



## **Human Health and Environmental Effects**

### **Human Health:**

Syngas contains carbon monoxide, which is a chemical asphyxiant. The toxic action of carbon monoxide is caused by combining with the hemoglobin in the blood to form the relatively stable carboxyhemoglobin. The stability of the carboxyhemoglobin prevents oxygen from being taken up by the body and consequently the body is deprived of needed oxygen.

Syngas is not classified as a poison at the normal levels of carbon monoxide present, but it can be fatal after just a few minutes of exposure.

### **Environment:**

Syngas is a pollutant, which can affect workers by causing headaches and dizziness.

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## **Exposure Potential and Risk Mitigation Measures**

### **Industrial Use:**

Syngas is shipped as a flammable gas, most commonly in pipelines.

Use atmospheric and personal monitors to ensure carbon monoxide levels do not exceed occupational exposure limits.

Personnel should be trained on the hazards and risks of syngas and carbon monoxide.

Precautions for the flammability of syngas include no smoking and the use of proper electrical equipment. All ignition sources must be eliminated when working with flammable gas.

Occupational exposure limits for carbon monoxide are:

ACGIH, 8 hr, TLV-TWA - 25 ppm

OSHA, 8 hr, PEL - 50 ppm

### **Consumer Use:**

None known.

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## **Additional Sources of Information**

Air Liquide Safety Data Sheets  
American Chemistry Council  
Compressed Gas Association (G-5.7)

## **Contact Information**

For matters related to health, safety, security, environment or Responsible Care® commitments, contact us by phone at 713-438-6721 or by [email](#).