Your physician has determined, as a result of your current condition that supplemental oxygen will be of benefit to you and has prescribed the use of an oxygen concentrator to provide this supplemental oxygen. A prescribed setting, of the oxygen concentrator, has been established to meet your related needs. Changes to these prescribed settings should only be made under the advice of your physician.

The air we normally breathe is a mixture of oxygen, nitrogen and trace gases. An oxygen concentrator is a device used to separate oxygen from room air allowing the oxygen to pass through a nasal cannula, mask or other delivery device for the benefit of the patient.

Your medical equipment supplier has instructed you on the proper care and use of your oxygen concentrator and will be available to answer any further questions you might have.

Some basic issues to be concerned with in relation to the care and use of your oxygen concentrator are:

- In the event of an equipment alarm or if you are experiencing discomfort, in relation to your oxygen therapy, contact your medical equipment supplier or your physician immediately;
- Oxygen generated by your oxygen concentrator is supplemental and should never be considered life supporting;
- In case your physician has determined that an interruption in the oxygen concentrators supply of oxygen may have serious consequences your medical equipment supplier has provided a backup system for use;
- Oxygen supports combustion and should be kept away from heat or open flame;
- Do not smoke or allow others to smoke near the concentrator when in use;
- Do not use oil or grease on concentrator or its components as the materials, when combined with oxygen, can present a potential for fire hazards and personal injury;
- Do not use the concentrator if either the plug or power cord is damaged;
- Avoid using extension cords or electrical adapters;
- Do not attempt to clean the concentrator while connected to an electrical outlet or other power source;
- Do not operate the concentrator without all filters in place;
- Ensure filters are totally dry before operating the concentrator;
- Oxygen concentrators require unobstructed ventilation. The concentrator ventilation ports should not be obstructed by anything that impedes required ventilation;
- Notify your utility provider that life supporting medical equipment (an oxygen concentrator) is in your home so that they can give you priority in regards to restoration should the need present itself;
- Do not move or transport your oxygen concentrator without first contacting your medical supplier.

**Operations**

1. Choose an appropriate location for your concentrator. One that will not restrict the flow of room air around the concentrator.
2. Place the concentrator 3 inches away from walls, furniture and especially draperies.
3. Do not place concentrator near any heat source.
4. Plug the concentrator into a grounded electrical outlet.
5. If a humidifier has been prescribed, add the appropriate amount of water and attach the humidifier bottle to the oxygen outlet port.
6. Connect the cannula (oxygen tubing) to the outlet port of the concentrator or humidifier bottle (as appropriate).
7. Turn the concentrator on. **Note: When the concentrator is first energized an alarm may sound with associated indicators illuminated. Once the concentrator has reached normal operating conditions the alarms should cease.**
8. Adjust the flow meter to the prescribed setting.
9. Put on your cannula, mask or other delivery device as previously instructed.
10. Breathe normally.
Suggested Maintenance

Routine preventive maintenance of your oxygen concentrator will be provided by your medical supplier; however there are a few minor maintenance activities for you to perform.

1. Weekly, clean the concentrator cabinet filter(s) in a mild detergent solution, squeezing out excess moisture and letting it dry before re-installation.
2. Weekly, change cannulas to reduce the risk of respiratory infections and other contamination.
3. Monthly, with the concentrator disconnected from power source, wipe the outside of the concentrator cabinet with a damp cloth and mild detergent. Additional tubing can be changed monthly or as needed.

Alarms

Most concentrators have both an audible and visual alarm should the unit fail in proper operation. Should the alarm sound, switch to back-up systems as appropriate and contact your medical equipment supplier immediately.

Suggested Cleaning

If you are using a humidifier jar, clean the water jar twice weekly with a solution of 1 part distilled white vinegar and 2 parts tap water.

Make sure you refill the humidifier jar using distilled or spring water and keep at least two inches of water in the humidifier jar during use.

Your nasal cannula or mask should be changed at least weekly. Additional tubing can be changed monthly or as needed.

The filter(s) on your concentrator must be cleaned regularly for the machine to work properly. Our technician will show you where your filter(s) are and how and when to clean them.

Keep your concentrator at least 6-8 inches from the wall to prevent heat buildup. Keep your concentrator away from heat registers, ovens, and all other sources of heat.

Our technician has approved the electrical wall outlet your concentrator is using as a power source. Do not add an extension cord or move your concentrator to another location without calling our office for instructions.

YOU WILL BE USING YOUR OXYGEN AS YOUR PHYSICIAN HAS PRESCRIBED. IF THERE ARE ANY CHANGES IN YOUR OXYGEN FLOW RATE OR HOURS OF USAGE, THEY WILL COME FROM YOUR PHYSICIAN.
STORAGE AND HANDLING

Storage: The cylinder storage area should provide protection from extreme cold and accumulation of ice and snow. The storage of cylinders outside or in unheated rooms can result in frostbite injury from contact with cold metal. Likewise, stored cylinders should not be subjected to extreme heat (temperatures exceeding 125 degrees F [52 degree C], nor should cold cylinders be warmed by heating. In storage, cylinders should be protected from tampering, cutting, and abrasion. The cylinder storage area should be constructed of firewalls, where practical; should be away from flammable, highly combustible, and corrosive substances, and should be cool and dry, to prevent cylinder rusting. The facility should also be well ventilated to prevent accumulation of oxygen in the event of a leak. Storing cylinders underground should be avoided, as should storing them in a closet or the trunk of a car. Cylinders must be in a well ventilated area. In the home, cylinders, whether full or empty should be stored in accordance the recommendation of the supplier. Large cylinders should be stored with valves closed and their protective caps in place, and they must be secured to prevent tipping. Cylinders should be stored in-groups according to contents, and gases that support combustion should be stored in a separate location from gases that are combustible. Full and empty cylinders should be separated.

Handling: The careful handling of cylinders is necessitated by their weight as well as their pressurized contents. Large cylinders can weigh as much as 150 pounds and can cause crushing injury if dropped or tipped over. If the cylinder valve is damaged when a cylinder falls, the cylinder can become a missile with a 1 ton thrust.

