# Chlorine Safety Data Sheet P-4580


Date of issue: 01/01/1979  \  Revision date: 11/30/2016  \  Supersedes: 10/17/2016

## SECTION: 1. Product and company identification

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Chlorine</td>
</tr>
<tr>
<td>CAS No</td>
<td>7782-50-5</td>
</tr>
<tr>
<td>Formula</td>
<td>Cl₂</td>
</tr>
</tbody>
</table>

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

Use of the substance/mixture: Industrial use. Use as directed.

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

Praxair, Inc.
10 Riverview Drive
Danbury, CT 06810-6268 - USA
T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146
www.praxair.com

### 1.4. Emergency telephone number

Emergency number: Onsite Emergency: 1-800-645-4633

CHEMTREC, 24hr/day 7days/week

— Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887
(collect calls accepted, Contract 17729)

## SECTION 2: Hazard identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

<table>
<thead>
<tr>
<th>Ox. Gas 1</th>
<th>H270</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquefied gas</td>
<td>H280</td>
</tr>
<tr>
<td>Acute Tox. 2 (Inhalation: gas)</td>
<td>H330</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>H314</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>H318</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>H335</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>H400</td>
</tr>
</tbody>
</table>

### 2.2. Label elements

**GHS-US labeling**

#### Hazard pictograms (GHS-US)

<table>
<thead>
<tr>
<th>GHS03</th>
<th>GHS04</th>
<th>GHS05</th>
<th>GHS06</th>
<th>GHS07</th>
<th>GHS09</th>
</tr>
</thead>
</table>

#### Signal word (GHS-US)

DANGER

#### Hazard statements (GHS-US)

- H270 - MAY CAUSE OR INTENSIFY FIRE; OXIDIZER
- H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED
- H314 - CAUSES SEVERE SKIN BURNS AND EYE DAMAGE
- H330 - FATAL IF INHALED
- H400 - VERY TOXIC TO AQUATIC LIFE
- CGA-HG22 - CORROSIVE TO THE RESPIRATORY TRACT

#### Precautionary statements (GHS-US)

- P202 - Do not handle until all safety precautions have been read and understood
- P244 - Keep reduction valves/valves and fittings free from oil and grease
- P260 - Do not breathe gas
- P264 - Wash hands thoroughly after handling
- P271+P403 - Use and store only outdoors or in a well-ventilated place
- P273 - Avoid release to the environment

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Chlorine
Safety Data Sheet P-4580
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2.3. Other hazards
Other hazards not contributing to the classification: None.

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/Information on ingredients

3.1. Substance

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine (Main constituent)</td>
<td>(CAS No) 7782-50-5</td>
<td>100</td>
</tr>
</tbody>
</table>

3.2. Mixture
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Call a physician. WARNING: To avoid possible chemical burns, the rescuer should avoid breathing any exhaled air from the victim.

First-aid measures after skin contact: Avoid breathing vapors. In case of contact, immediately flush affected areas with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse. Discard contaminated shoes.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately.

First-aid measures after ingestion: Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: Overexposure to concentrations moderately above the TLV of 1 ppm irritates the eyes and respiratory tract. Very brief exposure to a concentration of 1000 ppm may be fatal. Acts as an asphyxiant at high concentrations. Inhalation of high concentrations (e.g., greater than 15 ppm) causes choking, coughing, burning of the throat, and severe irritation of the upper respiratory tract; additionally, pulmonary edema, bronchitis, and pneumonitis may result.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Oxidizer. May accelerate the burning of other combustible materials.
Reactivity: No reactivity hazard other than the effects described in sub-sections below.
### 5.3. Advice for firefighters

**Firefighting instructions**: Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.

**Protection during firefighting**: DANGER! Toxic, corrosive, high-pressure gas.

**Special protective equipment for fire fighters**: Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

**Specific methods**: Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas containers to rupture. Cool endangered containers with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. Stop flow of product if safe to do so. Use water spray or fog to knock down fire fumes if possible.

**Other information**: Containers are equipped with a pressure relief device. (Exceptions may exist where authorized by DOT.).

### SECTION 6: Accidental release measures

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

**General measures**: DANGER: Oxidizing gas. Corrosive. Evacuate personnel to a safe area. Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE). (gas tight, chemical-protective) Approach suspected leak area with caution. Remove all sources of ignition. Toxic, corrosive vapor can spread from spill. Contact with flammable materials may cause fire or explosion. Ventilate area or move container to a well-ventilated area. Before entering the area, especially a confined area, check the atmosphere with an appropriate device. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

**6.1.1. For non-emergency personnel**

No additional information available

**6.1.2. For emergency responders**

No additional information available

#### 6.2. Environmental precautions

Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

#### 6.3. Methods and material for containment and cleaning up

No additional information available

#### 6.4. Reference to other sections

See also sections 8 and 13.
SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Do not breathe gas/vapor. Avoid all contact with skin, eyes, or clothing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Avoid oil, grease and all other combustible materials.

