



CGA G-1.6 — 2024

9TH EDITION

# STANDARD FOR MOBILE ACETYLENE TRAILER SYSTEMS

---

**PLEASE NOTE:**

The information contained in this document was obtained from sources believed to be reliable and is based on technical information and experience currently available from members of the Compressed Gas Association, Inc. and others. However, the Association or its members, jointly or severally, make no guarantee of the results and assume no liability or responsibility in connection with the information or suggestions herein contained. Moreover, it should not be assumed that every acceptable commodity grade, test or safety procedure or method, precaution, equipment or device is contained within, or that abnormal or unusual circumstances may not warrant or suggest further requirements or additional procedure.

This document is subject to periodic review, and users are cautioned to obtain the latest edition. The Association invites comments and suggestions for consideration. In connection with such review, any such comments or suggestions will be fully reviewed by the Association after giving the party, upon request, a reasonable opportunity to be heard. Proposed changes may be submitted via the Internet at our website, [www.cganet.com](http://www.cganet.com).

This document should not be confused with federal, state, provincial, or municipal specifications or regulations; insurance requirements; or national safety codes. While the Association recommends reference to or use of this document by government agencies and others, this document is purely voluntary and not binding unless adopted by reference in regulations.

A listing of all publications, audiovisual programs, safety and technical bulletins, and safety posters is available via the Internet at our website at [www.cganet.com](http://www.cganet.com). For more information contact CGA Phone: 703-788-2700, ext. 799. E-mail: [customerservice@cganet.com](mailto:customerservice@cganet.com).

Work Item 22-037  
Acetylene Committee

NOTE—Technical changes from the previous edition have been underlined.

NINTH EDITION: 2024  
EIGHTH EDITION: 2018  
SEVENTH EDITION: 2011  
SIXTH EDITION: 2008  
FIFTH EDITION: 2007

© 2024 BY THE COMPRESSED GAS ASSOCIATION, INC. ALL RIGHTS RESERVED

All materials contained in this work are protected by United States and international copyright laws. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording, or any information storage and retrieval system without permission in writing from The Compressed Gas Association, Inc. All requests for permission to reproduce material from this work should be directed to The Compressed Gas Association, Inc., 8484 Westpark Drive, Suite 220, McLean, VA 22102. You may not alter or remove any trademark, copyright or other notice from this work.

| <b>Contents</b>                                                                      | <b>Page</b> |
|--------------------------------------------------------------------------------------|-------------|
| 1 Scope .....                                                                        | 1           |
| 2 Definitions.....                                                                   | 1           |
| 3 Design and construction.....                                                       | 3           |
| 3.1 Acetylene Trailer.....                                                           | 3           |
| 3.2 Piping.....                                                                      | 4           |
| 3.3 Cylinders.....                                                                   | 6           |
| 4 Operations.....                                                                    | 7           |
| 4.1 Charging.....                                                                    | 7           |
| 4.2 Transportation .....                                                             | 8           |
| 4.3 Discharging at user sites .....                                                  | 8           |
| 5 Associated equipment .....                                                         | 8           |
| 5.1 Trailer fill station .....                                                       | 8           |
| 5.2 MATS discharge station .....                                                     | 9           |
| 5.3 Weather protection and MATS buildings for trailer system discharge stations..... | 10          |
| 6 General provisions .....                                                           | 10          |
| 6.1 Exterior markings and signs .....                                                | 10          |
| 6.2 Fire protection.....                                                             | 10          |
| 6.3 Training requirements.....                                                       | 11          |
| 7 References .....                                                                   | 11          |
| 8 Additional references.....                                                         | 12          |
| <b>Figures</b>                                                                       |             |
| Figure 1—Typical acetylene trailer.....                                              | 3           |
| Figure 2—Rear view of typical acetylene trailer.....                                 | 4           |
| Figure 3—Typical acetylene trailer manifold diagram .....                            | 6           |
| <b>Tables</b>                                                                        |             |
| Table 1—Liquefaction temperatures and pressures .....                                | 7           |

This page is intentionally blank.

Currently in preview, click buy full version

## 1 Scope

This publication contains the minimum requirements necessary for the design, construction, and operation of mobile acetylene trailer systems (MATS) consisting of trailers having acetylene cylinders manifolded for the purposes of charging, transporting, and discharging acetylene. It also covers ground-mounted auxiliary equipment used with the MATS such as piping, regulators, flash arrestors, and meters.

## 2 Definitions

For the purpose of this publication, the following definitions apply.

### 2.1 Publication terminology

#### 2.1.1 Shall

Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

#### 2.1.2 Should

Indicates that a procedure is recommended.

#### 2.1.3 May

Indicates that the procedure is optional.

#### 2.1.4 Will

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

#### 2.1.5 Can

Indicates a possibility or ability.

### 2.2 Technical definitions

#### 2.2.1 Acetylene trailer

Open transport vehicle designed to be towed that consists of a group or groups of acetylene cylinders secured in accordance with Title 49 of the U.S. *Code of Federal Regulations* (49 CFR) 393.102 or Part 1 of the National Safety Code (NSC) Standard 10, *Cargo Securement*, as adopted by provincial and territorial regulations in Canada, and manifolded together as a single unit for filling, transporting, and delivering acetylene [1, 2].<sup>1</sup>

#### 2.2.2 Authority having jurisdiction (AHJ)

Organization, office, or individual responsible for enforcing the requirement of a code or standard or responsible for approving equipment, materials, installations, or procedures.

#### 2.2.3 Charging

Process of filling containers to limits authorized by U.S. Department of Transportation (DOT)/Transport Canada (TC) for a specific product including mixtures.

#### 2.2.4 Deluge sprinkler system

Sprinkler system employing open sprinklers attached to a piping system that is connected to a water supply through a valve opened by the operation of a detection system installed in the same areas as the sprinklers. The sprinkler systems shall also be able to be activated manually. When this valve opens, water flows into the piping system and discharges from all sprinklers attached thereto [3].

#### 2.2.5 Discharging

Withdrawal of product from an acetylene trailer through the manifold discharge valve while the trailer is connected to ground-mounted auxiliary equipment used with MATS.

<sup>1</sup> References are shown by bracketed numbers and are listed in order of appearance in the reference section.