



OH&S Safety Matters

January 2025



Zero Incident Safety Culture

What safety metric needs to be used to lower the total number of injuries and illnesses. What is going to be the number of incidents deemed to be an acceptable number. In reality, when it comes to safety, we should all be striving for one number, the number Zero. A zero-incident safety culture where the mindset of every employee, from senior management on down to a front-line worker, is that all workplace incidents are preventable. A zero-tolerance safety culture conveys a commitment to the safety and well-being of everyone at the workplace.

The **"Zero Incident"** philosophy is based on the belief that eliminating all worker injuries is possible and is the only acceptable goal. "Zero Incident," including Zero lost time Injury and Zero OH&S recordable Injury, defines a unique attitude on projects achieving the category of **"Safety Excellence"**. This attitude appears as a commitment by top management to the concept that Zero Incidents is the only acceptable goal. The Zero Incident concept means that all serious injury to workers can be successfully prevented.

The essence of the Zero Incident concept is for a company to experience Zero Injury for as long a period or for as many work hours as they can. The companies that are making significant improvements in their safety performance are those with comprehensive safety programs, as reflected in their commitment to safety training, inspections, as well as efforts towards fostering a strong safety culture, and behaviour based safety plans aimed at decreasing the incidence rate. However, the problem of not knowing how to continue improving safety performance to reach Zero Injury is pervasive. The main challenge lies in the difficulty in determining what to measure and how to effect improvements, particularly with respect to those intangible aspects of safety.

The challenge is that safety management as part of the overall management process is affected by many factors, and it is difficult to identify and measure which factors are involved in developing a Zero Incident Safety Management methodology that will allow a company to strategically move towards a high performing and continuously improving safety culture, with the result of achieving and sustaining the goal of Zero Incidents.

A Zero Incident Safety Culture is a goal that every leadership group should mandate as the only acceptable outcome for all their employees. The key is clear communication on safety expectations. A zero-incident culture requires continuous improvement in risk management and accident prevention. Management should be constantly working to identify unsafe acts, hazards, and unsafe conditions that put employees in danger. ***What truly sets a zero-incident safety culture apart is the willingness to implement strategies and practices to proactively prevent accidents.***

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Propane Safety

Propane Safety Fundamentals for Workers training program has been designed to provide general information to facility safety personnel, loss prevention managers, members of joint health and safety committees, supervisors, and workers. The scope of this course is to convey particulars about health hazards, requirements for worker protection, safe work procedures, inspection criteria, applicable legislation and guidelines used to identify and control propane hazards.

The objective of this propane safety program is to impart the information for compliance with the Canadian Standards CSA-B149.2-20, Propane storage and handling code (in force February 1, 2021 and to provide the information needed for workers to be able to safely connect, activate, and disconnect heaters, torches, and propane powered equipment of less than 400,000 Btu/h.

Propane infrastructure in Canada is well-developed, with capacity to produce an abundant supply that is highly portable via truck, rail and pipeline across Canada, and into the U.S. There are two major propane trading hubs in Canada – Edmonton, Alberta and Sarnia, Ontario.

Around 92% of Canada's propane is extracted as a Natural Gas Liquid (NGL) mix from natural gas at hundreds of field plants in British Columbia, Alberta and Saskatchewan. Once extracted, NGLs are sent

Fundamentals



to fractionation plants to be separated into individual products, including propane. The remaining supply is produced at refineries located in every province except Manitoba, Nova Scotia and PEI.

Topics discussed during this Propane Safety Orientation will include;

- Current applicable legislation, codes and standards.
- The need for a propane hazards management program.
- The risk assessment processes to identify hazards.
- Conducting inspections and propane hazard analysis.
- Responsibilities of management and workers.
- Education and training requirements.
- Propane hazard handling controls.
- Documenting a Propane Safety Program.
- Housekeeping and safe work principles.
- Fire classification and fire extinguisher classifications.
- Record management.

This Propane Safety Orientation program is intended to provide workers with general propane use and handling safety best practices to be implemented when their work activities expose them to propane hazards.

All workers engaged in activities requiring the use of propane equipment must receive health and safety instruction on:

- Their responsibilities in support of health and safety;
- The proper use of the propane equipment;
- Work procedures and rules;
- The known propane and other hazards; and
- The health and safety measures in place to protect them from injury.

In the construction industry, propane is used in various applications: fuel in tar pots, welding torches, heaters, appliances, forklifts, and some mobile elevated work platforms.

Propane is a highly flammable liquid, and machinery operators must be aware of the health hazards associated with overexposure to propane. Refuelling a cylinder requires a person to have a propane handlers certification while changing out a propane cylinder can be done by the machine operator.

Propane is a hazardous product under WHMIS. Propane is heavier than air, and in the event of a leak it can accumulate in low-lying areas such as pits and trenches, a confined area or an area with poor ventilation where the gas can displace the oxygen content in the air and cause asphyxiation.

