

# FDNY CoF - Non-Flammable Compressed Gases (G-46) Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

**Remember:** successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## **1. Start with a Diagnostic Review**

**Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.**

## **2. Study in Short, Focused Sessions**

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.**

## **3. Learn from the Explanations**

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## **4. Track Your Progress**

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## **5. Simulate the Real Exam**

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## **6. Repeat and Review**

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!**

## Questions

- 1. Compressed gas containers must be secured well to prevent what?**
  - A. Theft**
  - B. Rust**
  - C. Movement**
  - D. Heat buildup**
- 2. Why are non-flammable gases used in cryogenic applications?**
  - A. To produce large quantities of solid gas**
  - B. To achieve extremely high temperatures**
  - C. To maintain extremely low temperatures for various processes**
  - D. To increase the reactivity of other gases**
- 3. The permitted operation of hazardous materials requires compliance with what type of regulations?**
  - A. Local regulations only**
  - B. Federal regulations only**
  - C. State and municipal regulations**
  - D. International regulations**
- 4. How far must compressed gas containers be kept from air conditioning units?**
  - A. 25 feet**
  - B. 50 feet**
  - C. 75 feet**
  - D. 100 feet**
- 5. What is required for emergency responders when dealing with compressed gas incidents?**
  - A. They should have up-to-date training and knowledge of the specific gases involved**
  - B. They should rely on their previous experience alone**
  - C. They can act without any specific training**
  - D. They should wait for specialized technicians to arrive**

- 6. Compressed gas containers should be kept a minimum of how many feet from ordinary electrical equipment?**
- A. 15 feet**
  - B. 20 feet**
  - C. 25 feet**
  - D. 30 feet**
- 7. Compressed gas containers should not be used for what purpose?**
- A. Storage of liquids**
  - B. Grounding**
  - C. Structural support**
  - D. Transporting solids**
- 8. Can non-flammable gases be stored outdoors?**
- A. Yes, but they must be in approved containers and protected from weather extremes**
  - B. No, they should only be stored indoors**
  - C. Yes, but only in open-air environments**
  - D. No, they should be stored in direct sunlight**
- 9. At what PSI at 68F do gases qualify as compressed?**
- A. 30 PSI**
  - B. 41 PSI**
  - C. 50 PSI**
  - D. 60 PSI**
- 10. Non-flammable gases are considered non-ignitable at 14.7 PSIA with a mixture of what percentage or less?**
- A. 10 percent**
  - B. 13 percent**
  - C. 15 percent**
  - D. 20 percent**



## **Answers**

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1. C
2. C
3. C
4. B
5. A
6. C
7. B
8. A
9. B
10. B

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## **Explanations**

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**1. Compressed gas containers must be secured well to prevent what?**

- A. Theft**
- B. Rust**
- C. Movement**
- D. Heat buildup**

Securing compressed gas containers is essential primarily to prevent movement. Compressed gas cylinders are heavy, and if they are not properly secured, they can fall over, leading to potential damage or even dangerous situations such as the risk of the cylinder becoming a projectile. When a cylinder tumbles, it may disconnect from its regulator or cause leaks, which can contribute to an unsafe environment, especially if the gas is reactive or can create hazardous conditions. While theft, rust, and heat buildup are important considerations in the overall management of gas cylinders, the immediate concern of securing these containers is to maintain their stability and safety in a work or storage environment. Keeping them upright and stationary helps avoid accidents and ensures safe handling practices.

