



CGA M-18—2022
STANDARD FOR THE CHANGE
OF PRODUCT AND CHANGE OF
GRADE FOR HIGH PRESSURE
AND REFRIGERATED LIQUID
CONTAINERS

SECOND EDITION

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NOTE—Technical changes from the previous edition are underlined.

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1 Introduction

This standard describes a process the compressed gas industry uses to develop a standard operating procedures (SOP) for changing grade of non-U.S. Food and Drug Administration (FDA)/Health Canada (HC) regulated product to FDA/HC regulated product for compressed gas containers. This standard also describes the process for change of service (COS) within regulated products. This standard also references CGA C-10—2019, *Guideline to Prepare Cylinders and Tubes for Gas Service and Changes in Gas Service* for SOPs for the change of service (COS) from one product to another for compressed gas containers, including tube trailers and cryogenic liquid containers other than liquid bulk trailers [1].¹

2 Scope

The scope of this standard is the qualification of the change of grade (COG) process, which involves the conversion of a non-FDA/HC regulated compressed gas container to a FDA/HC regulated compressed gas container. This standard also addresses the COS between FDA/HC regulated products including from one pure gas or gas mixture product to another referring to the process details covered in CGA C-10 [1]. This standard also addresses the record keeping requirements for FDA/HC regulated gas COG and COS. This standard addresses high pressure cylinders including tube trailers and cryogenic liquid containers.

This standard does not apply to liquid bulk trailers, or large cryogenic bulk storage containers. This standard also does not apply to containers previously containing corrosive, poisonous, pyrophoric, radioactive, and toxic gases see Appendix A of CGA C-10 [1].

3 Definitions

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

3.1 Publication terminology

3.1.1 Shall

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

3.1.2 Should

Indicates that a procedure is recommended.

3.1.3 May

Indicates that the procedure is optional.

3.1.4 Can

Indicates a possibility or ability.

3.1.5 Will

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

3.2 Technical definitions

3.2.1 Change of grade (COG)

Converting a container that previously contained non-FDA/HC regulated grade to a FDA/HC regulated grade of the same product, for example, nonmedical oxygen to medical oxygen, USP.

3.2.2 Change of service (COS)

Converting a container that previously contained one product to a different product, for example, oxygen to nitrogen or nitrogen for food use to nitrogen for medical use.

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