

Data sheet OXYGEN — FIRST AID

LEGISLATION

Pursuant to the *First-aid Minimum Standards Regulation*, establishments in the building and public works, forestry, mining, quarrying, and oil drilling sectors, depending on their geographical isolation, **must** have oxygen therapy equipment.

Establishments where asphyxiating (e.g., cyanide) or corrosive agents (e.g., ammonia, chlorine, etc.) gases are present are advised to obtain oxygen therapy equipment.

ITEMS TO CONSIDER WHEN USING OXYGEN

The establishment must take into account various items to ensure safe use of oxygen: i.e., the necessary equipment and safety measures, proper storage, maintenance and handling, and additional training for first aiders. The following table clarifies these requirements

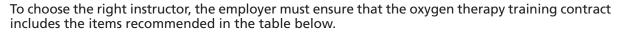
ITEM	DETAILS
Necessary equipment	 Type D (390 litres) or E (690 litres) oxygen cylinder Regulator that can support an oxygen flow of 15 litres a minute or more Mask with a high-concentration oxygen reservoir (100% pure oxygen) Carrying case for transportation purposes Pocket mask with oxygen inlet A bag-valve-mask if the company uses cyanide or cyanide by-products. (See the medical protocol for occupational poisoning in the section of CNESST*'s practical guide to First Aid in the Workplace discussing oxygen therapy To determine the number of cylinders to keep in reserve, consider: the time required before the victim will receive prehospital emergency care the minimum 10-litre per minute oxygen flow required in the meantime cylinder size: type D cylinders can last 39 minutes, while type E cylinders can last 69 minutes regular inspections, which reduce reserves.
Maintenance	 Inspect valves, regulators, and cylinders each week. Do not use two sealing rings when replacing a cylinder. Have the equipment inspected regularly by qualified personnel. (Changing the cylinder once pressure reaches 500 pounds is recommended.) Record equipment inspection and maintenance information.
Storage	• Store equipment in temperatures below 50 °C in a clean, cool, well-ventilated location outside production areas.
Handling	 Securely attach the cylinders or store them in a case. Never drag or roll a cylinder on the ground, even when empty.
Security measures to avoid explosions and fires	 Never smoke near an oxygen cylinder. Keep cylinders far from flammable materials. Never use grease or oil to handle or lubricate regulator or flowmeter components. Do not modify equipment parts. Close the main valve, empty the flowmeter, and reset it to zero when the cylinder is not in use. Automatic external defibrillator (AED) user: if oxygen cylinders are nearby, place mask (or bag-valve-mask) at arm's length distance from the victim.
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• Have all certified first aiders undergo complementary oxygen therapy training each year.



Complementary oxygen

therapy training





RECOMMENDED OXYGEN THERAPY TRAINING CONTENT	
WHMIS (Workplace Hazardous Materials Information System) pertaining to pressurized oxygen	 Review of Material Safety Data Sheet (MSDS) (data sheet) for oxygen: classification storage handling maintenance method of transportation accident risk Inspection and maintenance program Inspection and maintenance register
Oxygen therapy	 When to administer oxygen to the victim How to use the equipment: properly adjusting the regulator emptying the feedlines equipment handling, including regulating the flow placing the high-concentration oxygen mask connecting the oxygen to the pocket mask connecting the oxygen to bag-valve-mask, in case the company uses cyanide or its by-products Monitoring the victim
Assessment	Theoretical and practical assessments Annually renewable certification

NB: The instructional video on administering oxygen available on the CNESST website does not replace complementary oxygen therapy training. It serves to refresh first aiders' knowledge.

Sources:

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This tool was developed by a Provincial Nursing Working Group of Réseau de santé publique en santé au travail (RSPSAT) in collaboration with Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST).