

CGA P-67 — 2024

2ND EDITION

**GUIDELINE FOR THE
SAFE TRANSPORT
OF MEDICAL OXYGEN
OR OXYGEN
CONCENTRATORS
FOR PERSONAL USE**



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NOTE—Technical changes from the previous edition are underlined.

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Contents	Page
1 Scope and purpose	1
2 Definitions.....	1
3 Transporting medical oxygen for personal use	2
3.1 General safety practices for medical oxygen and oxygen equipment	2
3.2 Pre-boarding inspection procedures.....	3
3.3 Training.....	4
3.4 Operator procedures	4
4 Aircraft.....	4
4.1 General.....	4
4.2 Medical certificates for fitness to travel.....	5
4.3 Boarding	6
4.4 Layovers.....	6
5 Public watercraft.....	6
5.1 General.....	6
5.2 Cruise lines.....	7
5.3 Ferries, water taxis, and charter boats	7
6 Trains	7
6.1 General.....	7
6.2 For transportation in passenger compartments.....	7
7 Buses, shuttles, taxis, and other road vehicles	8
7.1 Commercial vehicles	8
7.2 Transportation in passenger compartments.....	8
7.3 Transportation in cargo departments.....	8
8 References	8

Appendix

Appendix A—Examples of oxygen equipment and cylinder marking (Informative).....	10
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Appendix figures

Figure A-1—Example of a high pressure medical oxygen cylinder with regulator on rolling cart	10
Figure A-2—Examples of high pressure medical oxygen gas cylinders with regulators (U.S. and Canada) (left and center) and in use in a carrying bag (right)	10
Figure A-3—Example of a portable medical liquid oxygen container.....	11
Figure A-4—Example of a portable oxygen concentrator (left) and in use in a carrying bag (right)	11
Figure A-5—Example of a stationary oxygen concentrator.....	12
Figure A-6—Example of a medical oxygen cylinder with both DOT and TC marks.....	12

1 Scope and purpose

This guideline provides information for the compressed gas industry and operators of private, public, and commercial vehicles who will be transporting users of medical oxygen on the safe storage and handling of medical oxygen. It addresses medical oxygen in high pressure cylinders and liquid oxygen containers as well as medical oxygen produced by oxygen concentrators. See the figures in Appendix A for examples of these types of medical oxygen containers and devices.

This publication includes guidance on the properties and hazards of oxygen and the segregation and securing of cylinders/containers in passenger and cargo areas. It should not be assumed that all applicable safety and security precautions or regulations are presented in this publication.

Private, public, and commercial vehicles are those intended for the transportation of passengers. Examples include but are not limited to aircraft, trains, buses, cruise ships, taxis, shuttles, and automobiles. Vehicles not covered in this publication are those for emergency response.

This publication does not address oxygen that is carried or generated on public and commercial transportation for emergency purposes or that has not been prescribed for personal use, e.g., drop down oxygen masks on aircraft.

2 Definitions

For the purpose of this publication, the following definitions apply.

2.1 Publication terminology

2.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

2.1.2 Should

Indicates that a procedure is recommended.

2.1.3 May

Indicates that the procedure is optional.

2.1.4 Will

Is used only to indicate the future, not a degree of requirement.

2.1.5 Can

Indicates a possibility or ability.

2.2 Technical definitions

2.2.1 Container

Vessel meeting the specifications of the U.S. Department of Transportation (DOT), Transport Canada (TC), or the American Society of Mechanical Engineers (ASME), which are of various shapes, sizes, materials of construction, and design.

NOTE—Containers as used in this publication include high pressure cylinders and liquid oxygen units.

2.2.2 Medical oxygen

Oxygen that conforms to the U.S. Pharmacopeia monograph (Oxygen USP) and which is manufactured and labeled in accordance with U.S. Food and Drug Administration (FDA) or Health Canada requirements [1, 2, 3].¹

¹ References are shown by bracketed numbers and are listed in order of appearance in the reference section.

2.2.3 Operator

Employees, handlers, or agents of air, boat, train, and private or commercial vehicle modes of transportation that are intended for the transportation of passengers.

2.2.4 Oxygen-enriched atmosphere

Air and gas mixtures in which the oxygen concentration by volume exceeds 23.5% at sea level or whose partial pressure of oxygen exceeds 175 torr (mm Hg).

2.2.5 Oxygen concentrator

Electrically powered medical device that removes nitrogen from ambient air to supply an oxygen-enriched gas mixture.

NOTE—This terms includes both portable oxygen concentrators (POC) and stationary oxygen concentrators.

2.2.6 Oxygen equipment

Equipment, which includes high pressure cylinders, liquid oxygen containers, pressure regulators, and oxygen concentrators, used to store and administer medical oxygen.

2.2.7 Passenger

Any traveler in a private or commercial vehicle, including the individual using medical oxygen, other than the operator.

2.2.8 Pressure regulator

Gas pressure-reducing and -controlling device designed to provide a controlled delivery (downstream) pressure over a range of variable inlet (cylinder) pressures and/or flow rates.

NOTE—A pressure regulator can have one or more stages of pressure reduction.

2.2.9 Pressure relief device (PRD)

Device designed to relieve pressure at a preset value.

3 Transporting medical oxygen for personal use

Oxygen equipment that is supplied by medical equipment distributors and/or fillers is maintained in accordance with manufacturer requirements and preventive maintenance procedures. Oxygen released from oxygen equipment can create an oxygen-enriched atmosphere that will support combustion and can accelerate a fire, which will burn hotter and faster than in air. Where an operator permits the transport and use of medical oxygen, whether passenger-supplied or supplied by the operator, the onus is on the operator to develop safety procedures and to ensure safety for all occupants.

Medical oxygen is available for use in three modalities:

- as a compressed gas in a high pressure cylinder;
- as a cryogenic liquid in a liquid oxygen container; or
- as gas supplied by an oxygen concentrator.

Each of the previous modalities require that safety procedures be developed and implemented in order to ensure safe transportation.

The following information applies to medical oxygen for personal use in all modes of public and commercial transport and where applicable, when transported in private vehicles. Details regarding specific modes of transport are given in subsequent sections.

3.1 General safety practices for medical oxygen and oxygen equipment

Passengers who require medical oxygen are dependent upon the oxygen for medical reasons and are under the care of a physician. Oxygen should be transported on public or commercial modes of transportation and in private vehicles only when medically necessary.