



Operating Instructions
Carbon Monoxide Monitor
(Part Number: 382012)

Introduction

Carbon monoxide is a colorless, odorless gas. It is the only commonly used industrial gas which is both highly toxic and odorless. Symptoms of exposure to carbon monoxide include headaches, palpitations, dizziness, weakness and nausea. Low levels of carbon monoxide in air, which are not immediately hazardous to life, may impair reaction time or sensory perception. Chronic exposure to low levels of carbon monoxide may adversely affect the cardiovascular system. Loss of consciousness and death may result from continued or more intense exposure. OSHA PEL (permissible exposure limit) for carbon monoxide is 50 ppm (TWA). NIOSH REL (recommended exposure limit) for carbon monoxide is 35 ppm (TWA).

Carbon monoxide is a widely spread air pollutant. It is a byproduct in the combustion of gasoline, diesel, kerosene and coal fuel; therefore, carbon monoxide may exist in different industries, residential areas and highways.

Principle of Operation

The SafeAir carbon monoxide badge is a monitoring system designed to indicate the presence of carbon monoxide at concentrations below the permissible exposure limit. The SafeAir carbon monoxide badge detects the presence of carbon monoxide by forming a color change in the shape of an exclamation mark inside the triangle. This indication is produced by a color-forming reaction which occurs when carbon monoxide reacts with a flat indicator layer.

Physical Specifications:

Dimensions	(74 ± 1 mm) x (41 ± 1 mm) x (1 mm)
Weight	1.5 g
Refrigerated shelf life	1 year
Color change	brown to black

Sampling Parameters:

Exposure level	7.0 ppm-hr
Minimum detectable limit (8 hours)	0.9 ppm
Maximum recommended sampling time	10 hours
Minimum recommended sampling time	15 minutes
Relative humidity range	40% - 90%
Face velocity range	10 – 150 cm/sec
Temperature range	50°F - 104°F
Light effect – UV (direct sunlight)	no effect
Light effect – visible	no effect
Color stability	2 days
Known Interferences	alkenes, hydrogen sulfide, hydrogen

Operating Instructions

1. Allow the badge to warm to room temperature prior to removing the badge from its protective pouch.
2. Remove activation label before monitoring.
3. For personnel monitoring, attach the badge near the user's breathing zone (i.e. the collar) with the front side exposed to the surrounding atmosphere.
4. For area monitoring, attach the badge to a stand and mount in a centralized area with the front side exposed to the surrounding atmosphere.

WARRANTY EXCLUSIONS AND LIMITATION OF LIABILITY

IF THE USER DOES NOT ACCEPT THE FOLLOWING TERMS, THE USER SHOULD NOT USE THE SAFEAIR BADGES.

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Warning: Keep out of reach of children, if ingested seek medical attention immediately.



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