000 ppm 8 hours. |

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**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

## Section 8. Exposure controls/personal 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.
- 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** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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

### Appearance

- Physical state** : Gas. [Liquefied compressed gas.]
- Color** : Colorless.
- Molecular weight** : 44.01 g/mole
- Molecular formula** : C-O<sub>2</sub>
- Melting/freezing point** : Sublimation temperature: -79°C (-110.2 to °F)
- Critical temperature** : 30.85°C (87.5°F)
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : Not available.
- Flash point** : [Product does not sustain combustion.]
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 830 (psig)
- Vapor density** : 1.53 (Air = 1)      Liquid Density@BP: Solid density = 97.5 lb/ft<sup>3</sup> (1562 kg/m<sup>3</sup>)
- Specific Volume (ft<sup>3</sup>/lb)** : 8.7719
- Gas Density (lb/ft<sup>3</sup>)** : 0.114
- Relative density** : Not applicable.
- Solubility** : Not available.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : 0.83
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- ADT** : Not available.
- Viscosity** : Not applicable.

## 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** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Not available.

**IDLH** : 40000 ppm

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

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

Not available.

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

Not available.

#### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

## Section 11. Toxicological information

- Skin contact : No known significant effects or critical hazards.  
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 : No specific data.  
Skin contact : No specific data.  
Ingestion : No specific data.

### 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

Not available.

- General : No known significant effects or critical hazards.  
Carcinogenicity : No known significant effects or critical hazards.  
Mutagenicity : No known significant effects or critical hazards.  
Teratogenicity : No known significant effects or critical hazards.  
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

Not available.

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| Carbon Dioxide          | 0.83               | -   | low       |

### Mobility in soil

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






## Section 12. Ecological information

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

## Section 13. Disposal considerations

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. Empty Airgas-owned pressure vessels should be returned to Airgas. 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

|                            | DOT                                                                                                                                                                          | TDG                                                                                                                                                                                                                                                     | Mexico                                                                                   | IMDG                                                                                       | IATA                                                                                                                           |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| UN number                  | UN1013                                                                                                                                                                       | UN1013                                                                                                                                                                                                                                                  | UN1013                                                                                   | UN1013                                                                                     | UN1013                                                                                                                         |
| UN proper shipping name    | CARBON DIOXIDE                                                                                                                                                               | CARBON DIOXIDE                                                                                                                                                                                                                                          | CARBON DIOXIDE                                                                           | CARBON DIOXIDE                                                                             | CARBON DIOXIDE                                                                                                                 |
| Transport hazard class(es) | 2.2<br>                                                                                     | 2.2<br>                                                                                                                                                                | 2.2<br> | 2.2<br> | 2.2<br>                                     |
| Packing group              | -                                                                                                                                                                            | -                                                                                                                                                                                                                                                       | -                                                                                        | -                                                                                          | -                                                                                                                              |
| Environment                | No.                                                                                                                                                                          | No.                                                                                                                                                                                                                                                     | No.                                                                                      | No.                                                                                        | No.                                                                                                                            |
| Additional information     | <u>Limited quantity</u><br>Yes.<br><br><u>Packaging instruction</u><br>Passenger aircraft<br>Quantity limitation: 75 kg<br><br>Cargo aircraft<br>Quantity limitation: 150 kg | Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).<br><br><u>Explosive Limit and Limited Quantity Index</u><br>0.125<br><br><u>Passenger Carrying Road or Rail Index</u><br>75 | -                                                                                        | -                                                                                          | <u>Passenger and Cargo Aircraft</u><br>Quantity limitation: 75 kg<br><u>Cargo Aircraft Only</u><br>Quantity limitation: 150 kg |

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

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 Annex II of MARPOL 73/78 and the IBC Code : Not available.



## Section 15. Regulatory information

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: This material is listed or exempted.  
 United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not 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

Classification : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

### State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

### California Prop. 65

| Ingredient name | Cancer | Reproductive | No significant risk level | Maximum acceptable dosage level |
|-----------------|--------|--------------|---------------------------|---------------------------------|
| Carbon dioxide  | No.    | No.          | No.                       | No.                             |

### International regulations

#### International lists

#### National inventory

Australia : This material is listed or exempted.

Canada : This material is listed or exempted.

China : This material is listed or exempted.

Europe : This material is listed or exempted.

Japan : This material is listed or exempted.

Malaysia : Not determined.

New Zealand : This material is listed or exempted.

Philippines : This material is listed or exempted.

Republic of Korea : This material is listed or exempted.

Taiwan : This material is listed or exempted.

#### Canada

WHMIS (Canada) : Class A: Compressed gas.

## Section 15. Regulatory information

CEPA Toxic substances: This material is listed.  
Canadian ARET: This material is not listed.  
Canadian NPRI: This material is not listed.  
Alberta Designated Substances: This material is not listed.  
Ontario Designated Substances: This material is not listed.  
Quebec Designated Substances: This material is not listed.

## Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

### Hazardous Material Information System (U.S.A.)

|                  |   |
|------------------|---|
| Health           | 1 |
| Flammability     | 0 |
| Physical hazards | 3 |
|                  |   |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

### National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

| Classification            | Justification   |
|---------------------------|-----------------|
| Press. Gas Liq. Gas, H280 | Expert judgment |

### History

Date of printing : 4/25/2017  
Date of issue/Date of revision : 4/25/2017  
Date of previous issue : 2/11/2016  
Version : 0.02  
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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

## Section 16. Other information

UN = United Nations

### References

: Not available.

Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# CoCheck™

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 11/11/2016

Revision date: 11/11/2016

Version: 1.0

### SECTION 1: Identification

#### 1.1. Product identifier

Product name : CoCheck™  
Product code : FG # 16501

#### 1.2. Recommended use and restrictions on use

Recommended use : Checking the operation of carbon monoxide detector

#### 1.3. Supplier

##### Supplier

HSI Fire and Safety Group, LLC  
107 Garlisch Drive  
Elk Grove Village, IL - U.S.A.  
T +1 (847) 427-8340 - F +1 (847) 427-8343  
[tbarakat@hsifiresafety.com](mailto:tbarakat@hsifiresafety.com)

HSI Fire and Safety Group, LLC  
unit # 1252  
3-1750 The Queensway  
Etobicoke, ON M9C5H5

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-CA)

Compressed gas H280  
Repr. 1A H360

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-CA labelling

Hazard pictograms (GHS-CA) :



GHS04

GHS08

Signal word (GHS-CA) :

Danger

Hazard statements (GHS-CA) :

H280 - Contains gas under pressure; may explode if heated  
H360 - May damage fertility or the unborn child

Precautionary statements (GHS-CA) :

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P410+P403 - Protect from sunlight. Store in a well-ventilated place  
P405 - Store locked up  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-CA)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

| Name            | Product identifier | %    |
|-----------------|--------------------|------|
| Carbon monoxide | (CAS No) 630-08-0  | 0.25 |

# CoCheck™

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists. Thaw frosted parts with lukewarm water. Do not rub affected area.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention. Thaw frosted parts with lukewarm water. Do not rub affected area.
- First-aid measures after ingestion : Not a normal route of exposure. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/injuries after inhalation : May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness. Intentional misuse of product by inhalation can result in asphyxiation or death.
- Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause frostbite.
- Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. May cause frostbite.
- Symptoms/injuries after ingestion : Not a normal route of exposure. May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

#### 4.3. Immediate medical attention and special treatment, if necessary

- Other medical advice or treatment : Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable extinguishing media

- Suitable extinguishing media : Treat for surrounding material.

#### 5.2. Unsuitable extinguishing media

- Unsuitable extinguishing media : None known.

#### 5.3. Specific hazards arising from the hazardous product

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

#### 5.4. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray to keep fire-exposed containers cool.

### SECTION 6: Accidental release measures

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

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition.

#### 6.2. Methods and materials for containment and cleaning up

- For containment : Stop leak if safe to do so. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Methods for cleaning up : Provide ventilation.

#### 6.3. Reference to other sections

- For further information refer to section 8: "Exposure controls/personal protection"

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Pressurized container: Do not pierce or burn, even after use. Container may explode if heated. . When using do not eat, drink or smoke. Use only in well-ventilated areas.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store away from direct sunlight or other heat sources. Store in a dry, cool and well-ventilated area. Store locked up.

# CoCheck™

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Carbon monoxide (630-08-0)

|             |                 |        |
|-------------|-----------------|--------|
| USA - ACGIH | ACGIH TWA (ppm) | 25 ppm |
|-------------|-----------------|--------|

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, etc.) below recommended exposure limits.