Store only where temperature will not exceed 125°F (52°C). Post “No Smoking/No Open Flames” signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g., NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16.

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chlorine (7782-50-5)</th>
<th>ACGIH TLV-TWA (ppm)</th>
<th>0.5 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH TLV-STEL (ppm)</td>
<td>1 ppm</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (Ceiling) (mg/m³)</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (Ceiling) (ppm)</td>
<td>1 ppm</td>
</tr>
<tr>
<td>USA IDLH</td>
<td>US IDLH (ppm)</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Use only in a closed system. A corrosion-resistant, forced-draft fume hood is preferred. LOCAL EXHAUST: A corrosion-resistant system is acceptable.

Eye protection: Wear safety glasses with side shields. Wear goggles and a face shield when transferring or breaking transfer connections. Provide readily accessible eye wash stations and safety showers. Wear safety glasses with side shields or goggles when transferring or breaking transfer connections.
Skin and body protection: Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible. Select per OSHA CFR 1910.132, 1910.136, and 1910.138.

Respiratory protection: When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA CFR 1910.134, ANSI Z88.2, or MSHA CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

Thermal hazard protection: Wear cold insulating gloves when transfilling or breaking transfer connections.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Gas</td>
</tr>
<tr>
<td>Appearance</td>
<td>Greenish-yellow gas. Amber liquid (under pressure).</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>71 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Greenish gas.</td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Odor threshold is subjective and inadequate to warn for overexposure. 0.23 mg/m³ (Dixon and Ikels)</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (ether=1)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Melting point</td>
<td>-101 °C (-149.85°F)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>-34.05 °C (-29.25°F)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Critical temperature</td>
<td>144 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>6.9 bar (100 psia) (@20°C [68°F])</td>
</tr>
<tr>
<td>Critical pressure</td>
<td>77.11 bar (1118.4 psia)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.6</td>
</tr>
<tr>
<td>Density</td>
<td>2.7 kg/m³ (at 50 °C)</td>
</tr>
<tr>
<td>Relative gas density</td>
<td>2.5</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: 8620 mg/l</td>
</tr>
<tr>
<td>Log Pow</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Log Kow</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Oxidizer.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Non flammable.</td>
</tr>
</tbody>
</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas group</td>
<td>Liquefied gas</td>
</tr>
<tr>
<td>Additional information</td>
<td>Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level</td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>10.1. Reactivity</th>
<th>No reactivity hazard other than the effects described in sub-sections below.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2. Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>10.3. Possibility of hazardous reactions</td>
<td>May occur.</td>
</tr>
<tr>
<td>10.5. Incompatible materials</td>
<td>Chlorine reacts with most materials, especially flammable materials, other reducing agents, and nearly all metals. At temperatures below 250°F (121°C) certain common metals (e.g., iron, copper, steel, lead, nickel) resist reaction with dry chlorine, but others (e.g., aluminum, arsenic, gold, mercury, tin, titanium) react. Moist chlorine is highly corrosive except to glass, stoneware, porcelain, and certain alloys and only at low pressure. Titanium ignites spontaneously on contact with dry chlorine. Carbon steel ignites in chlorine at temperatures near 483°F (251°C).</td>
</tr>
</tbody>
</table>

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Acute toxicity**
- Inhalation: **FATAL IF INHALED.**
- **Chlorine (f)7782-50-5**
  - LC50 inhalation rat (ppm) 146.5 ppm/4h
  - ATE US (gases) 146.500 ppmV/4h

**Skin corrosion/irritation**
- **CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.**
- **pH:** Not applicable.

**Serious eye damage/irritation**
- **CAUSES SERIOUS EYE DAMAGE.**
- **pH:** Not applicable.

**Respiratory or skin sensitization**
- Not classified

**Germ cell mutagenicity**
- Not classified

**Carcinogenicity**
- Not classified

**Reproductive toxicity**
- Not classified

**Specific target organ toxicity (single exposure)**
- **MAY CAUSE RESPIRATORY IRRITATION.**

**Specific target organ toxicity (repeated exposure)**
- Not classified

**Aspiration hazard**
- Not classified

**Symptoms/injuries after inhalation**
- Overexposure to concentrations moderately above the TLV of 1 ppm irritates the eyes and respiratory tract. Very brief exposure to a concentration of 1000 ppm may be fatal. Acts as an asphyxiant at high concentrations. Inhalation of high concentrations (e.g., greater than 15 ppm) causes choking, coughing, burning of the throat, and severe irritation of the upper respiratory tract; additionally, pulmonary edema, bronchitis, and pneumonitis may result.