Hazard assessments of propane equipment and systems need to be planned and scheduled. The assessment, includes a review of the hazards, the associated foreseeable tasks, and the protective measures that are required in order to maintain an acceptable level of risk. An assessment should be conducted before work is started.



Supervisors and workers need to be aware of all the potential hazards on the site and make sure all measures are taken to control the risks and prevent the hazards from causing any harm.

Propane-powered heaters supply more heat (BTUs) than electric heaters and because propane heaters are not tied to the electrical grid, you can take them anywhere to meet construction demands.

Propane-powered torches are perfect for burning brush, thawing pipes, roofing, melting ice, asphalt prep and other similar heating uses. Many construction industry tradesman use open flames or flame tools in their jobs. Heating and air conditioning contractors, welders and plumbers all use open flame at the job site. These workers are responsible for the safe use of their tools, just as the roofing contractor is when using a torch to apply bitumen roofing systems.

Employers must train their work crews in the safe use of propane powered heaters, open flame torches and tools. Employers must make sure their supervisors are familiar with the necessary safety precautions for using welding torches, heaters, and appliances on the job site.

Pro-actively prevent unsafe work conditions from developing by imparting knowledge through employee safety training.

Get Your Instructor Certification so that you can deliver the Safety Training you need on your job site !



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Crossword Puzzle Answers

Here are the answers to the December Safety Matters Crossword Puzzle.

Transportation of Dangerous Goods

Across

2. Placard
4. Carrier
5. Handling
6. ERAP
8. Technical
10. Subsidiary
12. Consignment
13. Mark
14. Inspector

Down

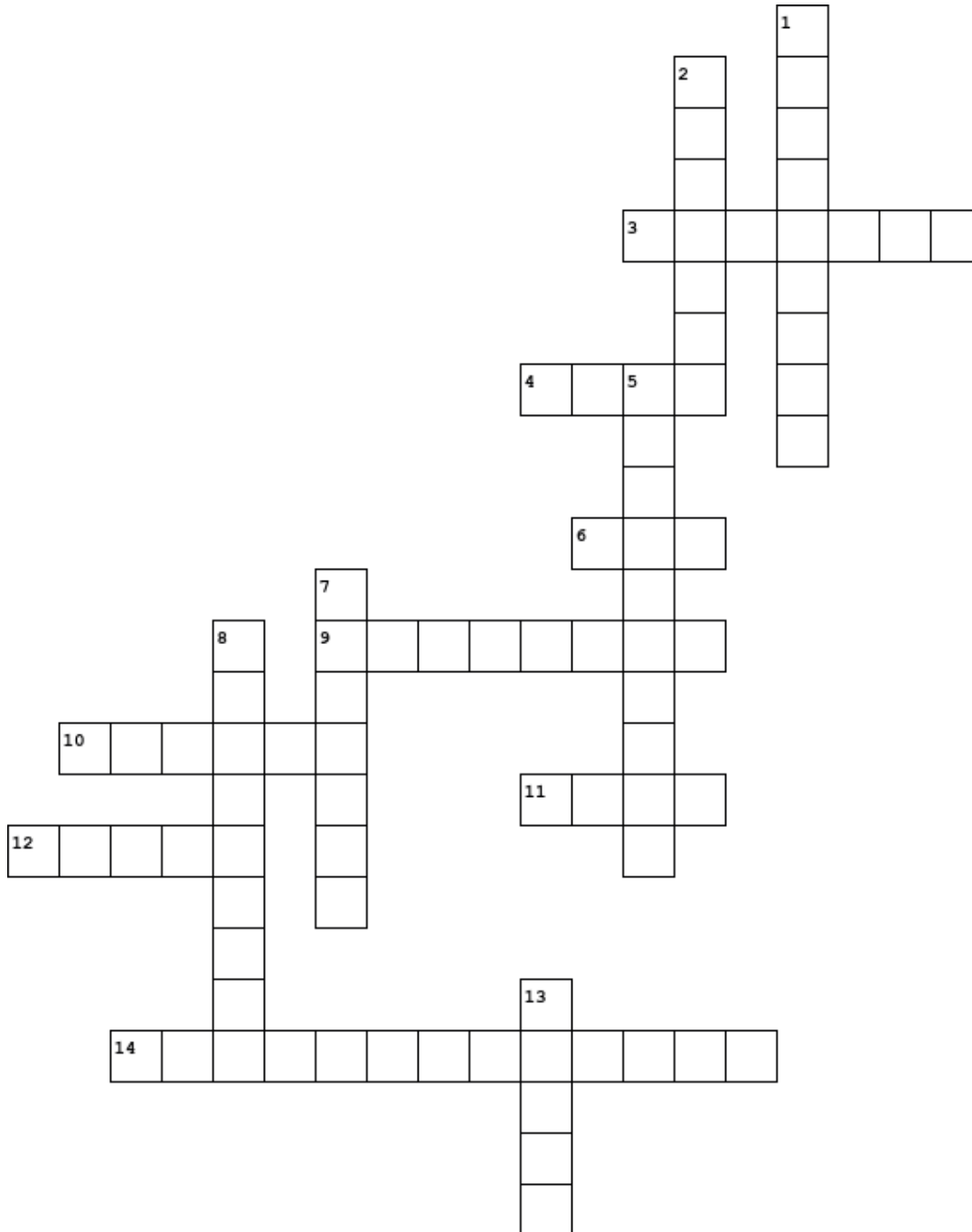
1. Primary
3. Release
4. Consignor
7. Classification
9. Drum
11. CANUTEC

