CGA C-7—2014

GUIDE TO CLASSIFICATION AND LABELING OF COMPRESSED GASES

TENTH EDITION

CGA
Compressed Gas Association
The Standard For Safety Since 1913

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Work Item 15-014
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NOTE—Due to the extensive changes in this document, technical changes from the previous edition are not identified.

NOTE—Appendices A, B, C, D, E, F, and G (Normative) are requirements.

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NINTH EDITION: 2011
EIGHTH EDITION: 2004
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1 Introduction

The compressed gas industry has developed precautionary labels and markings for use on containers of compressed gases, cryogenic liquids, and other hazardous materials for the purpose of identifying the contents, warning of principal physical, health, and environmental hazards, and providing appropriate precautionary information following the *Globally Harmonized System of Classification and Labeling of Chemicals* (GHS) as allowed by the U.S. Occupational Safety and Health Administration (OSHA) [1].

GHS was established by the United Nations (UN) to develop a means of hazard classification and communication via labels, pictograms, and consistent hazard language on a global basis. Internationally, competent authorities may adopt the GHS in whole or in part and may also require additional information on labels.

2 Scope

The Compressed Gas Association (CGA) has prepared this publication to state the general principles for labels and markings and give recommended minimum requirements for many hazardous gases and selected liquids. Additional information may be shown by gas suppliers if desired.

The methods of preparing label information established by GHS as required by Title 29 of the U.S. *Code of Federal Regulations* (29 CFR) Part 1910.1200 (OSHA's Hazard Communication Standard) have been followed to meet the specific labeling and marking needs of the compressed gas industry [1, 2].[1] OSHA's Hazard Communication Standard and the currently referenced edition of GHS shall be used in conjunction with this publication when classifying products and creating labels [2, 1].

This publication is not intended to address state, provincial, territorial, or local regulatory label and marking requirements such as the "Proposition 65" warnings required by the state of California.

Labels shall be applied to compressed gas and cryogenic liquid containers to identify the container contents and to warn of principal physical and health hazards associated with the container and its contents. Containers in transportation not exceeding 454 kg (1000 lb) water capacity require the U.S. Department of Transportation (DOT) and Transport Canada (TC) hazard label.

Labels as given herein with regard to cylinder handling and storage information may be modified with respect to format so they can be applied as required to fixed storage vessels, portable tanks, tube trailers, cargo tanks, or other packaging.

Labels shown in this publication are examples of labels and markings that warn of principal physical and health hazards involved in the handling and use of these specific products. The words label or labeling as used in this publication include labels, markings, decals, tags, stenciling, and similar methods of presenting precautionary information.

Appendix A illustrates the basic marking consisting of DOT or TC proper shipping name; identification number; and 30-mm (1.25-in) diamond, which is permitted under conditions authorized by DOT and TC regulations as an alternative to the DOT/TC 100-mm (3.9-in) diamond label and marking [3, 4].

Appendices B and C, provide additional labeling and marking information to aid in complying with applicable regulations of the U.S. Food and Drug Administration (FDA) for the labeling of medical gases, including mixtures, that are classified as drugs and medical devices.

Appendix D includes the GHS classifications and corresponding hazard and precautionary phrases, signal word, and GHS pictograms for the pure gases listed in this publication. This appendix also contains DOT's transportation classifications and CGA-developed hazard and precautionary phrases.

Appendix E provides a decision tree to determine the classification of gaseous mixtures in accordance with OSHA's Hazard Communication Standard [2].

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