

# FORMALDEHYDE

## Silent & Invisible

Formaldehyde is a naturally occurring chemical compound that is also frequently used in the manufacturing of many common household materials.

Formaldehyde can be found in many products that are all around us. Much of the formaldehyde that people are exposed to comes from its use in the production of polymers that are found in many products used to build and furnish our homes and offices. The chemical is commonly used in countless manufacturing processes and as a key ingredient in many building supplies and furnishings.

*In more recent years the health effects associated with elevated levels of exposure have brought to light the dangers from prolonged and repeated contact with the chemical. The major exposure risks associated with formaldehyde come from occupants inhaling contaminated air.*



The list of formaldehyde containing substances is extensive and can involve everything from plywood and particle board, insulation, cleaners, fabrics, carpeting and furniture to automobile exhaust, smog and tobacco smoke.



Exposure to elevated levels of this gas should be avoided whenever possible.

Exposure to elevated levels of formaldehyde can trigger:

- ◆ asthma attacks
- ◆ nausea
- ◆ watery eyes, burning eyes
- ◆ difficulty breathing
- ◆ headaches
- ◆ respiratory irritation
- ◆ sensitization

*Formaldehyde has been shown to cause cancer in animals and according to the Department of Health and Human Services (DHHS), formaldehyde may reasonably be anticipated to be a carcinogen.*

### EMSL Analytical provides the following Formaldehyde services

1. Formaldehyde by NIOSH 2016
2. Formaldehyde in Passive Samplers (badges) by modified NIOSH 2016
3. Formaldehyde by HPLC/UV
- 4) Formaldehyde in Bulk Samples
- 5) Environmental Test Chamber Offgassing
- 6) Product Testing

During a formaldehyde inspection air samples are taken to determine the presence and concentrations of the gas in the air.

*Contact EMSL for all your formaldehyde testing sampling supplies and testing needs.*



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For Additional Information  
Call EMSL Toll-Free:

**West Coast 888.455.3675**    **East Coast 800.220.3675**

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Locally Focused...  
Nationally Recognized

Formaldehyde	
IUPAC name	Methanal
Other names	formalin, formol, methyl aldehyde, methylene oxide
Identifiers	
CAS number	[50-00-0]
RTECS	LP8925000
SMILES	C=O
Properties	
Molecular formula	H <sub>2</sub> CO
Molar mass	30.03g·mol <sup>-1</sup>
Appearance	colorless gas
Density	1 kg·m <sup>-3</sup> , gas
Melting point	-117°C (156K)
Boiling point	-19.3°C (253.9K)
Solubility in water	> 100g/100 ml (20°C)
Structure	
Molecular shape	trigonal planar
Dipole moment	2.33168(1) D
Hazards	
Main hazards	toxic, flammable
NFPA 704	
R-phrases	R23/24/25, R34, R40, R43
S-phrases	(S1/2), S26, S36/37, S39, S45, S51
Flash point	-53 °C
Related compounds	
Related aldehydes	acetaldehyde benzaldehyde
Related compounds	ketones carboxylic acids
Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa)	

Table Courtesy of Wikipedia: <http://en.wikipedia.org/wiki/Formaldehyde>

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