



**CGA G-6.4—2023
SAFE TRANSFER OF LIQUID
CARBON DIOXIDE IN
INSULATED CARGO TANKS,
TANK CARS, AND PORTABLE
CONTAINERS**

FIFTH EDITION

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Work Item 19-003
Carbon Dioxide Committee

NOTE—Technical changes from the previous edition are underlined.

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1 Introduction

Liquid carbon dioxide is transported in insulated tank cars, cargo tanks, and portable tanks. Shipping this product requires transferring it from production plant storage to a variety of shipping containers and subsequent transfer to storage containers at consumer sites. Accidents that occur during transfer operations are usually attributed to failure to follow established safe procedures.

2 Scope

The information contained in this publication is provided for personnel involved in the safe transfer of liquid carbon dioxide.

General procedures recommended for the safe loading and unloading of the different types of carbon dioxide containers are presented. The special hazards of liquid carbon dioxide associated with product transfer are explained so personnel can be properly trained for product handling.

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

Is 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 Approved

Acceptable to the authorities having jurisdiction (AHJ).

3.2.2 Appurtenances

All system components (excluding the container) such as pressure relief devices (PRDs), liquid level gauges, valves, pressure gauges, vaporizers, refrigeration systems, pumps, control equipment, and regulators.

3.2.3 Authorities having jurisdiction (AHJ)

Federal, state, provincial, territorial, local, or other bodies having regulatory authority over the equipment being installed or used.

3.2.4 Blow-down valve

Valve used to depressurize lines or systems.

3.2.5 Capacity

Maximum weight of carbon dioxide a container will hold when filled to the proper level.