1. Product and Company Identification

Material name: CARBON DIOXIDE

Version #: 02

Revision date: 03-18-2011

Chemical name: CARBON DIOXIDE

CAS #: 124-38-9

Product use: Fire extinguishing agent

Manufacturer / Importer / Supplier

Name: Tyco Fire Protection Products

Address: One Stanton Street

Marinette, WI 54143-2542

Phone: 715-735-7411

Internet: http://www.ansul.com

Emergency Phone Number: CHEMTREC 800-424-9300 or 703-527-3887

2. Hazards Identification

Emergency overview: DANGER

Contents under pressure. Heat may cause the containers to explode.

Potential health effects

Routes of exposure: Inhalation.

Eyes: None known.

Skin: None known.

Inhalation: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

Ingestion: Not a likely route of entry.

Potential environmental effects: Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

Components | CAS # | Percent
---|---|---
CARBON DIOXIDE | 124-38-9 | 60 - 100

4. First Aid Measures

First aid procedures

Eye contact: Flush thoroughly with water for at least 15 minutes. Get medical assistance.

Skin contact: Rinse with water.

Inhalation: Remove to fresh air.

Ingestion: Not likely, due to the form of the product.

General advice: If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media: This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.
**Protection of firefighters**

- Specific hazards arising from the chemical: Contents under pressure. Pressurized container may explode when exposed to heat or flame.
- Protective equipment for firefighters: None known.
- Special protective equipment for fire-fighters: None known.
- Specific methods: None known.

**Explosion data**

- Sensitivity to mechanical impact: Not available.
- Sensitivity to static discharge: Not available.

### 6. Accidental Release Measures

#### Personal precautions
None known.

#### Environmental precautions
No special environmental precautions required.

#### Methods for containment
Move the cylinder to a safe and open area if the leak is irreparable.

#### Methods for cleaning up
Not applicable.

#### Other information
Clean up in accordance with all applicable regulations.

### 7. Handling and Storage

#### Handling
Handle and open container with care. Use care in handling/storage.

#### Storage
Contents under pressure. Keep away from heat and sources of ignition. Store in a well-ventilated place.

### 8. Exposure Controls / Personal Protection

#### Occupational exposure limits

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARBON DIOXIDE (124-38-9)</td>
<td>STEL</td>
<td>15000.0000 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>5000.0000 ppm</td>
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#### Canada - Ontario

<table>
<thead>
<tr>
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<tr>
<td>CARBON DIOXIDE (124-38-9)</td>
<td>STEL</td>
<td>54000.0000 mg/m3</td>
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<tr>
<td></td>
<td></td>
<td>30000.0000 ppm</td>
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<tr>
<td></td>
<td></td>
<td>9000.0000 mg/m3</td>
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#### Canada - Quebec

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</tbody>
</table>

#### Engineering controls
General ventilation normally adequate.

#### Personal protective equipment

- **Eye / face protection**: Not normally needed.
- **Skin protection**: No special protective equipment required.
- **Respiratory protection**: No personal respiratory protective equipment normally required.
9. Physical & Chemical Properties

Appearance
- Form: Compressed gas.
- Color: Not available.
- Odor: Not available.

Physical state
- Gas.

pH
- 3.2 - 3.7 The pH of saturated CO2 solutions varies from 3.7 at 101 kPa (1 atm) to 3.2 at 2370 kPa (23.4 atm)

Melting point
- Not available.

Freezing point
- Not available.

Boiling point
- -110.2 °F (-78.5 °C)

Flash point
- Not available.

Evaporation rate
- Not available.

Flammability limits in air, upper, % by volume
- Not available.

Flammability limits in air, lower, % by volume
- Not available.

Vapor pressure
- 6439.45 kPa

Vapor density
- 1.522 at 21°C

Specific gravity
- 1.512

Relative density
- Not available.

Solubility (water)
- 2 g/l

Partition coefficient (n-octanol/water)
- Not available

Auto-ignition temperature
- Not available.

Decomposition temperature
- Not available.

Molecular weight
- 44.01 g/mol

Molecular formula
- C-O2

10. Chemical Stability & Reactivity Information

Chemical stability
- Material is stable under normal conditions.

Conditions to avoid
- Excessive heat.

Hazardous decomposition products
- No hazardous decomposition products are known.

11. Toxicological Information

Chronic effects
- Prolonged inhalation may be harmful. Not expected to be hazardous by WHMIS criteria.

12. Ecological Information

Ecotoxicity
- This product has no known eco-toxicological effects.

Persistence and degradability
- Not available.

Partition coefficient (n-octanol/water)
- Not available

13. Disposal Considerations

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

Waste from residues / unused products
- Dispose of in accordance with local regulations.

Contaminated packaging
- Not applicable.

14. Transport Information

TDG
- Proper shipping name: CARBON DIOXIDE
15. Regulatory Information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status Controlled

WHMIS classification A - Compressed Gas

WHMIS labeling

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
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<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
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<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
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<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Health</td>
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<tr>
<td>Flammability</td>
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NFPA ratings

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Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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