

# THE DANGERS OF FORMALDEHYDE IN BUILDINGS AND HOMES

Formaldehyde (HCHO) is considered a strong irritant and potent sensitizer. Inhalation of large amounts of HCHO can cause severe irritation of the upper respiratory tract and death. Data from human exposures indicate that exposure to large concentrations of HCHO gas may lead to pulmonary edema. Even HCHO gas present in the workroom at concentrations of 1 to 11 ppm can cause eye, nose and throat irritation. Formaldehyde has the potential to cause cancer in humans.

Sources of formaldehyde in the home include building materials, pressed wood products (hardwood plywood wall paneling, particleboard, fiberboard) and furniture made with these pressed wood products, Urea-formaldehyde foam insulation (UFFI), combustion sources and environmental tobacco smoke, durable press drapes, other textiles and glues.

## **Health Effects:**

Formaldehyde, a colorless, pungent-smelling gas, can cause watery eyes, burning sensations in the eyes and throat, nausea and difficulty in breathing in some humans exposed at elevator levels (above 0.1 parts per million.) High concentrations may trigger attacks in people with asthma. There is evidence that some people can develop sensitivity to formaldehyde. It has also been shown to cause cancer in animals and may cause cancer in humans. Health effects include eye, nose, and throat irritation; wheezing and coughing; fatigue; skin rash; severe allergic reactions. May also cause other effects under "organic gases."

## **Concentration levels:**

### **Concentration**

0.5 to 2 ppm  
3 to 5 ppm  
10 to 20 ppm  
  
25 to 30 ppm  
100 ppm

### **Symptoms**

Eyes, nose and throat irritation  
Tearing of the eyes  
Difficult breathing, nose and throat burning, cough, heavy tearing of the eyes  
Severe respiratory tract injury  
Immediately dangerous to life and health (IDLH)

Reprinted from Article from IEQ Review by Ed Ziegler, Pure Air Control Services

For further information and guidelines on formaldehyde in the work place, see OSHA Standards and Interpretations 1910.1048 Formaldehyde.

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