

# Carbon dioxide

1,000ppm (0.1%)
5,000ppm (0.5%)
10,000ppm (1%)
15,000ppm (1.5%)
20,000ppm (2%)
30,000ppm (3%)
40,000- 50,000ppm (4-5%)
50,000- 100,000ppm (5-10%)
100,000- 1,000,000ppm (10-100%)

- 1–1.5% Slight effect on chemical metabolism after exposures of several hours.
- 3% The gas is weakly narcotic at this level, giving rise to deeper breathing, reduced hearing ability, coupled with headache, an increase in blood pressure and pulse rate.
- 4–5% Stimulation of the respiratory centre occurs resulting in deeper and more rapid breathing. Signs of intoxication will become more evident after 30 minutes' exposure.
- 5–10% Breathing becomes more laborious with headache and loss of judgement.
- 10–100% When the CO<sub>2</sub> concentration increases above 10%, unconsciousness will occur in less than one minute. Unless prompt action is taken, further exposure to these high levels will eventually result in death.

Adapted from: 'Carbon Dioxide Physiological Hazards', Safety Info 24/11/E, European Industrial Gases Association.