HOMEFILL CYLINDER DURATION

<table>
<thead>
<tr>
<th>Table of EasyPulse Values</th>
<th>Duration (in hours) at 20 bpm, when set to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder</td>
<td>1</td>
</tr>
<tr>
<td>M6</td>
<td>4.5</td>
</tr>
<tr>
<td>ML6</td>
<td>5.2</td>
</tr>
<tr>
<td>M9</td>
<td>6</td>
</tr>
</tbody>
</table>

*approximate weight in lbs., with full cylinder | ** at factory-set 2 Lpm

Selecting the Right Number and Size of Cylinders: The table references the weight of an EasyPulse system with the M6, ML6, and M9 cylinders. It also shows the duration of these cylinders at its five pulse settings, assuming a breathing rate of 20 bpm, and its duration on continuous flow. Reference this table to select the type of cylinder that is not too heavy for you to carry and has the duration you expect at your prescribed setting. Once a type of cylinder is selected, you can calculate the number of cylinders you need to order with the Homefill II.
**APPROXIMATE CYLINDER DURATION IN HOURS & MINUTES BASED ON TANK SIZE AND LITER FLOW SETTING**

<table>
<thead>
<tr>
<th>B CYLINDERS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>2 HR</td>
<td>1 HR</td>
<td>45 MIN</td>
<td>30 MIN</td>
<td>25 MIN</td>
<td>20 MIN</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>1 HR</td>
<td>30 MIN</td>
<td>20 MIN</td>
<td>15 MIN</td>
<td>12 MIN</td>
<td>10 MIN</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>30 MIN</td>
<td>15 MIN</td>
<td>10 MIN</td>
<td>7 MIN</td>
<td>6 MIN</td>
<td>5 MIN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C CYLINDERS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>4 HR</td>
<td>2 HR</td>
<td>1H, 30M</td>
<td>1 HR</td>
<td>50 MIN</td>
<td>45 MIN</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>2 HR</td>
<td>1 HR</td>
<td>45 MIN</td>
<td>30 MIN</td>
<td>25 MIN</td>
<td>20 MIN</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>1 HR</td>
<td>30 MIN</td>
<td>22 MIN</td>
<td>15 MIN</td>
<td>12 MIN</td>
<td>10 MIN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D CYLINDERS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>5 HR</td>
<td>2H, 30M</td>
<td>1H, 50M</td>
<td>1H, 15M</td>
<td>1H, 10M</td>
<td>1 HR</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>2H, 30M</td>
<td>1H, 15M</td>
<td>55 MIN</td>
<td>35 MIN</td>
<td>32 MIN</td>
<td>30 MIN</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>1H, 15M</td>
<td>35 MIN</td>
<td>25 MIN</td>
<td>15 MIN</td>
<td>13 MIN</td>
<td>12 MIN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E CYLINDERS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>10 HR</td>
<td>5 HR</td>
<td>3H, 45M</td>
<td>2H, 30M</td>
<td>2 HR</td>
<td>1H, 45M</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>5 HR</td>
<td>2H, 30M</td>
<td>1H, 50M</td>
<td>1H, 15M</td>
<td>1 HR</td>
<td>55 MIN</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>2H, 30M</td>
<td>1H, 15M</td>
<td>55 MIN</td>
<td>35 MIN</td>
<td>30 MIN</td>
<td>25 MIN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N/Q TANKS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>26 HR</td>
<td>13 HR</td>
<td>10 HR</td>
<td>6H, 30M</td>
<td>5H, 45M</td>
<td>5 HR</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>13 HR</td>
<td>6H, 30M</td>
<td>5 HR</td>
<td>3H, 30M</td>
<td>3 HR</td>
<td>2H, 30M</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>6H, 30M</td>
<td>3H, 15M</td>
<td>2H, 15M</td>
<td>1H, 30M</td>
<td>1H, 15M</td>
<td>1 HR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M TANKS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>2D, 8H</td>
<td>1D, 3H</td>
<td>18 HR</td>
<td>14 HR</td>
<td>11 HR</td>
<td>9H, 30M</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>20 HR</td>
<td>14 HR</td>
<td>8 HR</td>
<td>6H, 30M</td>
<td>5 HR</td>
<td>4 HR</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>12 HR</td>
<td>6H, 30M</td>
<td>4H, 15M</td>
<td>3 HR</td>
<td>2H, 30M</td>
<td>2H, 15M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>H TANKS</th>
<th>1 LITER</th>
<th>2 LITER</th>
<th>3 LITER</th>
<th>4 LITER</th>
<th>5 LITER</th>
<th>6 LITER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULL</td>
<td>4D, 16H</td>
<td>2D, 7H</td>
<td>1D, 12H</td>
<td>1D, 4H</td>
<td>23 HR</td>
<td>19 HR</td>
</tr>
<tr>
<td>1/2 FULL</td>
<td>2D, 2H</td>
<td>1D, 2H</td>
<td>17 HR</td>
<td>13 HR</td>
<td>10 HR</td>
<td>8H, 30M</td>
</tr>
<tr>
<td>1/4 FULL</td>
<td>25 HR</td>
<td>12H, 30M</td>
<td>8 HR</td>
<td>6 HR</td>
<td>5 HR</td>
<td>4 HR</td>
</tr>
</tbody>
</table>

*Note: it is important to change to a full tank when the indicator needle hits the red zone instead of watching the time frames listed above. These are only estimates.*
Your physician has determined, as a result of your current condition, supplemental oxygen will be of benefit to you and has prescribed the use of supplemental oxygen.

Though oxygen is not a flammable substance and it will not explode or burn, it will aggressively support combustion and cause a fire to burn faster and hotter than normal. Oxygen is a wonderful benefit to those in need of oxygen therapy, but should always be handled with caution.

In order to assist you in using appropriate caution associated with oxygen use, the following information is provided.

