



Environmental Air Systems, Inc.

Making Your World Comfortable

Heating • Ventilation • Air Conditioning

CARBON MONOXIDE SAFETY LEVELS

ACCEPTED CARBON MONOXIDE AMBIENT, HEALTH, AND RESPONSE LEVELS

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|-------------------|--|
| 1-9 ppm | Acceptable ambient levels, if not caused by vented appliances |
| 10-35 ppm* | Acceptable short term levels from unvented appliances but not vented. Occupants need to be advised of elevated levels of CO |
| 15-20 ppm | World Health Organization lists this as the first level of CO that can cause ill effects |
| 27 ppm | 21% increase in cardio respiratory complaints – Kurt 1978 |
| 30 ppm | Earlier onset of exercise induced angina – World Health Organization |
| 36-99 ppm | Excessive level. Advise occupants to seek fresh air, check symptoms, and ventilate area. |
| 100 ppm | Evacuate immediately. Advise occupants to check symptoms, seek medical attention. |
| 200 ppm | Accepted as causing ill effects in healthy adults (has caused death in some cases) |
| 400 ppm | Life threatening to most after 2-3 hours |
| 800 ppm | Unconscious to most after 1-2 hours, death after 2 hours |
| 1,600 ppm | Unconscious or death to most after one hour |
| 3,200 ppm | Death to most after 30 minutes |
| 6,400 ppm | Death to most after 10-15 minutes |
| 12,800 ppm | Death to most after 1-3 minutes |

***CO exposure above this level can cause headache, nausea, tiredness and other flue – like symptoms- anytime. Infants and the elderly may be considerably more sensitive than what is represented here for healthy adults.**