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Ecology - general**
- **VERY TOXIC TO AQUATIC LIFE.**

**Chlorine (7782-50-5)**
- LC50 fish 1 0.44 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
- EC50 Daphnia 1 0.017 mg/l (Exposure time: 48 h - Species: Daphnia magna)
Chlorine (7782-50-5)

LC50 fish 2 0.014 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

12.2. Persistence and degradability

Chlorine (7782-50-5)

Persistence and degradability  Not applicable for inorganic gases.

12.3. Bioaccumulative potential

Chlorine (7782-50-5)

BCF fish 1 (no bioaccumulation expected)
Log Pow  Not applicable.
Log Kow  Not applicable.
Bioaccumulative potential  No data available.

12.4. Mobility in soil

Chlorine (7782-50-5)

Mobility in soil  No data available.
Ecology - soil  Because of its high volatility, the product is unlikely to cause ground or water pollution.

12.5. Other adverse effects

Other adverse effects  May cause pH changes in aqueous ecological systems.
Effect on ozone layer  None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations  Do not attempt to dispose of residual or unused quantities. Return container to supplier.

SECTION 14: Transport information

In accordance with DOT

Transport document description  UN1017 Chlorine, 2.3
UN-No.(DOT)  UN1017
Proper Shipping Name (DOT)  Chlorine
Class (DOT)  2.3 - Class 2.3 - Poisonous gas 49 CFR 173.115
Hazard labels (DOT)  Poison Gas
2.3 - Poison gas

DOT Special Provisions (49 CFR 172.102)  2 - This material is poisonous by inhalation (see 171.8 of this subchapter) in Hazard Zone B (see 173.116(a) or 173.133(a) of this subchapter), and must be described as an inhalation hazard under the provisions of this subchapter
B9 - Bottom outlets are not authorized
B14 - Each bulk packaging, except a tank car or a multi-unit-tank car tank, must be insulated with an insulating material so that the overall thermal conductance at 15.5 C (60 F) is no more than 1.5333 kilojoules per hour per square meter per degree Celsius (0.075 Btu per hour per square foot per degree Fahrenheit) temperature differential. Insulating materials must not promote corrosion to steel when wet
N86 - UN pressure receptacles made of aluminum alloy are not authorized
T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter
TP19 - The calculated wall thickness must be increased by 3 mm at the time of construction. Wall thickness must be verified ultrasonically at intervals midway between periodic hydraulic tests (every 2.5 years). The portable tank must not be used if the wall thickness is less than that prescribed by the applicable T code in Column (7) of the Table for this material
Additional information

Emergency Response Guide (ERG) Number: 124;173

Other information: No supplementary information available.

Special transport precautions:
- 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.

Transport by sea

UN-No. (IMDG): 1017
Proper Shipping Name (IMDG): CHLORINE
Class (IMDG): 2 - Gases
MFAG-No: 124

Air transport

UN-No. (IATA): 1017
Proper Shipping Name (IATA): Chlorine
Class (IATA): 2

Civil Aeronautics Law: Gases under pressure/Gases toxic under pressure

SECTION 15: Regulatory information

15.1. US Federal regulations

Chlorine (7782-50-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the United States SARA Section 302
Subject to reporting requirements of United States SARA Section 313

CERCLA RO: 10 lb
SARA Section 302 Threshold Planning Quantity (TPQ): 100 lb
SARA Section 311/312 Hazard Classes:
  - Immediate (acute) health hazard
  - Delayed (chronic) health hazard
  - Sudden release of pressure hazard
  - Fire hazard

SARA Section 313 - Emission Reporting: 1.0 %

15.2. International regulations

CANADA

Chlorine (7782-50-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
SECTION 15: Other information

15.2. National regulations

Chlorine (7782-50-5)
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Japanese Poisonous and Deleterious Substances Control Law
- Listed on the Canadian IDL (Ingredient Disclosure List)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on CICR (Turkish Inventory and Control of Chemicals)

15.3. US State regulations

Chlorine (7782-50-5)

<table>
<thead>
<tr>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California - Proposition 65 - Carcinogens List</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Developmental Toxicity</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</td>
</tr>
<tr>
<td>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</td>
</tr>
<tr>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Other information: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc, it is the user's obligation to determine the conditions of safe use of the product.

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