



SAFETY TRAINING LEAFLET 21 CHEMICALS

Doc 23.21/26

Revision of Doc 23.21/18

EUROPEAN INDUSTRIAL GASES ASSOCIATION AISBL

AVENUE DE L'ASTRONOMIE 30 • B – 1210 BRUSSELS
Tel: +32 2 217 70 98
E-mail: info@eiga.eu • Internet: www.eiga.eu





SAFETY TRAINING LEAFLET 21 CHEMICALS

Prepared by WG-21
Published in April 2026

Disclaimer

All technical publications of EIGA or under EIGA's name, including Codes of practice, Safety procedures and any other technical information contained in such publications were obtained from sources believed to be reliable and are based on technical information and experience currently available from members of EIGA and others at the date of their issuance.

While EIGA recommends reference to or use of its publications by its members, such reference to or use of EIGA's publications by its members or third parties are purely voluntary and not binding.

Therefore, EIGA or its members make no guarantee of the results and assume no liability or responsibility in connection with the reference to or use of information or suggestions contained in EIGA's publications.

EIGA has no control whatsoever as regards, performance or non performance, misinterpretation, proper or improper use of any information or suggestions contained in EIGA's publications by any person or entity (including EIGA members) and EIGA expressly disclaims any liability in connection thereto.

EIGA's publications are subject to periodic review and users are cautioned to obtain the latest edition.



Table of Contents

1	Introduction	1
1.1	Safety leaflets	1
1.2	Comprehension tests.....	1
2	Chemicals	1
2.1	Hazard Identification	1
2.2	Use of chemicals	2
	Appendix 1 – Chemicals – Test Questions	4
	Appendix 2 - Chemicals – Test Answers	5

1 Introduction

1.1 Safety leaflets

Safety training leaflets summarise the basic operational safety knowledge which needs to be known by employees working in the gas industry.

Refer to EIGA Doc 23 *Safety Training of Employees* for the various combinations of leaflets which define the scope of safety training for a variety of specific jobs.

Each leaflet addresses a specific topic as identified in the title.

1.2 Comprehension tests

There is a comprehension test for each leaflet, included in **Appendix 1**.

Each test comprises several questions. To pass the test it is suggested that the employee should score 75% at the first attempt. Incorrect answers should be discussed to confirm understanding.

Appendix 2 includes the list of correct answers.

2 Chemicals

This safety leaflet outlines the process of identifying hazards and the general precautions associated with chemicals.

2.1 Hazard Identification

Any hazardous substance will be labelled by one or more of the hazard pictograms shown in picture 1.



Picture 1

The pictograms in Picture 1 show the risk categories of the chemical.

The label also contains H-phrases, which describe the risks, and P-phrases, which describe the necessary precautionary measures to ensure your safety.

2.2 Use of chemicals

Various chemicals are used in the gas industry for operations such as purification, cooling, drying, water treatment and cleaning. These can be handled safely, provided their properties are understood and adequate precautions are taken. Safety data sheets must be made available wherever chemicals are used or stored. Specific work instructions must also be provided, and staff must be trained in their use.

The following points outline common precautions when handling chemicals.

- Before use, carefully read all the labels on the container. Follow the safety instructions and comply with all requirements, especially those relating to the use of adequate personal protective equipment.
- Learn the correct first aid treatment to be adopted in the event of being splashed with, breathing or swallowing the chemical.
- Always get medical help if a chemical has been inhaled, entered your eyes or has been swallowed.
- Know where the nearest eye wash and safety showers are located.
- Do not put chemicals into unmarked or unsuitable containers (e.g. bottles for soft drinks). Always use a suitable container and ensure that it is clearly labelled with all the safety-relevant information from the original label of the chemical.
- Withdraw only the amount of chemical required for the current task. Protect it from contamination and return any unused chemicals to storage.
- Do not dispose of surplus chemicals by dumping them in the sewer, drain or normal waste containers. Segregate hazardous waste and dispose of it in an authorised manner (follow your companies waste disposal instructions and the specific information in the safety data sheet). Only registered companies shall be used for disposal of hazardous waste.
- Any chemical spillages should be reported to your supervisor immediately. They will advise on the best method for clearing it up safely. Make sure that chemicals do not creep into the sewer grid or soil.
- If a corrosive chemical comes into contact with your skin or eyes, immediately flush the affected area with water for several minutes to dilute and wash away the chemical. Note: The recommendation is for at least 15 minutes. Cold water can create the false impression that the corrosive chemical has been removed, but this is not always the case after only a few minutes. The chemical may then react again. Remove clothing from the affected areas. Then apply the appropriate first aid treatment and get medical help if necessary. Report the incident to your management.
- If your clothing becomes contaminated with a chemical, then change it and have the contaminated articles washed. If contaminated with acids or bases, remove the clothing immediately under an emergency shower.
- After handling chemicals, carefully wash your hands before eating and do not consume food or drink in a potentially contaminated area.
- To control the risk from flammable liquids, they must be stored in segregated, specifically designated areas as defined by local regulations, and all established procedures for the safe storage of hazardous substances must be strictly followed. During transfilling the equipment usually needs to be grounded to avoid sparks.

- Liquid chemicals should be stored under a roof on a retention basin (bund), to prevent them from entering the soil or water in the event of a spill.
- Use only hazardous chemicals which have been authorised by Company Management as suitable for a particular job.

Appendix 2 - Chemicals – Test Answers

1. B and C
2. A, B and D
3. **"Wash"**
4. **"Safety Data Sheet"**
5. C
6. A
7. A
8. A