

CGA G-4.3—2015
COMMODITY SPECIFICATION
FOR OXYGEN
SEVENTH EDITION

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Work Item 10-033
Atmospheric Gases and Equipment Committee

NOTE—Technical changes from the previous edition are underlined.

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Contents	Page
1 Scope	1
2 Definitions.....	1
3 Classification	1
3.1 Quality verification levels (grades).....	1
3.2 Types.....	1
3.3 Quality tests.....	1
4 Quality verification systems.....	3
4.1 Production qualification tests.....	3
4.2 Analytical requirements of the production qualification tests.....	3
4.3 Lot acceptance tests.....	3
5 Sampling	4
5.1 Sample size.....	4
5.2 Gaseous samples.....	4
5.3 Liquid samples.....	4
6 Analytical procedures	4
6.1 Parameters of analysis.....	4
6.2 Percent oxygen.....	5
6.3 Acetylene content.....	5
6.4 Carbon dioxide content.....	6
6.5 Carbon monoxide content	6
6.6 Ethane and other hydrocarbons (as ethane) content	6
6.7 Ethylene content.....	7
6.8 Halogenated refrigerant or solvent content	7
6.9 Methane content.....	7
6.10 Nitrogen content.....	7
6.11 Nitrous oxide content.....	7
6.12 Odor.....	7
6.13 Other components.....	8
6.14 Permanent particulates of Type II.....	8
6.15 Total hydrocarbon content.....	8
6.16 U.S. Pharmacopeia tests.....	8
6.17 Water content	8
7 Containers	11
7.1 Oxygen containers.....	11
7.2 Container preparation.....	11
7.3 Oxygen (USP)	11
7.4 Valves on oxygen containers.....	12
8 References	12
 Tables	
Table 1—Directory of limiting characteristics/quality verification levels (QVL).....	2
Table 2—Typical uses.....	2
Table 3—Moisture conversion data [9]	9

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1 Scope

This publication describes specification requirements for gaseous and liquid oxygen produced only by the air liquefaction process. The term container as used in this publication shall refer to portable compressed gas cylinders and liquid containers made in accordance with Title 49 of the U.S. *Code of Federal Regulations* (49 CFR) Parts 100-180; Transport Canada's (TC) *Transportation of Dangerous Goods Regulations*; or ASME *Boiler & Pressure Vessel Code*, Section VIII, Div 1 [1, 2, 3].¹

WARNING: For safety reasons, do not permit oxygen to come in contact with oil, grease, asphalt, or similar substances. Use equipment cleaned for oxygen service in accordance with CGA G-4.1, *Cleaning Equipment for Oxygen Service* [4].

This publication does not attempt to recommend or establish end usage designations for specific types or grades of products. It is suggested that users requiring this kind of information contact individual gas suppliers.

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.

3 Classification

3.1 Quality verification levels (grades)

Table 1 presents the component maxima in parts per million (ppm [v/v]), unless otherwise shown, for the quality verification levels (QVL) of oxygen. The absence of a value in a listed QVL does not mean that the limiting characteristic is or is not present but merely indicates that the test is not required for compliance with the specification. Typical uses are listed in Table 2.

3.2 Types

Gaseous oxygen is denoted as Type I and liquid oxygen as Type II.

3.3 Quality tests

The supplier will ensure, by standard practice, the QVL of oxygen. If otherwise required, alternative control procedures are described in 4.3.1, 4.3.2, and Sections 5 and 6. Other control procedures not listed in this publication are acceptable if agreed to by the supplier and the customer.

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