#### 8.3. Individual protection measures/Personal protective equipment

Personal protective equipment : Avoid all unnecessary exposure.  
Hand protection : Wear chemically resistant protective gloves.  
Eye protection : Safety glasses or goggles are recommended when using product.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : In case of inadequate ventilation wear respiratory protection. 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.  
Environmental exposure controls : Maintain levels below Community environmental protection thresholds.  
Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Gas  
Appearance : Aerosol  
Colour : Colourless  
Odour : Odourless  
Odour threshold : No data available  
pH : No data available  
pH solution : No data available  
Relative evaporation rate (butylacetate=1) : > 1  
Relative evaporation rate (ether=1) : No data available  
Melting point : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : Not flammable  
Vapour pressure : 49 psi @ 21 °C (70 °F)  
Vapour pressure at 50 °C : No data available  
Relative vapour density at 20 °C : > 1 (Air = 1)  
Relative density : No data available  
Relative density of saturated gas/air mixture : No data available  
Density : No data available  
Relative gas density : No data available  
Solubility : Insoluble.  
Partition coefficient n-octanol/water : No data available  
Log Kow : No data available  
Viscosity, kinematic : No data available  
Explosive properties : No data available  
Oxidising properties : No data available  
Explosive limits : No data available

#### 9.2. Other information

VOC content : None  
Additional information : Contains volatile component(s): < 100

# CoCheck™

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

|                                    |                                                                                                                                   |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | : No dangerous reaction known under conditions of normal use.                                                                     |
| Chemical stability                 | : Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. |
| Possibility of hazardous reactions | : No dangerous reaction known under conditions of normal use.                                                                     |
| Conditions to avoid                | : Incompatible materials. Sources of ignition. Direct sunlight.                                                                   |
| Incompatible materials             | : Strong oxidizing agents. Strong reducing agents. Strong acids. Strong bases.                                                    |
| Hazardous decomposition products   | : May include, and are not limited to: oxides of carbon.                                                                          |

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

|                             |                   |
|-----------------------------|-------------------|
| Acute toxicity (oral)       | : Not classified. |
| Acute toxicity (dermal)     | : Not classified. |
| Acute toxicity (inhalation) | : Not classified. |

| CoCheck™            |                                                     |
|---------------------|-----------------------------------------------------|
| LD50 oral rat       | No data available                                   |
| LD50 dermal rabbit  | No data available                                   |
| LC50 inhalation rat | > 20000 ppm/4h (Calculated acute toxicity estimate) |

| Carbon monoxide (630-08-0)        |                                             |
|-----------------------------------|---------------------------------------------|
| LC50 inhalation rat               | 1807 ppm/4h                                 |
| Skin corrosion/irritation         | : Not classified.                           |
| Serious eye damage/irritation     | : Not classified.                           |
| Respiratory or skin sensitization | : Not classified.                           |
| Germ cell mutagenicity            | : Not classified.                           |
| Carcinogenicity                   | : Not classified.                           |
| Reproductive toxicity             | : May damage fertility or the unborn child. |
| STOT-single exposure              | : Not classified.                           |
| STOT-repeated exposure            | : Not classified.                           |
| Aspiration hazard                 | : Not classified.                           |

| CoCheck™  |         |
|-----------|---------|
| Vaporizer | Aerosol |

|                                      |                                                                                                                                                                        |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms/injuries after inhalation   | : May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness. Intentional misuse of product by inhalation can result in asphyxiation or death. |
| Symptoms/injuries after skin contact | : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause frostbite.                                            |
| Symptoms/injuries after eye contact  | : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling. May cause frostbite.     |
| Symptoms/injuries after ingestion    | : Not a normal route of exposure. May be harmful if swallowed. May cause stomach distress, nausea or vomiting.                                                         |

### SECTION 12: Ecological information

#### 12.1. Toxicity

|                   |                                                                   |
|-------------------|-------------------------------------------------------------------|
| Ecology - general | : May cause long-term adverse effects in the aquatic environment. |
|-------------------|-------------------------------------------------------------------|

#### 12.2. Persistence and degradability

| CoCheck™                      |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

#### 12.3. Bioaccumulative potential

| CoCheck™                  |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |

#### 12.4. Mobility in soil

No additional information available

# CoCheck™

## Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

### 2.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

## SECTION 14: Transport information

### 14.1. Basic shipping description

In accordance with TDG

#### TDG

UN-No. (TDG) : UN1950  
TDG Primary Hazard Classes : 2.2  
Transport document description : UN1950 AEROSOLS (non-flammable), 2.2  
Proper Shipping Name (TDG) : Aerosols, non-flammable, limited quantities