**2. Why are non-flammable gases used in cryogenic applications?**

- A. To produce large quantities of solid gas**
- B. To achieve extremely high temperatures**
- C. To maintain extremely low temperatures for various processes**
- D. To increase the reactivity of other gases**

Non-flammable gases are used in cryogenic applications primarily to maintain extremely low temperatures for various processes. These gases, such as nitrogen and helium, have properties that allow them to remain in a gaseous state at very low temperatures, making them suitable for applications that involve cooling or freezing materials. Their non-flammable nature is particularly important in cryogenics because it minimizes safety risks associated with fire hazards, especially when dealing with ultra-low temperatures and potential ignition sources. Maintaining extremely low temperatures is essential in a range of processes, including scientific research, medical applications, and industrial operations, where precise thermal management is crucial. While the other options mention related concepts, such as producing solid gas or increasing reactivity, they do not pertain directly to the primary purpose of non-flammable gases in cryogenic processes, which is focused on stable, ultra-low temperature environments.

**3. The permitted operation of hazardous materials requires compliance with what type of regulations?**

- A. Local regulations only**
- B. Federal regulations only**
- C. State and municipal regulations**
- D. International regulations**

The permitted operation of hazardous materials necessitates adherence to state and municipal regulations because these regulations are designed to address local environmental conditions, community safety concerns, and specific operational practices that can vary widely between different jurisdictions. State regulations often provide broader compliance frameworks that include safety requirements, handling procedures, and reporting obligations tailored to local populations and environmental risks. Municipal regulations complement these by providing more detailed rules and guidelines relevant to specific areas or types of operations within a city or locality. While federal regulations provide overarching standards and frameworks for hazardous materials, they might not account for regional idiosyncrasies and local hazardous conditions. International regulations apply primarily to cross-border situations but do not govern state and local compliance. Thus, state and municipal regulations are crucial for ensuring that hazardous materials are managed safely and effectively within specific communities.

**4. How far must compressed gas containers be kept from air conditioning units?**

- A. 25 feet**
- B. 50 feet**
- C. 75 feet**
- D. 100 feet**

The requirement to keep compressed gas containers at least 50 feet away from air conditioning units is based on safety regulations concerning the potential hazards associated with compressed gases. Air conditioning units can generate heat and present ignition sources, which, when combined with the presence of compressed gases, could lead to dangerous situations such as leaks, explosions, or fires. By maintaining this minimum distance, it reduces the risk of an accident occurring. This safety protocol is part of broader efforts to manage risks in environments where compressed gases are in use, ensuring that there is a clear space that helps mitigate potential interactions that could lead to dangerous consequences. Following these guidelines helps maintain safe operational standards and protects personnel and infrastructure.

**5. What is required for emergency responders when dealing with compressed gas incidents?**

**A. They should have up-to-date training and knowledge of the specific gases involved**

**B. They should rely on their previous experience alone**

**C. They can act without any specific training**

**D. They should wait for specialized technicians to arrive**

For emergency responders handling compressed gas incidents, having up-to-date training and knowledge of the specific gases involved is crucial. This requirement stems from the fact that different gases can have varying properties such as toxicity, flammability, reactivity, and the necessary safety protocols for each type. Understanding these properties allows responders to assess the risk effectively, make informed decisions, and implement appropriate mitigation strategies to safely control the situation and protect both themselves and bystanders. Training ensures that responders are familiar with the behavior of gases under different conditions, including how they might react in emergencies, which is vital for both their safety and the safety of others. Additionally, staying current with new information and technologies related to compressed gases is essential, as recommendations and safety standards can evolve. This proactive approach is far more effective than relying solely on previous experience, which may not encompass newer hazards or updated procedures.

**6. Compressed gas containers should be kept a minimum of how many feet from ordinary electrical equipment?**

**A. 15 feet**

**B. 20 feet**

**C. 25 feet**

**D. 30 feet**

Compressed gas containers are required to be kept a minimum of 25 feet away from ordinary electrical equipment to minimize the risk of a fire or explosion. This distance is important because electrical equipment can generate sparks or heat that may ignite flammable gases, leading to dangerous situations. The guideline is in place to ensure safety in environments where compressed gases are stored or used, as these gases can pose significant hazards if they come in contact with electrical sources. Maintaining this distance is a precautionary measure to help protect both personnel and property.

