

# FORMALDEHYDE AT DUKE

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## *Information for personnel*



**FORMALDEHYDE**

**IRRITANT AND  
POTENTIAL CANCER  
HAZARD**

**AUTHORIZED  
PERSONNEL ONLY**

### **OSHA Standard Highlights**

#### PERMISSIBLE EXPOSURE LIMIT

For an 8 hour workday, your exposure to formaldehyde must be under 0.75 parts formaldehyde per million parts air (0.75 ppm). For any 15 minute period, your exposure must be no more than 2 ppm.

#### EXPOSURE MONITORING

The Occupational Hygiene Program will monitor initially and periodically to determine airborne levels of formaldehyde. Employees will receive results in 15 days.

## MEDICAL SURVEILLANCE

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Duke provides medical surveillance for employees exposed over 0.5 ppm for eight hours or over 2 ppm for 15 minutes.

## INFORMATION AND TRAINING

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Employees exposed over 0.1 ppm must be trained initially and annually on this Standard, health hazards, safe work practices, and PPE.

## METHODS OF COMPLIANCE

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Duke will attempt to use ventilation and enclosures to control exposure. However, respiratory protection may be necessary.

## HAZARD COMMUNICATION

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Labels for formaldehyde containers must follow OSHA regulations, and Materials Safety Data Sheets must be available in your work area.

# SHORT TERM EXPOSURE

**Formaldehyde vapor** can cause varying effects, depending on the air concentration:

Level, ppm	Effect
0.5 – 2	Possible eye, nose and throat irritation
3 – 5	Above plus tearing of eyes
10 – 20	Difficulty breathing, burning of nose and throat, coughing and heavy tearing of eyes
20	Immediately Dangerous to Life and Health (IDLH) - severe respiratory tract injury leading to pulmonary edema and pneumonitis

**Skin** contact with formaldehyde can cause discoloration, stinging, drying, cracking, and scaling. Prolonged contact can cause numbness and hardening of the skin. Skin contact with formaldehyde can also lead to sensitization and allergic reaction.

**Eye** contact can lead to temporary discomfort or more serious injuries such as corneal clouding or loss of vision.

**Ingestion** of formaldehyde can lead to severe irritation of the mouth, throat, and stomach. Unconsciousness or death can also result.

# LONG TERM EXPOSURE

**Formaldehyde is a potential carcinogen. Repeated exposure increases the risk.**

Formaldehyde exposure has been associated with cancers of the nose, throat, and lungs.

There is no conclusive evidence that formaldehyde causes any adverse reproductive or developmental effects in humans.

## SPILLS

### SMALL SPILLS

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Wear double disposable nitrile gloves and use an absorbent material to take up spilled liquid. Place this in a properly labeled container for disposal. Contact the OESO Chemical Waste Program (684-2794) about proper disposal procedures.

### LARGE SPILLS

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Follow Standard Operating Procedures.

**Call 911** to activate Duke's Spill Response Team.

## FIRST AID PROCEDURES

**GET MEDICAL ATTENTION when formaldehyde is swallowed, gets in the eyes, causes chemical burns on the skin, or is inhaled in high concentrations.**

### INGESTION

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Give the conscious person milk or water. Keep the person warm and at rest and get medical attention immediately. If the person vomits, lower the head below hips.

### INHALATION

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Remove the person to fresh air immediately if possible. If the concentration is very high (as in a large volume chemical spill), call 911 and get medical attention.

### SKIN

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Remove contaminated clothing and wash the affected area with soap and large amounts of water for at least 15 minutes. Get medical attention if you have chemical burns or eye or respiratory irritation.

### EYES

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Wash the eyes immediately with large amounts of water, occasionally lifting lower and upper lids, for at least 15 minutes. Get medical attention immediately.

## Questions?

Call the Occupational and Environmental Safety Office (OESO) for information on the following topics:

- Recommendations for appropriate Personal Protective Equipment (PPE) for your job
- Air monitoring
- Health effects of formaldehyde
- The OSHA formaldehyde standard



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