- **DO NOT** permit smoking or open flames in a room where oxygen is in use or being stored.
- **DO NOT** use bedding or clothes made of wool, nylon or synthetic fabrics as these materials have the tendency to produce static electricity. The use of cotton material bedding and clothes will avoid sparks from static electricity.
- **DO NOT** permit the use of any spark-producing device, such as spark producing toys. Keep these materials at least five feet away from oxygen source.
- **DO NOT** use petroleum products such as petroleum jelly, petroleum-based creams or lotions or aerosol sprays in a room where oxygen is in use or being stored.
- **DO NOT** use oil, grease or other petroleum-based products on oxygen equipment.
- **DO NOT** allow oxygen tubing to be covered by bedding, carpet or furniture.
- **DO NOT** leave oxygen equipment turned on when not in use.
- **DO NOT** store oxygen in an enclosed area, such as a closet or wardrobe.
- **DO NOT** abuse or handle oxygen equipment roughly.
- **DO NOT** allow children or untrained individuals to handle or operate oxygen equipment.
- **DO NOT** attempt repairs on oxygen equipment. Always contact your medical equipment supplier if you have any questions about the condition of your oxygen equipment.
- **DO NOT** place oxygen equipment near heaters, stoves, or other sources of heat, open flames or combustible materials.
- **DO NOT** touch the frosted fitting or piping of liquid oxygen systems.
- **DO NOT** open oxygen cylinder valves too quickly.
- **DO NOT** place oxygen cylinders in the trunks of cars.
- **DO NOT** leave oxygen cylinders standing unsecured.
- Be sure the cylinder is secured in a pouch, use a cylinder stand, chain, rope or other device to keep the cylinder from falling over. If you have extra portable cylinders, they should be stored lying down out of the way. We suggest you store extra cylinders under your bed.
- **DO NOT** use oxygen while under a hooded hairdryer due to oxygen concentration level.
- Keep liquid oxygen units upright at all times.
- Periodically wipe your oxygen equipment off with a damp cloth and a mild household cleaner.
- If you find yourself in need of moving your oxygen equipment, always contact your medical equipment supplier first for their assistance.

**Above all other concerns, for those individuals prescribed home oxygen therapy, DO NOT change the oxygen flow rate prescribed by your physician!**
# SAFETY DATA SHEET

**Oxygen**

## Section 1. Identification

<table>
<thead>
<tr>
<th>GHS product identifier</th>
<th>Oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>oxygen</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Molecular oxygen; Oxygen molecule; Pure oxygen; O2; UN 1072; Dioxygen; Oxygen USP, Aviator’s Breathing Oxygen (ABO)</td>
</tr>
<tr>
<td>Product type</td>
<td>Gas.</td>
</tr>
<tr>
<td>Product use</td>
<td>Synthetic/Analytical chemistry.</td>
</tr>
<tr>
<td>Synonym</td>
<td>Molecular oxygen; Oxygen molecule; Pure oxygen; O2; UN 1072; Dioxygen; Oxygen USP, Aviator’s Breathing Oxygen (ABO)</td>
</tr>
<tr>
<td>SDS #</td>
<td>001043</td>
</tr>
</tbody>
</table>
| 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 | OXIDIZING GASES - Category 1  
GASES UNDER PRESSURE - Compressed gas |

### GHS label elements

- **Hazard pictograms**

### Signal word: Danger

### Hazard statements:
- May cause or intensify fire; oxidizer.
- Contains gas under pressure; may explode if heated.

### 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. Open valve slowly. Use only with equipment cleaned for Oxygen service.

**Prevention**
- Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves, valves and fittings free from oil and grease.

**Response**
- In case of fire: Stop leak if safe to do so.

**Storage**
- Protect from sunlight. Store in a well-ventilated place.

**Disposal**
- Not applicable.

**Hazards not otherwise classified**
- None known.
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>oxygen</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Molecular oxygen; Oxygen molecule; Pure oxygen; O2; UN 1072; Dioxygen; Oxygen USP, Aviator’s Breathing Oxygen (ABO)</td>
</tr>
<tr>
<td>Product code</td>
<td>001043</td>
</tr>
</tbody>
</table>

CAS number/other identifiers
- CAS number: 7782-44-7

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxygen</td>
<td>100</td>
<td>7782-44-7</td>
</tr>
</tbody>
</table>

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.

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: Contact with rapidly expanding gas may cause burns or frostbite.
Inhalation: No known significant effects or critical hazards.
Skin contact: Contact with rapidly expanding gas may cause burns or frostbite.
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. Oxidizing material. This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products: No specific data.

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk.

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

Environmental precautions

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Methods and materials for containment and cleaning up

Small spill: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling
Oxygen

Section 7. Handling and storage

**Protective measures**

Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid breathing gas. 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.

Avoid contact with eyes, skin and clothing. Empty containers retain product residue and can be hazardous. Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves free from grease and oil.

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). 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). Separate from reducing agents and combustible materials. Store away from grease and oil. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

**Control parameters**

**Ingredient name**

<table>
<thead>
<tr>
<th>Oxygen</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>None.</td>
<td></td>
</tr>
</tbody>
</table>

**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**

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.
### Section 8. Exposure controls/personal protection

**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**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. 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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>Gas. [Compressed gas.]</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Colorless. Blue.</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Odorless.</td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>-218.4°C (-361.1°F)</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>-183°C (-297.4°F)</td>
</tr>
<tr>
<td><strong>Critical temperature</strong></td>
<td>-118.15°C (-180.7°F)</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>[Product does not sustain combustion.]</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>Extremely flammable in the presence of the following materials or conditions: reducing materials, combustible materials and organic materials.</td>
</tr>
<tr>
<td><strong>Lower and upper explosive (flammable) limits</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>1.1 (Air = 1)</td>
</tr>
<tr>
<td><strong>Specific Volume (ft³/lb)</strong></td>
<td>12.0482</td>
</tr>
<tr>
<td><strong>Gas Density (lb/ft³)</strong></td>
<td>0.083</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Solubility in water</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>0.65</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Flow time (ISO 2431)</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Molecular weight</strong></td>
<td>32 g/mole</td>
</tr>
</tbody>
</table>

### Section 10. Stability and reactivity

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

**Chemical stability**: The product is stable.  

**Possibility of hazardous reactions**: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials. Reactions may include the following: risk of causing fire.
Section 10. Stability and reactivity

Conditions to avoid : No specific data.

