Compressed Gas Association
The Standard For Safety Since 1913

CGA P-1—2022

STANDARD FOR SAFE HANDLING OF COMPRESSED GASES IN CONTAINERS

THIRTEENTH EDITION

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Work Item 20-004
Safety and Health Committee

NOTE—Technical changes from the previous edition are underlined.

NOTE—Appendix A (Normative) is a requirement.

THIRTEENTH EDITION: 2022
TWELFTH EDITION: 2015
ELEVENTH EDITION: 2008
TENTH EDITION: 2006

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1 Introduction

Users of gases supplied in containers as compressed or liquefied gases or as cryogenic or refrigerated liquids shall become familiar with the properties and inherent hazards of the products they use. Valuable information about each specific gas is contained in its product labeling and safety data sheet (SDS). Read this information and inform others of the importance of understanding and applying the precautions recommended within the available safety literature.

The user is cautioned that hazard classification systems exist for labeling, storage, transportation, security, and other purposes, particularly from regulatory agencies, which can result in a different classification of the hazard. In addition, there can be additional hazards not addressed in this standard; therefore, the user should consult the gas supplier's SDS for specific information. See Title 29 of the U.S. *Code of Federal Regulations* (29 CFR); CGA C-7, *Guide to Classification and Labeling of Compressed Gases*; and CGA P-19, *CGA Recommended Hazard Ratings for Compressed Gases* [1, 2, 3].[1] The user should perform due diligence to research any necessary codes or regulations that can affect the use of these products.

Safe handling practices for refrigerated liquefied gases and cryogenic liquids are based on understanding the specific properties of each gas. Procedures should be developed based on those specific properties and knowledge of the material compatibility of each gas. The compressed gas industry has developed safe handling, delivery, and equipment design methods that are specific to each refrigerated liquefied gas or cryogenic liquid discussed in this publication by obtaining a thorough understanding of the risks and hazards associated with each gas. This individualized approach minimizes the risks of handling and use of these gases.

2 Scope

This standard is primarily for the users of compressed gases in containers and is based upon accepted good practices. This standard also contains precautions that are applicable to gas suppliers and distributors. It should not be assumed that all applicable safety and security precautions or regulations are contained here.

The term "container" as used in this publication shall refer to portable compressed gas cylinders and liquid containers made in accordance with the U.S. Department of Transportation (DOT), Transport Canada (TC), or the American Society of Mechanical Engineers (ASME) specifications [4, 5, 6].

Additional information on the movement and handling of liquid containers with wheel bases can be found in CGA P-84, *Guideline for Safe Handling of Liquid Containers on Wheel Bases* [7].

Additional information and requirements contained in CGA P-2, *Guideline for Characteristics and Safe Handling of Medical Gases*, and other related publications it references should be reviewed when handling medical gases [8].

For the purpose of this publication, the use of the term compressed gas(es) includes cryogenic liquids, refrigerated liquids, and liquefied gases, unless otherwise noted.

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.

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