**7. Compressed gas containers should not be used for what purpose?**

- A. Storage of liquids**
- B. Grounding**
- C. Structural support**
- D. Transporting solids**

Using compressed gas containers for grounding is inappropriate because these containers are designed specifically to hold gases under pressure, not to serve as electrical conductors or grounding mechanisms. Grounding typically involves connecting a conductive object to the earth to avoid electrical hazards, and this can create safety risks. Compressed gas containers may become damaged or compromised if improperly used in this way, which could lead to the release of gas, posing serious hazards. In contrast, while the other uses listed may have their own risks or limitations, they pertain more to improper storage or handling rather than a fundamental misuse of the container's intended function. For example, the storage of liquids in compressed gas containers can lead to issues with pressure increase and potential explosions, while using them for structural support or transporting solids could also result in physical damage and safety hazards. However, the grounding of a compressed gas container is distinctly and primarily a misuse of its design and purpose.

**8. Can non-flammable gases be stored outdoors?**

- A. Yes, but they must be in approved containers and protected from weather extremes**
- B. No, they should only be stored indoors**
- C. Yes, but only in open-air environments**
- D. No, they should be stored in direct sunlight**

Non-flammable gases can indeed be stored outdoors, provided they are in approved containers designed for such use and are adequately protected from weather extremes. This is important because outdoor storage can expose gas containers to various environmental factors, such as rain, snow, extreme temperatures, and sunlight, which can affect the integrity of the containers and potentially lead to hazardous situations. Therefore, proper storage methods, including using appropriate materials and following safety guidelines, are essential to ensure that the containers remain secure and the gases are contained safely. The approval of containers is critical as it ensures that they meet safety standards and are suitable for the storage of the specific gases in question. Additionally, protecting them from weather extremes helps prevent issues such as condensation or extreme heat that could lead to pressure changes within the containers. Storing non-flammable gases in approved outdoor settings allows for greater flexibility in managing gas supplies while still adhering to safety regulations, which is why this answer is the most appropriate.

**9. At what PSI at 68°F do gases qualify as compressed?**

- A. 30 PSI**
- B. 41 PSI**
- C. 50 PSI**
- D. 60 PSI**

Gases are classified as "compressed" when they are in a gaseous state at a specific temperature and pressure. At the standard reference temperature of 68°F (20°C), a gas is typically considered compressed if it exceeds 41 PSI. This threshold is significant because it indicates that the gas has been subjected to pressures above ambient conditions, which can affect its storage, handling, and safety requirements. The 41 PSI benchmark is established to differentiate compressed gases from those that are stored at lower pressures and therefore possess less potential risk in terms of both storage and transportation. Understanding this threshold is vital for compliance with safety regulations and for ensuring that appropriate precautions are taken when working with gases under pressure. Ensuring adherence to the correct classification and pressure requirements is part of maintaining safety standards within various applications involving compressed gases, which include industrial processes and certain consumer products.

**10. Non-flammable gases are considered non-ignitable at 14.7 PSIA with a mixture of what percentage or less?**

- A. 10 percent**
- B. 13 percent**
- C. 15 percent**
- D. 20 percent**

Non-flammable gases are classified based on their ability to ignite when mixed with air. A gas is deemed non-ignitable if it does not form a mixture with air that can sustain combustion or explosion at a specific pressure level. At 14.7 PSIA (standard atmospheric pressure), non-flammable gases can have a maximum concentration of 13 percent in air without becoming ignitable. This threshold is critical for safety considerations in environments where these gases are stored or used, ensuring they do not present a fire hazard. The 13 percent limit allows for a safe margin below which the risk of ignition remains extremely low. It is essential for those working with non-flammable gases to understand these concentration levels to maintain safe working conditions and adhere to regulatory standards. Hence, selecting 13 percent aligns perfectly with the definitions and thresholds set forth in safety regulations concerning non-flammable gases.



## Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://fdnyg46.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**