Incompatible materials : Highly reactive or incompatible with the following materials:
combustible materials
reducing materials
grease
oil

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.

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 : Contact with rapidly expanding gas may cause burns or frostbite.
Inhalation : No known significant effects or critical hazards.
Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.
Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics
Section 11. Toxicological information

**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**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxygen</td>
<td>0.65</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

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

**Other adverse effects**: No known significant effects or critical hazards.
Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or 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

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>Mexico</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN1072</td>
<td>UN1072</td>
<td>UN1072</td>
<td>UN1072</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>OXYGEN, COMPRESSED</td>
<td>OXYGEN, COMPRESSED</td>
<td>OXYGEN, COMPRESSED</td>
<td>OXYGEN, COMPRESSED</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.2 (5.1)</td>
<td>2.2</td>
<td>2.2 (5.1)</td>
<td>2.2 (5.1)</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

Additional information

DOT Classification: Limited quantity Yes. Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg. Special provisions A52

TDG Classification: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.23-2.25 (Class 5). Explosive Limit and Limited Quantity Index 0.125 ERAP Index 3000 Passenger Carrying Ship Index 50 Passenger Carrying Road or Rail Index 75 Special provisions 42


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 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.
  - **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.

**International regulations**
- **Chemical Weapon Convention List Schedules I, II & III Chemicals**: Not listed.
- **Stockholm Convention on Persistent Organic Pollutants**: Not listed.
- **UNECE Aarhus Protocol on POPs and Heavy Metals**: Not listed.

**Inventory list**
- **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.
- **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.

**Date of issue/Date of revision**: 2/3/2018  
**Date of previous issue**: 1/27/2017  
**Version**: 0.03
Section 15. Regulatory information

Taiwan : This material is listed or exempted.
Thailand : Not determined.
Turkey : Not determined.
United States : This material is listed or exempted.
Viet Nam : Not determined.

Section 16. Other information

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

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXIDIZING GASES - Category 1</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>GASES UNDER PRESSURE - Compressed gas</td>
<td>According to package</td>
</tr>
</tbody>
</table>

History

<table>
<thead>
<tr>
<th>Date of printing</th>
<th>Date of issue/Date of revision</th>
<th>Date of previous issue</th>
<th>Version</th>
<th>Key to abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/3/2018</td>
<td>2/3/2018</td>
<td>1/27/2017</td>
<td>0.03</td>
<td>ATE = Acute Toxicity Estimate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BCF = Bioconcentration Factor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GHS = Globally Harmonized System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IATA = International Air Transport Association</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IBC = Intermediate Bulk Container</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>IMDG = International Maritime Dangerous Goods</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LogPow = logarithm of the octanol/water partition coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973</td>
</tr>
</tbody>
</table>
Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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.
# SAFETY DATA SHEET

Oxygen, Refrigerated Liquid

## Section 1. Identification

<table>
<thead>
<tr>
<th>GHS product identifier</th>
<th>Oxygen, Refrigerated Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name</td>
<td>Oxygen Refrigerated Liquid</td>
</tr>
<tr>
<td>Other means of identification</td>
<td>Liquid Oxygen; LOX; Liquid Oxygen USP</td>
</tr>
<tr>
<td>Product type</td>
<td>Liquefied gas</td>
</tr>
<tr>
<td>Product use</td>
<td>Synthetic/Analytical chemistry.</td>
</tr>
<tr>
<td>Synonym</td>
<td>Liquid Oxygen; LOX; Liquid Oxygen USP</td>
</tr>
<tr>
<td>SDS #</td>
<td>001190</td>
</tr>
<tr>
<td>Supplier's details</td>
<td>Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253</td>
</tr>
<tr>
<td>24-hour telephone</td>
<td>1-866-734-3438</td>
</tr>
</tbody>
</table>

## 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**
- OXIDIZING GASES - Category 1
- GASES UNDER PRESSURE - Refrigerated liquefied gas

**GHS label elements**

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Pictograms" /></td>
</tr>
</tbody>
</table>

**Signal word**: Danger

**Hazard statements**: May cause or intensify fire; oxidizer.
Contains refrigerated gas; may cause cryogenic burns or injury.
May cause frostbite.
Combustibles in contact with Liquid Oxygen may explode on ignition or impact.

**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. Open valve slowly. Use only with equipment cleaned for Oxygen service. Always keep container in upright position. Do not change or force fit connections. Avoid spills. Do not walk or roll equipment over spills.

**Prevention**: Wear cold insulating gloves and face shield. Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves free from grease and oil. Use and store only outdoors or in a well ventilated place.

**Response**: Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention. In case of fire: Stop leak if safe to do so.

**Storage**: Store in a well-ventilated place.

**Disposal**: Not applicable.

**Hazard not otherwise classified**: Liquid can cause burns similar to frostbite.

Date of issue/Date of revision: 1/31/2018  
Date of previous issue: 2/12/2016  
Version: 0.02  
1/11
**Section 3. Composition/information on ingredients**

**Substance/mixture**: Substance

**Chemical name**: Oxygen Refrigerated Liquid

**Other means of identification**: Liquid Oxygen; LOX; Liquid Oxygen USP

**Product code**: 001190

**CAS number/other identifiers**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen Refrigerated Liquid</td>
<td>7782-44-7</td>
<td>100</td>
</tr>
</tbody>
</table>

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.

**Section 4. First aid measures**

**Description of necessary first aid measures**

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If 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. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. Never give anything by mouth to an unconscious person. 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. As this product rapidly becomes a gas when released, refer to the inhalation section.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact**: Extremely cold material. Liquid can cause burns similar to frostbite.
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: Extremely cold material. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- **Frostbite**: Try to warm up the frozen tissues and seek medical attention.
- **Ingestion**: Ingestion of liquid can cause burns similar to frostbite.

