Carbon Monoxide Meeting Kit

Carbon Monoxide (CO) is a toxic, colorless, tasteless, odorless gas. It is created as a waste product of the incomplete burning of coal, wood, oil, and other petroleum based fuels like gasoline and propane. CO gas, although odorless, usually occurs in a combination of combustion by-products that have unique odors. The primary source is the internal combustion engine. CO gas is also generated in industrial operations such as auto repair, oil refining, steel, and chemical manufacturing.

HAZARDS OF CARBON MONOXIDE

CO is a chemical asphyxiant, which means that it reduces the blood’s ability to carry oxygen. It can then get into the lungs and bloodstream and cause suffocation. Since it’s odorless, there may be no warning if toxic CO levels are present.

CO gas mixes very well with air and enters easily through walls and ceilings. It is also very flammable and may react very strongly with oxygen, acetylene, chlorine, fluorine, or nitrous oxide.

CAUSE OF CARBON MONOXIDE POISONING

Carbon monoxide poisoning is caused by inhaling combustion fumes. When too much carbon monoxide is in the air you’re breathing, your body replaces the oxygen in your red blood cells with carbon monoxide. This prevents oxygen from reaching your tissues and organs.

OCCUPATIONAL RISKS

Workers may be exposed to harmful levels of CO in boiler rooms, warehouses, petroleum refineries, pulp and paper production, and steel production; around docks, blast furnaces, or coke ovens; or in one of the following occupations:

- Welder
- Garage mechanic
- Firefighter
- Carbon-black maker
- Organic chemical synthesizer
- Metal oxide reducer
- Longshore worker
- Diesel engine operator
- Forklift operator
- Marine terminal worker
- Toll booth or tunnel attendant
- Customs inspector
- Police officer
- Taxi driver

SYMPTOMS

Signs and symptoms of carbon monoxide poisoning may include:

- Dull headache
- Weakness
- Dizziness
- Nausea or vomiting
- Shortness of breath
- Confusion
- Blurred vision
- Loss of consciousness

Carbon monoxide poisoning can be particularly dangerous for people who are sleeping or intoxicated. People may have irreversible brain damage or even die before anyone realizes there’s a problem.

WHAT EMPLOYEES NEED TO DO

- Report any situation to your employer that might cause CO to build up.
- Pay attention to ventilation problems, especially in enclosed areas.
- Do not use gas-powered equipment in enclosed spaces.

- If your facility has installed carbon monoxide monitors and an alarm is triggered, immediately shut off the equipment you are using, move to fresh air and contact a supervisor immediately.
- Know the symptoms of CO poisoning.
- If a coworker is experiencing CO poisoning, get the victim to the fresh open air and contact emergency medical services.
- Report promptly complaints of dizziness, drowsiness, or nausea.
- Avoid overexertion if you suspect CO poisoning and leave the contaminated area.
- Tell your doctor that you may have been exposed to CO if you get sick.
- Avoid the use of gas-powered engines, such as those in powered washers as well as heaters and forklifts, while working in enclosed spaces.

CARBON MONOXIDE CONTROL METHODS TO REDUCE CO POISONING IN THE WORKPLACE

- Consider installing carbon monoxide detectors with audible alarms.
- Install a ventilation system that will effectively remove CO from the work area.
- Properly maintain equipment that may produce CO to enhance safe operation and to reduce CO generation.
- Consider switching from gasoline-powered equipment to battery or electric equipment. For example, switching from propane powered forklifts to electric forklifts.
- Do not allow the use of gasoline-powered equipment indoors or in poorly ventilated areas.
- Educate workers about the sources, hazards, and controls of CO.

FINAL WORD

Whether you work in white collar enclosed office setting, an industrial setting, or as a public/private service provider, there is a risk of being exposed to the lethal effects of carbon monoxide.