CGA P-87—2020
(Formerly SB-36)

GUIDELINE FOR AVOIDING CONTAINER PRODUCT MIGRATION AND CONTAMINATION DURING USE

FIRST EDITION

Compressed Gas Association
The Standard For Safety Since 1913

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Work Item 18-020
Specialty Gases Committee

NOTE—Technical changes from SB-36—2006 edition are underlined.

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Contents **Page**

1 Introduction

While compressed gas containers have been filled and used safely for decades, wherever more than one container or process stream is connected to a system, there is potential for product migration or back contamination.

2 Scope

This publication is intended for users, fillers, and designers of gas delivery systems. It provides steps that can be taken to minimize, if not eliminate, the risk of product migration or back contamination.

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 Container
One of many types of pressure vessels that include but are not limited to cylinders, cylinder packs, ISO modules, multi-element gas containers, ton tanks, tubes, and tube trailers.

3.2.1.1 Bundle of cylinders
Arrangement of UN cylinders into a cluster where the cylinders are confined into a grouping or arrangement with a strapping or frame system and connections are made to a common manifold.

3.2.1.2 Cylinder
Seamless pressure vessel having a nominal water capacity up to 50 L.

3.2.1.3 Cylinder packs
Arrangement of cylinders into a cluster where the cylinders are confined into a grouping or arrangement with a strapping or frame system and connections are made to a common manifold.

3.2.1.4 ISO module
Multi-modal assembly of cylinders, tubes, or bundles of cylinders that are interconnected by a manifold and assembled within a framework.

NOTE—The ISO module includes service equipment and structural equipment necessary for the transport of gases. The frame of an ISO module and its corner castings are specially designed and dimensioned for use in multi-modal transportation service on container ships, special highway chassis, and container-on-flatcar railroad equipment. An ISO module may also be referred to in regulations as a MEGC and its' equivalent.