



Designation: D7323 – 21

Standard Practice for Handling, Transportation, and Storage of IG-100 (Nitrogen)¹

This standard is issued under the fixed designation D7323; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers guidance and direction to suppliers, purchasers, and users in the handling, transportation, and storage of IG-100 (nitrogen).

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 CGA Standards:²

C-1 Methods for Pressure Testing Compressed Gas Cylinders

C-6 Standards for Visual Inspection of Steel Compressed Gas Cylinders

C-7 Guide to Classification and Labeling of Compressed Gases

P-1 Standard for Safe Handling of Compressed Gases in Containers

2.2 U.S. Government Standards:³

49 CFR Part 172 Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emer-

gency Response Information, Training Requirements, and Security Plans

49 CFR Part 172.101 Purpose and Use of Hazardous Materials Table

49 CFR Part 173 Shippers—General Requirements for Shipments and Packagings

49 CFR Part 178 Specifications for Packagings

49 CFR Part 180 Continuing Qualification and Maintenance of Packagings

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *containers, n*—storage vessels for IG-100.

3.1.2 *cylinders, n*—containers of IG-100.

3.1.3 *IG-100 (nitrogen), n*—compound used to inert or suppress a fire or explosion hazard.

3.1.4 *insulated, adj*—placed in an isolated situation to protect and prevent the transfer of damage.

4. Significance and Use

4.1 This practice provides requirements for the handling, transportation, and storage of IG-100 encountered in distribution through both commercial and military channels. It is intended to ensure that IG-100 is handled, transported, and stored in such a way that its physical property virtues are not degraded. Transport may be by various means, such as, but not limited to, highway, rail and water.

5. Practice

5.1 To ensure safe handling, loading, unloading, storing, and transporting of material, personnel shall be trained in the CGA publications and CFR regulations as listed in Sections 2.1 and 2.2, respectively.

5.2 Handling:

5.2.1 Handling shall be in accordance with CGA Publication P-1 and as specified by the manufacturer.

5.2.1.1 Personnel who handle or store, or both, cylinders of IG-100 shall be trained properly to recognize and identify the characteristics of the product and the proper methods of safely handling full, partially full, and empty cylinders.

5.2.2 All IG-100 transfers between storage containers and recycling processes shall be performed by personnel trained in handling procedures.

¹ This practice is under the jurisdiction of ASTM Committee D26 on Halogenated Organic Solvents and Fire Extinguishing Agents and is the direct responsibility of Subcommittee D26.09 on Fire Extinguishing Agents.

Current edition approved June 1, 2021. Published June 2021. Originally approved in 2007. Last previous edition approved in 2013 as D7323 – 13. DOI: 10.1520/D7323-21.

² Available from Compressed Gas Association, 8484 Westpark Drive, Suite 220, McLean, VA 22102, <https://www.cganet.com>.

³ Code of Federal Regulations (CFR) documents are available from U.S. Government Publishing Office (GPO), 732 N. Capitol St., NW, Washington, DC 20401, <https://www.gpo.gov>.