CGA G-6.9—2019

DRY ICE

FOURTH EDITION

CGA
Compressed Gas Association
The Standard For Safety Since 1913

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Work Item 16-031
Carbon Dioxide Committee

NOTE—Technical changes from the previous edition are underlined.

FOURTH EDITION: 2019
THIRD EDITION: 2011
SECOND EDITION: 2004
FIRST EDITION: 1998

Contents **Page**

Figures

Appendix

Appendix Figures

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1 Introduction

This publication is one of a series compiled by the Compressed Gas Association, Inc. (CGA) to satisfy the demand for information relative to the production, storage, transportation, safe handling, and use of carbon dioxide in gaseous, liquid, and solid states. There are other CGA publications that provide similar information on other products.

CGA G-6, *Carbon Dioxide*, contains information critical to safe storage and handling of carbon dioxide [1].[1] To ensure personnel safety and proper system design, reference to CGA G-6 is highly recommended [1]. Without obtaining CGA G-6, the reader will not be provided with significant information related to the physical properties and common hazards associated with storage, production, transportation, and handling of carbon dioxide [1].

This publication addresses hazards specifically associated with dry ice.

2 Scope

This publication provides information on dry ice production, regulations, storage, handling, and applications, including direct food contact. This information is applicable to users, producers, and distributors. More information on the various aspects of dry ice and its transportation and use can be found in the references cited in this publication, which are listed in Section 11.

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 Will
Used only to indicate the future, not a degree of requirement.

3.1.5 Can
Indicates a possibility or ability.

3.2 Technical definitions

3.2.1 Carbon dioxide
Chemical compound consisting of one atom of carbon bonded to two atoms of oxygen expressed by the chemical formula CO_2.

3.2.2 Dry ice
Common name for solid carbon dioxide. Its temperature is –109.3 °F (–78.5 °C) at atmospheric pressure.

NOTE—The term dry ice shall not be confused with frozen water, which is commonly referred to as ice, water ice, or wet ice.

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