**Over-exposure signs/symptoms**

- **Eye contact**: Adverse symptoms may include the following:, frostbite
- **Inhalation**: No specific data.
- **Skin contact**: Adverse symptoms may include the following:, frostbite
- **Ingestion**: Adverse symptoms may include the following:, frostbite
Section 4. First aid measures

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.

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. Contains refrigerated gas. Oxidizing material. This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products: No specific data.

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. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

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. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. 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. Use spark-proof tools and explosion-proof equipment.
Section 6. Accidental release measures

Large spill: Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. 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. Contains refrigerated gas. Do not get in eyes or on skin or clothing. Avoid breathing gas. 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.

Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture. Empty containers retain product residue and can be hazardous. Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves free from grease and oil.

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 in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). 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). Separate from reducing agents and combustible materials. Store away from grease and oil. Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name | Exposure limits
--- | ---
Oxygen Refrigerated Liquid | None.

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

Date of issue/Date of revision: 1/31/2018  Date of previous issue: 2/12/2016  Version: 0.02
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. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. 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**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Thermal hazards**: If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

Section 9. Physical and chemical properties

**Appearance**
- **Physical state**: Cryogenic Liquid
- **Color**: Colorless. Blue.
- **Odor**: Odorless.
- **Odor threshold**: Not available.
- **pH**: Not available.
- **Melting point**: -218.4°C (-361.1°F)
- **Boiling point**: -183°C (-297.4°F)
- **Critical temperature**: -118.15°C (-180.7°F)
- **Flash point**: [Product does not sustain combustion.]
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Extremely flammable in the presence of the following materials or conditions: reducing materials, combustible materials and organic materials.
- **Lower and upper explosive (flammable) limits**: Not available.
- **Vapor pressure**: Not available.
- **Vapor density**: 1.1 (Air = 1)
- **Specific Volume (ft³/lb)**: 12.0482
- **Gas Density (lb/ft³)**: 0.083
- **Relative density**: Not applicable.
- **Solubility**: Not available.
- **Solubility in water**: Not applicable.
- **Partition coefficient: n-octanol/water**: 0.65
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not applicable.
- **Flow time (ISO 2431)**: Not available.
- **Molecular weight**: 32 g/mole

Date of issue/Date of revision: 1/31/2018
Date of previous issue: 2/12/2016
Version: 0.02
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 : Highly reactive or incompatible with the following materials:
- combustible materials
- reducing materials
- grease
- oil

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.

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
Oxygen, Refrigerated Liquid

Section 11. Toxicological information

**Eye contact**
- Extremely cold material. Liquid can cause burns similar to frostbite.

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

**Skin contact**
- Extremely cold material. Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

**Ingestion**
- Ingestion of liquid can cause burns similar to frostbite.

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

- **Eye contact**: Adverse symptoms may include the following:, frostbite
- **Inhalation**: No specific data.
- **Skin contact**: Adverse symptoms may include the following:, frostbite
- **Ingestion**: Adverse symptoms may include the following:, frostbite

**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**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen Refrigerated Liquid</td>
<td>0.65</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

<table>
<thead>
<tr>
<th>Date of issue/Date of revision</th>
<th>Date of previous issue</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/31/2018</td>
<td>2/12/2016</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Section 12. Ecological information

Soil/water partition coefficient ($K_{oc}$) : Not available.

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

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or 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

<table>
<thead>
<tr>
<th>UN number</th>
<th>DOT</th>
<th>TDG</th>
<th>Mexico</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Oxygen, Refrigerated Liquid</td>
<td>Oxygen, Refrigerated Liquid</td>
<td>Oxygen, Refrigerated Liquid</td>
<td>Oxygen, Refrigerated Liquid</td>
<td>Oxygen, Refrigerated Liquid</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.2 (5.1)</td>
<td>2.2</td>
<td>2.2 (5.1)</td>
<td>2.2 (5.1)</td>
<td>2.2 (5.1)</td>
</tr>
<tr>
<td>Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

Additional information

DOT Classification : Limited quantity Yes.  
Quantity limitation Passenger aircraft/rail: 75 kg. Cargo aircraft: 150 kg.  
Special provisions A52

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.23-2.25 (Class 5).  
Explosive Limit and Limited Quantity Index 0.125  
ERAP Index 3000  
Passenger Carrying Ship Index 50  
Passenger Carrying Road or Rail Index 75  
Special provisions 42


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.
Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 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.
  - **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.

International regulations
- **Chemical Weapon Convention List Schedules I, II & III Chemicals**: Not listed.
- **Stockholm Convention on Persistent Organic Pollutants**: Not listed.
- **UNECE Aarhus Protocol on POPs and Heavy Metals**: Not listed.

**Inventory list**
- **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**: Japan inventory (ENCS): Not determined.
  - Japan inventory (ISHL): Not determined.
- **Malaysia**: Not determined.

Date of issue/Date of revision: 1/31/2018  
Date of previous issue: 2/12/2016  
Version: 0.02
Section 15. Regulatory information

- 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.
- Thailand: Not determined.
- Turkey: Not determined.
- United States: This material is listed or exempted.
- Viet Nam: Not determined.

Section 16. Other information

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

<table>
<thead>
<tr>
<th>Health</th>
<th>/</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Physical hazards</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

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 and the associated label are not required on SDSs or products leaving a facility 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 trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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

<table>
<thead>
<tr>
<th>Health</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special</td>
<td>OX</td>
</tr>
</tbody>
</table>

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXIDIZING GASES - Category 1</td>
<td>Expert judgment</td>
</tr>
<tr>
<td>GASES UNDER PRESSURE - Refrigerated liquefied gas</td>
<td>Expert judgment</td>
</tr>
</tbody>
</table>

History

- Date of printing: 1/31/2018
- Date of issue/Date of revision: 1/31/2018
- Date of previous issue: 2/12/2016
- Version: 0.02
Section 16. Other information

**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
- UN = United Nations

**References**
- Not available.

**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.
SAFETY DATA SHEET

DATE PREPARED: 12-11-1991  Date Updated: 04-05-2016

SECTION 1  PRODUCT IDENTIFY

PRODUCT NAME: Oxygen Equipment Cleaner
MANUFACTURER'S NAME: Applied Home Healthcare Equipment
COMPANY ADDRESS: 28825 Ranney Parkway Westlake OH 44145
CO. PHONE NO: 440-716-9962 Email: med@applied-inc.com

Emergency number=423-562-3191

SECTION 2  HAZARDOUS INGREDIENTS - HAZARD DATA

CHEMICAL NAMES  CAS Registry No.:No toxic and no hazardous ingredients are to be listed. In accordance with SARA right to know the only listing is Diethylene Glycol Mono Butyl Ether. CAS#: 112-34-5 <10% The NAICS code=325600. Export Classification Code=3401.96.5810. All ingredients appear on TSCA inventory list. No Carcinogen. All ingredients are biodegradable. Cage Code=05184.DOD Data SDS Code =6850-00F030633. Military Critical Technical Data Agreement #:0018974

SECTION 3  Composition /Information on Ingredients

"NOTE" This listing is for the concentrated ingredient only. 1.Diethylene Glycol Mono Butyl Ether=<10% CAS#=112-34-5 No TWA or Steel Limits. A blend of Ionic and Non-Ionic surfactants and a Glycol Ether. 50% solids and 50% water. Product is a PROPRIETARY Formulation all ingredients are on the TSCA inventory list. Approx 50% water and the other ingredients are supplied under a confidential agreement only.

SECTION 4  FIRST AID INFORMATION

Primary Entry Routes: Ingestion, Eyes, Skin and Vapor Inhalation.

Skin contact: Product can cause redness and prolonged contact can cause defatting of the skin. Wearing rubber gloves is recommended.
EYE CONTACT: Irritation and burn to eyes. Safety glasses or face shield are recommended. Eye contact should not cause any permanent damage and contact with the eyes must be flushed with fresh water.
INHALATION: Irritation of mucous membrane and upper respiratory tract.
INGESTION: This product is not food grade. However, if the product is accidently swallowed, give the person water or milk. Medical conditions aggravated by long term chronic exposure=NONE
Chronic Effects: =NONE

SECTION 5  FIRE & EXPLOSION HAZARD DATA

FLASH POINT °F (TEST METHOD C.O.C.) Not flammable.
AUTOIGNITION TEMPERATURE: N/A
FLAMMABILITY LIMITS IN AIR (% V): N/A
EXTINGUISHING MEDIA: No restrictions known, use media appropriate for surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES: Recommend that self-contained breathing apparatus and protective clothing be worn in areas where this product is involved in a fire. Use water spray to keep containers cool and to knock down flames.
UNUSUAL FIRE & EXPLOSION HAZARDS: May release oxides of carbon when heated to extreme temperatures.

SECTION 6  SPILL OR LEAK PROCEDURES

SMALL SPILLS: Flush with plenty of water to sewers. Dike spill & neutralize to neutral pH. If local sewer regulations permits, flush neutralized waste to sewer. Otherwise absorb and place in closed containers for disposal. Neutralized waste may have to be disposed of by an approved contractor.

NEUTRALIZING MATERIALS: Dilute acids.
WASTE DISPOSAL METHODS: Follow all local, state, and federal regulations.

SECTION 7  HANDLING & STORAGE

HANDLING & STORAGE PRECAUTIONS: Do not get in eyes, on skin, or breathe vapors.
Do not take internally.
Keep containers closed when not in use.
Store in cool area from heat sources. Not for food or drug use.

OTHER PRECAUTIONS: None

SECTION 8  SPECIAL PROTECTION INFORMATION

VENTILATION: Local ventilation sufficient to maintain the TLV.
RESPIRATORY PROTECTION: Use a NIOSH approved respirator for mists if conditions warrant.
EYE PROTECTION: Chemical splash goggles.
OTHER PROTECTIVE EQUIPMENT: Wear full work clothing. Rubber apron will provide additional protection.

SECTION 9  PHYSICAL & CHEMICAL PROPERTIES

Boiling point @ 760 mm Hg. F: Approx. 220
Freezing point, °F: 32
pH: 10% Solution: 11.8t12.8
Specific Gravity or Bulk Density: 1.07
Solubility in Water: 100
Appearance & odor: Blue Liquid-Mild Fragrance
Vapor Pressure mm Hg @ 20°C: Less than 20
Vapor Density (Air=1%) Not determined
Evaporation Rate (Bu/Ac=1) Less than 1
SECTION 10: REACTIVITY DATA

PRODUCT STABILITY: Product is stable under normal usage. Strength will decline with age.

CONDITIONS TO AVOID: High temperatures.

CHEMICAL INCOMPATIBILITY: Acids & strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur oxides & oxides of carbon.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

The product blend has not been tested. This toxicological data is for the concentrated glycol ether.

1. Glycol Ether= Oral LD 50®rat) 7292mg/kg. Oral LD 50: (mouse) 2,406 mg/kg. Dermal LD 50: (rabbit) 2,764 mg/kg. SKIN irritation (guinea pig)= Slight eye irritation (rabbit)= Moderate

SECTION 12: ECOLOGICAL INFORMATION

ECO TOXICITY: This product may be considered acute to aquatic flat head minnows and should not be disposed of indiscriminately.

However, if the diluted mixtures are properly neutralized the potential for toxicity will be greatly reduced or completely eliminated.

ENVIRONMENTAL FATE: The use of this cleaning blend has been in use here in America and foreign countries for many years with no negative results concerning the environment. This product is biodegradable. However, in concentrated form it is slow to biodegrade.

