

# Carbon Dioxide CO<sub>2</sub>

**Characteristics:** Carbon dioxide is a colorless, odorless gas. Wood chips have a tendency to degrade the surrounding air when they are stored in confined spaces. The natural processes of microbiological activity and chemical decomposition can quickly deplete the ambient oxygen, as well as increasing the carbon dioxide and generating carbon monoxide. Any one of these things could render the air unsafe but when two or more exist together they can become a lethal combination.

CO<sub>2</sub> is also produced by the roasting of lime mud and lime rock (kilns) and the combustion of organic material (Recovery and steam plant or in any other area where combustion takes place). CO<sub>2</sub> is 1 ½ times heavier than air.

**Effects:** Dizziness followed by a feeling of faintness. This condition exists only when oxygen has been largely displaced by Carbon Dioxide.

**Treatment:** Fresh air – Immediately report to First Aid

**Protective measures:** Use air supply equipment in areas suspected of containing large concentrations of carbon dioxide. Use proper ventilation.

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%)

## Main symptoms of Carbon dioxide toxicity

Volume % in air	
■	- 1%
■	- 3%
■	- 5%
■	- 8%

### Visual

- Dimmed  
sight

### Auditory

- Reduced  
hearing

### Central

- Drowsiness  
- Mild narcosis  
- Dizziness  
- Confusion  
- Headache  
- Unconsciousness

### Skin

- Sweating

### Heart

- Increased  
heart rate and  
blood  
pressure

### Respiratory

- Shortness  
of breath

### Muscular

- Tremor



**West Fraser Mills Ltd.**

