**Job Hazard Analysis: Chemical Use**

|  |  |
| --- | --- |
| **Formaldehyde**  (Laboratory Grade)  **Corrosive Warning Label Acute Toxicity Warning Label  Health Hazard Warning Label** | **Personal Protective Equipment (PPE) Required:**  Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fumes/gas/mist/vapors/spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing dust/fumes/gas/mist/vapors/spray. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. |

|  |
| --- |
| Hazards: Toxic if swallowed [Danger Acute toxicity, oral]. Toxic in contact with skin [Danger Acute toxicity, dermal]. Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]. May cause an allergic skin reaction [Warning Sensitization, Skin]. Causes serious eye damage [Danger Serious eye damage/eye irritation]. Fatal if inhaled [Danger Acute toxicity, inhalation]. Toxic if inhaled [Danger Acute toxicity, inhalation]. Suspected of causing genetic defects [Warning Germ cell mutagenicity]. May cause cancer [Danger Carcinogenicity]. Suspected of causing cancer [Warning Carcinogenicity].  (Review supplier Safety Data Sheet (SDS) for complete hazard information) |

|  |  |  |
| --- | --- | --- |
| **Job Steps** | **Hazards** | **Controls** |
| 1. Receiving and Storing Formaldehyde | * Exposure to vapors or spills * Skin contact with liquid * Improper storage leading to leaks or reactions | * Use appropriate PPE: gloves, goggles, and laboratory coat * Store in a well-ventilated area, away from incompatible substances * Ensure proper labeling and secure storage to prevent leaks |
| 1. Handling and Preparing Solutions | * Inhalation of fumes * Skin and eye contact * Spill or splash during mixing | * Use appropriate PPE: gloves, goggles, and laboratory coat * Perform work in a fume hood or well-ventilated area * Follow proper procedures for mixing and handling to avoid spills |

|  |  |  |
| --- | --- | --- |
| **Job Steps** | **Hazards** | **Controls** |
| 1. Application and Use in Processes | * Prolonged exposure to vapors * Accidental release or spill * Contact with eyes, skin, or mucous membranes | * Use appropriate PPE: gloves, goggles, and laboratory coat * Limit exposure time and ensure adequate ventilation * Have spill kits and emergency showers/eyewash stations readily available |
| 1. Cleaning and Disposal | * Exposure during cleaning of equipment * Improper disposal methods leading to environmental contamination * Inhalation of fumes during disposal | * Use appropriate PPE: gloves, goggles, and laboratory coat * Follow protocols for cleaning and decontaminating equipment * Dispose of waste according to local regulations and ensure it is in properly labeled containers |

|  |  |
| --- | --- |
| **Description of**  **Activities** | **Control Measures** |
| Emergency Procedures | * Spill Response: * Evacuate the area and alert others * Use spill containment materials to control the spill * Clean up using appropriate PPE and disposal methods * First Aid: * Inhalation: Move to fresh air immediately and seek medical attention if symptoms persist * Skin Contact: Rinse skin thoroughly with water for at least 15 minutes; remove contaminated clothing * Eye Contact: Rinse eyes with water for at least 15 minutes and seek medical attention * Ingestion: Seek immediate medical attention; do not induce vomiting |
| Training | Employees should:   * Be trained on formaldehyde hazards and safe handling procedures * Be trained on the use of PPE and emergency response procedures * Regularly review SDS for formaldehyde. |
| Review and Monitoring | * Conduct regular audits to ensure compliance with safety procedures * Monitor air quality in areas where formaldehyde is used * Review and update the job hazard analysis (JHA) periodically or when new hazards are identified |

**Resource:** National Library of Medicine – Pub Chem - [Formaldehyde](https://pubchem.ncbi.nlm.nih.gov/compound/formaldehyde#section=Safety-and-Hazards)

This resource is intended for informational purposes only and should not replace laboratory-specific procedures.   
References to non-CDC resources do not constitute or imply endorsement by CDC or U.S. Department of Health and Human Services. This job aid is a component of the free, on-demand CDC training course “Fundamentals of Working Safely with Formaldehyde and Glutaraldehyde”. Find the course at <https://reach.cdc.gov/training>

v23166