SECTION 13: DISPOSAL CONSIDERATIONS:

If local sewer facilities allow the pH of the mixed solution, always check with the local and federal requirements. The used mixtures can be run through an ultra-filtration system as a recycling method. The liquid can be boiled off and the sludge disposed of in an approved manner. Through natural evaporation, or the use of alcohol. If nuclear waste or radiation waste is present in the waste solution, adding acid will reduce the waste from a higher U count to a lower point. Most BOD & COD type waste facilities will issue permits for disposal. Allow the mixed waste solution to remain idle and the petroleum oils will float to the top and can be skimmed while the sludge will sink to the bottom of the tank. Always check with local and state waste treating facilities for regulated disposal.

SECTION 14: TRANSPORTATION INFORMATION


ICAO/IATA: Not regulated. RID/ADR= Not regulated. Canadian TDG= Not regulated. NO KNOWN RESTRICTIONS FOR TRANSPORTATION. Export Classification Code= 3402.90.2050

SECTION 15: REGULATORY INFORMATION

TSCA Inventory= Listed. DSL. inventory= Listed. EC= Listed. KOREA= Listed. RCRA= Listed. CERCLA= Not reportable.

Australia= Listed. China= Listed. Philippines= Listed. SARA 313= CAS#: 112-34-5= Diethylene Glycol Mono Butyl Ether<10%

HMIS RATING: HEALTH= 1 FIRE= 0 REACTIVITY = 0 PERSONAL PROTECTION= B

SECTION 16: OTHER INFORMATION

N.A.= Not Applicable. NAICS= North American Industry Classification System. COC= Cleveland open cup.


IMPORTANT NOTICE: The information contained herein is based upon data available to us and is believed to be correct. However, Applied Home Healthcare Equipment makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Applied Home Healthcare Equipment assumes no responsibility for injury from the use of the product described herein.
EQUIPMENT MANAGEMENT FORM

( ) NEW SETUP
( ) SWAP
( ) 6 MONTH CHECK
( ) RX CHANGE
( ) HOSPICE
( ) NURSING HOME

NAME: ______________________________________  PHONE#: ______________________  DATE SERVICED: ________________

ADDRESS: ___________________________________________________________________________________________________}

RESPIRATORY & OTHER ELECTRICAL EQUIPMENT:

( ) AIR COMPRESSOR:  MFR / Model__________________________________________ S#_________________  PMI DUE:________

( ) APNEA MONITOR:  MFR / Model____________________________________________ S#_________________  PMI DUE:________

( ) BI-PAP:  MFR / Model____________________________________________________ S#_________________  Hours: ____________

( ) CONCENTRATOR:  MFR / Model____________________________________________ S#_________________  Hours: ____________

( ) C-PAP:  MFR / Model____________________________________________________ S#_________________  Hours: ____________

( ) ENTERAL:  MFR / Model__________________________________________________ S#_________________  PMI DUE:__________

( ) OTHER:  MFR / Model____________________________________________________ S#_________________

CONCENTRATION:  (< 90% = SWAP)
1L@________________ BACK UP PORTABLES:  ( ) Q CYL #_________________________
2L@________________  ( ) E CYL #_________________ EA.
3L@________________  ( ) C CYL #_________________ EA.
4L@________________  ( ) OTHER
5L@________________

FLOW RATE/PRESSURE:  ACCURATE?  ( ) YES ( ) NO  TANKS STORED APPROPRIATELY?  ( ) YES ( ) NO
HYDROSTATIC TEST DUE DATE  (EXPIRES EVERY 5 YEARS – unless stamped with SP special provisions for 10 yrs)
Q TANKS:  ______/_____/______  HOMEFILL TANKS  ______/_____/______  CONTINUOUS HOMEFILL TANKS  ______ OR CONSERVER HOMEFILL TANKS  ______

INTERNAL FILTER:  ( ) CHANGED (PMI in 6 months)  EXTERNAL FILTER:  ( ) CHANGED
( ) NONE  (PMI annually)  ( ) CLEANED
( ) NA

TUBING:  ( ) CHANGED BY US and reminded to change cannula weekly and tubing monthly
( ) CHANGED BY CUSTOMER and reminded to change cannula weekly and tubing monthly
( ) 10L Conc must use high flow cannula and high flow water bottle

OXYGEN SENSOR:  ( ) N / A  HUMIDIFIER:  ( ) NONE USED
( ) GREEN  ( ) CLEANED BY CUSTOMER21
YELLOW (fix or exchange unit)  ( ) ADVISED IN PROPER CLEANING
RED (fix or exchange unit)  ( ) HUMIDIFLOW

PRESCRIBED USE / SETTINGS: ________________________________ Liters per minute / Pressure/ Flow

ACTUAL USE / SETTINGS: ________________________________ Liters per minute / Pressure/ Flow

Note: If Actual Use is different from Prescribed Use A, Customer re-educated and placed on prescribed setting OR B.
Physician that approved the change is: ________________________________

CIRCLE: A OR B OR SAME

ACCOUNT # ________________

ADFM02421
## Equipment Management Form

**Plan of Service Update**

### Home Safety:
- ( ) Adequate
- ( ) Advised RE:

### Client Knowledge:
- ( ) Adequate
- ( ) Advised RE:

### Compliance:
- ( ) Adequate
- ( ) Advised RE:

### Goals:

<table>
<thead>
<tr>
<th>Goal</th>
<th>Goal Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client / caregiver will indicate understanding of use of equipment</td>
<td>( ) YES</td>
</tr>
<tr>
<td>Client / caregiver will use equipment as prescribed by Physician</td>
<td>( ) YES</td>
</tr>
<tr>
<td>Client / caregiver will clean/maintain equipment appropriately</td>
<td>( ) YES</td>
</tr>
<tr>
<td>(Other):</td>
<td>( ) YES</td>
</tr>
</tbody>
</table>

Problem noted: ( ) NO ( ) YES if YES, ____________________________________________________________________________________________

Action taken: If YES, ____________________________________________________________________________________________

Supplies used: (product #): ____________________________________________________________________________________________