**Upcoming challenge solve the Propane Crossword Puzzle on the next page
Play Now!**



Propane Handling Crossword

The OHS Registry *Safety Matters* crossword puzzles are ideal for people who love words, general knowledge, and testing their problem-solving skills. So, what are you waiting for? Print the puzzle to play now !



Clues for the Propane Handling Crossword Puzzle

Select a clue from the 'across' or 'down' lists. Think up possible answers to the clue.

Each across and down clue is assigned a unique number. This number corresponds to the number for its answer in the grid. Words in the crossword puzzle will cross each other, this is the source of inspiration for the name of the game, crossword!

Who can complete the crossword challenge. Save your progress, the correct answers to the crossword challenge will be revealed in the next issue of *Safety Matters*

Across

3. This is the position that a propane cylinders should always be placed in so that the relief valve is in direct communication with the vapour space of the cylinder.
4. A standard that is an extensive compilation of provisions covering a subject matter.
6. The acronym used to describe any material that is composed predominantly of the following hydrocarbons, either by themselves (except propylene) or as mixtures: propane, propylene, butane, and butylenes.
9. Means the storing, transporting or distributing of propane in a container and "handler" has a corresponding meanings.
10. A method of filling containers to not more than the maximum permitted filling limit based on the heaviness of the LP-Gas in the container.
11. A container that is used to transport LP-Gas as liquid cargo that either is mounted on a conventional truck chassis or is an integral part of a cargo transporting vehicle. Is a container constructed in accordance with the pressure vessel code.
12. This is attached to a propane cylinder as an identifying mark of an organization that maintains periodic inspection, and indicates compliance with standards.
14. The process by which a product is evaluated and tested by an independent laboratory to affirm compliance.

Down

1. Means a device that consumes or is intended to consume propane and includes all valves, fittings, controls and components.
2. A hydrocarbon stored in a pressurized tank, which is gaseous at standard temperature and pressure. It is a by-product of natural gas processing and petroleum refining. It is a colourless three-carbon alkane gas with the molecular formula C₃H₈.
5. The location where connections and disconnections are made or the point where LP-Gas is vented to the atmosphere in the course of transfer operations. The process used to transfer LP-Gas into cylinders, portable and mobile containers, and vehicle fuel containers.
7. A device that stops the flow of LP-Gas vapor when the outlet pressure of the regulator reaches a predetermined maximum allowable pressure to prevent the filling of a container beyond a predetermined level.
8. A pressure device for LP-Gas liquid or vapour service designed to reduce pressure from the container to a lower pressure required at the point of delivery.
13. A fixed liquid level indicator that shows the liquid level at which the container is filled to its maximum permitted filling limit.

Carbon Monoxide Safety Tips

According to the Centres for Disease Control and Prevention, the first month of the year is the worst for carbon monoxide poisoning. Unintentional carbon monoxide exposure fatalities are highest among men. Men likely because they are engaged in more high-risk behaviours such as working with fuel-burning tools or appliances.

Cold weather increases the use of gas-powered furnaces as well as the use of risky alternative heating and power sources (portable generators, charcoal briquettes, propane stoves or grills) during power outages.

Consider the following safety tips to prevent CO poisoning:

- Have your heating system, water heater and any other gas, oil or coal-burning appliance inspected and serviced by a qualified technician every year.

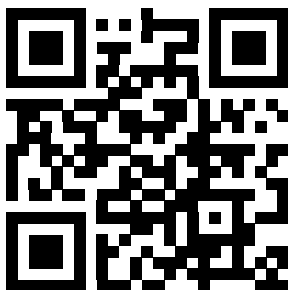
- Install battery-operated CO detectors in your workplace and on every level of your home.
- Don't use a generator, charcoal grill, camp stove or other gas or charcoal-burning device inside a warehouse, garage or outside your home near a window.
- Don't burn anything in an unventilated stove or fireplace.
- Don't let a vehicle idle inside a garage, even if the garage door is left open.

If a CO detector sounds, leave the premises immediately and call 911 from outside. Seek prompt medical attention if you suspect CO poisoning.

The symptoms of CO poisoning include feeling light-headed, nauseated, dizziness, vomiting, chest pain, and confusion. CO symptoms are often described as "flu-like."

For more Information

Point your smartphone camera at this QR code and take a picture to be redirected to the OH&S Registry Website. www.ohsregistry.com



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markh@ohandscanada.ca

Staying in Touch

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