

Carbon Monoxide Data Sheet

Carbon monoxide: CO

Hazard Flammable: will explode; LEL 12.5%

Classification: Health: extremely toxic

Synonyms: carbon oxide, flue gas, monoxide

Exposure Limits:

(OSHA) PEL\TWA: 50 ppm

(ACGIH) STEL: 400 ppm / 15 min.

(OSHA) IDLH: 1500 ppm / 30 min.

Industries: steel mills, fire departments, garages, loading docks, electrical utilities, and general industries

Carbon monoxide is a colorless gas. To the human senses it is invisible.

Carbon monoxide is a byproduct of combustion and will appear naturally in any situation where burning has taken place.

Carbon monoxide is a highly toxic gas which is termed a toxic asphyxiant, meaning it reduces the oxygen transport properties of the blood. It reacts with the hemoglobin in the blood forming carboxyhemoglobin, which prevents the hemoglobin from transferring oxygen. Low ppm doses of carbon monoxide can cause headaches and dizziness. If the victim is removed to fresh air no permanent damages will result. High doses can be fatal.

Effects of Various CO Levels

50	Permissible Exposure Level for 8 hours (OSHA)
200	Possible mild frontal headache in 2 to 3 hours.
400	Frontal headache and nausea after 1 to 2 hours. Occipital after 2-1/2 to 3-1/2 hours.
800.	Headache, dizziness, and nausea in 45 minutes. Collapse and possible death in 2 hours
1600	Headache, dizziness, and nausea in 20 minutes. Collapse and death in 1 hour.
3200	Headache and dizziness in 5 to 10 minutes. Unconsciousness and danger of death in 30 minutes.
6400	Headache and dizziness in 1 to 2 minutes. Unconsciousness and danger of death in 10 to 15 minutes.
12,800	Immediate effects-unconsciousness. Danger of death in 1 to 3 minutes.

Source: American Industrial Hygiene Association