Hazard labels (TDG) :



### 14.2. Transport information/DOT

No additional information available

### 14.3. Air and sea transport

#### MDG

UN-No. (IMDG) : 1950  
Proper Shipping Name (IMDG) : AEROSOLS  
Class (IMDG) : 2 - Gases

#### IATA

UN-No. (IATA) : 1950  
Proper Shipping Name (IATA) : Aerosols, non-flammable  
Class (IATA) : 2

## SECTION 15: Regulatory information

### 15.1. National regulations

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

### 15.2. International regulations

No additional information available

## SECTION 16: Other information

Date of issue : 11/11/2016  
Revision date : 11/11/2016

Indication of changes:

Other information : None.

*Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.*





# MATERIAL SAFETY DATA SHEET

Prepared according to ISO 11014 : 2009

Data sheet No.: MSDS0081US; Issue 4; Date: 12/16/2010

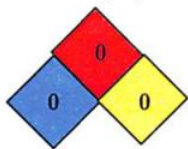
## WHAT IS THE PRODUCT AND WHAT INFORMATION IS REQUIRED IN AN EMERGENCY?

### SECTION 1 – IDENTIFICATION OF SUBSTANCE AND OF THE COMPANY

**Product Name:** SOLO CO Detector Tester  
**Part Number:** SOLO C6-xxx (xxx denotes product variant)  
**Manufacturer:** SDi, 1345 Campus Parkway, Neptune, NJ 07753-6815  
Tel: 732-751-9266; Fax: 732-751-9241

### SECTION 2 – HAZARD IDENTIFICATION

NFPA ratings (scale 0-4)



|                |                                            |
|----------------|--------------------------------------------|
| Health = 0     | No Unusual Hazard                          |
| Fire = 0       | Not combustible                            |
| Reactivity = 0 | Stable: Not reactive when mixed with water |

### OVER-EXPOSURE:

#### Inhalation:

- In high concentrations may cause asphyxiation.

#### FIRE AND EXPLOSION HAZARDS:

- This product is classed as non-flammable\*;
- Compressed gas - as with all pressurized aerosol containers, cans may burst if heated to over 122°F (50°C).

### SECTION 3 – COMPOSITION/INFORMATION ON COMPONENTS

#### Substance/Preparation:

- Preparation approx. 1850ppm Carbon Monoxide balance Nitrogen.

#### Composition/Impurities:

- Contains no other components or impurities, which will influence the classification of the product.

## WHAT SHOULD BE DONE IF A HAZARDOUS SITUATION OCCURS?

### SECTION 4 – FIRST AID MEASURES

#### Ingestion:

- Ingestion is not considered a potential route of exposure;

#### Inhalation:

- In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim is not aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested.
- Call a doctor.
- Apply artificial respiration if breathing stopped.

### SECTION 5 – FIRE FIGHTING MEASURES

#### Fire-fighting Measures:

- These containers hold gas under pressure, with no liquid phase. If involved in a major fire, they should be sprayed with water to avoid pressure increases, otherwise pressures will rise and ultimately they may distort or burst to release the contents. The gases will not add significantly to the fire, but containers or fragments may be projected considerable distances - thereby hampering fire-fighting efforts.

**SECTION 6 – ACCIDENTAL RELEASE (SPILL AND LEAK) MEASURES:**

**Accidental Release Measures:**

- In terms of weight, these containers hold very little contents, such that any accidental release by puncturing etc. will be of no practical concern.

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**HOW CAN HAZARDOUS SITUATIONS BE PREVENTED FROM OCCURRING?**

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**SECTION 7 – PRECAUTIONS FOR SAFE HANDLING, STORAGE & USE**

**Safe handling:**

- Suck back of water into the container must be prevented. Do not allow backfeed into the container. Use only properly specified equipment, which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's container handling instructions;
- Contents are under pressure- do not puncture or force open cans even when empty;

**Safe Storage:**

- Observe official regulations on storing packaging with pressure containers;
- Store containers in cool, dry, well-ventilated locations away from direct sunlight and do not store at temperatures exceeding 122°F (50°C) (e.g. passenger or back seat of a car in summer months);

**Safe Use:**

- Ensure good ventilation/mechanical exhaustion at workplace - if this is not possible, take regular breaks from use; personal CO detection may also be utilized by test personnel;
- Do not deliberately inhale gas

**SECTION 8 – EXPOSURE CONTROLS**

**Respiratory Protection:**

- No protective device is required during normal use of product;
- Ensure adequate ventilation - mechanical ventilation is recommended where product is used in confined spaces- if this is not possible, take regular breaks in fresh air.

**Personal Protection:**

- Wear PPE (personal protective equipment) appropriate to the task and the environment.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Physical & Chemical properties:**

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| Relative density, gas | Heavier than air                                    |
| Solubility in water   | Not specified but considered to have low solubility |
| Appearance/Colour     | Colourless gas                                      |
| Odour                 | None                                                |

**SECTION 10- STABILITY & REACTIVITY**

**Stability:**

- Product is stable under normal conditions;

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**WHAT IS THE IMPACT OF THIS PRODUCT ON HEALTH AND THE ENVIRONMENT?**

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**SECTION 11 – TOXICOLOGICAL INFORMATION**

Under normal usage, this product should pose little risk to the health of the user.

**General:**

- No known toxicological effects from this product

**SECTION 12 – ECOLOGICAL INFORMATION**

**General:**

- No ecological damage caused by this product

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste disposal method:**

- Do not discharge into any place where its accumulation could be dangerous. Used containers are acceptable for disposal in the normal waste stream.

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**WHAT INFORMATION DO I NEED TO KNOW REGARDING THE TRANSPORTATION,  
CLASSIFICATION, PACKAGING AND LABELLING OF THIS PRODUCT?**

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**SECTION 14 – TRANSPORT INFORMATION**

**Designation of goods/Proper shipping name:**

- Compressed gas n.o.s;

**Commodity Code:**

- **38249099**

**UN- Number:**

- UN 1950;

**Land Transport (ADR/RID):**

- ADR/RID class: 2.2 gasses that are compressed, liquefied or dissolved under pressure;
- Classification code 5<sup>A</sup>;

**Maritime Transport (IMDG)/Land-Sea Interface:**

- IMDG class: 2; page 2102;

**Air Transport (ICAO-TI/IATA):**

- ICAO/IATA class: 2.2.

**Transport Canada**

- TDG Classification UN 1950 Class: 2.2 Proper shipping name: Aerosols.

**SECTION 15- REGULATORY INFORMATION**

**Designation according to EC Guidelines**

This product has been classified and labelled in accordance with relevant EC Directives and national laws:

- Classified non-flammable\* / according to Directives 88/379/EEC, 67/548/EEC and the UK's CHIP 3 (July 2002) Regulations.
- Risk phrases:
  - R61 May cause harm to the unborn child
- Safety phrases:
  - S2 Keep out of reach of children
  - S3 Keep in a cool place
  - S9 Keep in well-ventilated place
  - S22 Do not breathe gas
  - S45 In case of accident or if you feel unwell seek medical advice immediately
  - S51 Use only in well ventilated areas

**WHMIS (Canada)**

- Class A: Compressed Gas.

**SECTION 16 – OTHER INFORMATION**

**References:**

Commission Directive 91/155/EEC, 1991; Statutory Instruments- The Chemicals (Hazard Information and Packaging for Supply) CHIP 3 Regulations July 2002; COSHH Regulations 1989; Hazard Communication Rule, 29 CFR 1910.1200; DOT 49 CFR; 40 CFR - Protection of the Environment; NFPA 704- Standard System for the Identification of Hazards of Materials for Emergency Response 1996

**Revision Status:**

- |                                                                                                           |            |
|-----------------------------------------------------------------------------------------------------------|------------|
| 1. New Material Safety Data Sheet.                                                                        | 06/22/2007 |
| 2. Section 7 amended to expand references as to safe use.                                                 | 08/21/2008 |
| 3. Heading - Specification added page 1.<br>Sections 2 and 3 reversed in accordance with Reach directive. | 03/11/2010 |
| 4. NFPA ratings added to Section 2 hazard identification                                                  | 12/16/2010 |

**Notification:**

This MSDS has been prepared in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations, July 2002. The information is based on the best knowledge of the Supplier, and its advisors and is given in good faith, but we cannot guarantee its accuracy, reliability or completeness and therefore disclaim any liability for loss or damage arising out of use of this data. Since conditions of use are outside the control of the Company and its advisors we disclaim any liability for loss or damage when the product is used for other purposes than it is intended.