### Reminders:

<table>
<thead>
<tr>
<th>Reminder</th>
<th>YES</th>
<th>NO</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is Back-up secure or lying down?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Are Portables stored lying down?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Advised not to store portables in closet or in the trunk?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Electrical cord condition is good?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Electrical outlet tested and grounded?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Electrical cord pulled to test power outage alarm</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Smoke detectors / fire extinguishers present?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Tubing changed, filter cleaned per protocol?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Oxygen tubing clear of radiators?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Advised not to use petroleum-based lubricants, (ie, no Vaseline)</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>(use water based lubricants like KY Jelly)</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Liter flow tested &amp; accurate with flow pen closest to patient</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Advised client how / when to utilize b-u tank?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Visualized client able to turn on/off b-u tank &amp; portable tanks</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Are no smoking signs posted?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
<tr>
<td>Multiple caregivers? If so, are all educated re: equip use? Safety?</td>
<td>(   )</td>
<td>(   )</td>
<td></td>
</tr>
</tbody>
</table>

CareLinc Representative: _____________________________ Date: __________________

Customer Signature: ____________________________________

ACCOUNT # ___________________

ADFM02421
OXYGEN CALL LIST

☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday

☐ Automatic Stop ☐ Call Weekly ☐ Every 2 Weekly ☐ Call 6 months ☐ Call Annually

(except MCR 3-5 yr customers, identify who called in the order and how much they have left)

Note:
1. Customers must be aware of their delivery day. They should call before noon on the business before their delivery day. We should not have "will call us" customers! After the first month, homefill and night time customers with internal filter concentrators will be called and have a home PMI at least every 6 months. Night time customers without internal filters must have a home PMI annually.
2. When making oxygen calls, if a customer only has 1-2 empty tanks, see if they have enough full tanks to last them another week.
3. Check on all repeat supplies with every 6 month / annual check. I.e. neb kits and filters, cpap / bipap supplies, etc
4. Confirm address, insurance and physician information with every supply order.

Name: ____________________________________________ Phone: __________________

(always make calls while looking at and updating the customers information in the computer)

(circle) OXL  OXQ  OXM  OXE  OXD  OXC  OXB

(circle) Home-Fill Cylinder: Continuous Conserver or Helios or Conserver

Comments/Supplies: ______________________________________________________

Other Equipment: _______________________________________________________

(circle) Rental Air Compressor with internal filter or Rental Enteral Pump

Annual check due_______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

Annual check due_______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

(use form ADFM024 for all oxygen set ups, all rental swaps, and rental equipment checks)

Concentrator Set up date _______ internal filter = every 6 months / no internal filter = annually

Physicians order: LPM _______ Duration _______ (check most current prescription / CMN on on-base, see DTWI004.)

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

PMI check due _______ Form ADFM024 initiated ___/___/___ By: ________ PMI Completed date ___/___/___

Account #: ___________________
Directions to Home / Special Instructions:

Deliveries

<table>
<thead>
<tr>
<th>Date / Qty.</th>
<th>Date / Qty.</th>
<th>Date / Qty.</th>
<th>Date / Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

Account #: __________________
A portable oxygen concentrator (POC) is designed to use the air around you and turn it into medical oxygen prescribed by your doctor.

Lightweight and hands-free with included carry case/straps, our POC’s are designed to move with you.

**Improve your quality of life!**

Forget the days of lugging around heavy oxygen cylinders and breathe easy, a POC is made for your on-the-go lifestyle.

CareLinc only offers top-of-the-line POC options.

**Call today or stop into our closest CareLinc to find out which may be best suited for you!**

---

**PORTABLE OXYGEN CONCENTRATORS**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Setting</th>
<th>O2 Output</th>
<th>Single Battery</th>
<th>Double Battery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>210 ml/min</td>
<td>4.75 hrs</td>
<td>10.25 hrs</td>
</tr>
<tr>
<td>2</td>
<td>420 ml/min</td>
<td>4.5 hrs</td>
<td>9.7 hrs</td>
</tr>
<tr>
<td>3</td>
<td>630 ml/min</td>
<td>3.0 hrs</td>
<td>6.7 hrs</td>
</tr>
<tr>
<td>4</td>
<td>840 ml/min</td>
<td>2.25 hrs</td>
<td>4.75 hrs</td>
</tr>
<tr>
<td>5</td>
<td>1,050 ml/min</td>
<td>1.75 hrs</td>
<td>3.75 hrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Setting</th>
<th>O2 Output</th>
<th>Single Battery</th>
<th>Double Battery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>210 ml/min</td>
<td>2.7 hrs</td>
<td>5.0 hrs</td>
</tr>
<tr>
<td>2</td>
<td>420 ml/min</td>
<td>2.25 hrs</td>
<td>4.5 hrs</td>
</tr>
<tr>
<td>3</td>
<td>630 ml/min</td>
<td>1.3 hrs</td>
<td>2.5 hrs</td>
</tr>
</tbody>
</table>

At a tiny 2.8 lbs—the OxyGo FIT® is the ultra-lightweight POC!

**CareLinc Price**

- **$2,495.00**

**Setting**

- 1 210 ml/min
- 2 420 ml/min
- 3 630 ml/min

**Battery Duration**

- *Up to 10.25 hours*
- *Up to 5 hours*

**O2 Capacity**

- 1050 ml/min
- 630 ml/min

**Flow Settings**

- 1, 2, 3, 4, 5
- 1, 2

**Size**

- 8.75” x 3” x 7.25”
- 5.9” x 2.68” x 7.2”

**Warranty**

- 3 year limited
- 3 year limited

**Sound Level**

- 39 decibels
- 40 decibels

**FAA Approved**

- ✓
- ✓

**CareLinc Price**

- **$2,495.00**

*Approximate and based on breaths per minute using the double-cell battery. See duration chart based on oxygen flow setting and battery usage.

We accept Mastercard, Visa & Discover. We also offer CareCredit financing options to help pay out-of-pocket expenses.

**888.810.5462**

www.carelincmed.com