

Material Safety Data Sheet (MSDS) For Formalin

Product Name: Formalin

Chemical Formula: CH₂O

Synonyms: Formaldehyde solution, Formaldehyde solution, Formalith, Formol

Manufacturer Information: [Manufacturer Name] [Address] [City, State, Zip Code]
[Phone Number] [Emergency Phone Number]

Composition/Information on Ingredients:

- Formaldehyde (CH₂O): ≥ 37%
- Methanol (CH₃OH): ≤ 10%
- Water (H₂O): Balance

Hazards Identification: Classification of the Substance or Mixture:

- Skin Corrosion/Irritation (Category 1A)
- Serious Eye Damage/Eye Irritation (Category 1)
- Specific Target Organ Toxicity - Single Exposure (Category 3)
- Carcinogenicity (Category 1B)

Label Elements:

- **Signal Word:** Danger
- **Hazard Statements:**
 - Causes severe skin burns and eye damage.
 - May cause respiratory irritation.
 - Suspected of causing cancer.
- **Precautionary Statements:**
 - Wear protective gloves/protective clothing/eye protection/face protection.
 - Wash hands thoroughly after handling.
 - If inhaled: Remove person to fresh air and keep comfortable for breathing.

- If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- If swallowed: Rinse mouth. Do NOT induce vomiting.

First Aid Measures:

- **Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if symptoms persist.
- **Skin Contact:** Remove contaminated clothing immediately and rinse skin with plenty of water. Seek medical attention if irritation develops or persists.
- **Eye Contact:** Rinse cautiously with water for several minutes, removing contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.
- **Ingestion:** Rinse mouth. Do not induce vomiting. Seek medical attention immediately.

Firefighting Measures:

- **Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
- **Special Firefighting Procedures:** Wear self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.
- **Hazardous Combustion Products:** Carbon monoxide, carbon dioxide, formaldehyde.

Accidental Release Measures:

- **Personal Precautions:** Wear appropriate protective equipment. Avoid breathing vapor or mist. Avoid contact with skin, eyes, and clothing.
- **Environmental Precautions:** Prevent entry into waterways, sewers, and surface or ground water. Notify authorities if spillage enters waterways or contaminates soil or vegetation.
- **Cleanup Methods:** Absorb spillage with inert material (e.g., sand, earth) and dispose of according to local regulations. Wash contaminated area with plenty of water.

Handling and Storage:

- **Handling:** Use in a well-ventilated area. Avoid inhalation, ingestion, and contact with skin and eyes. Do not eat, drink, or smoke while handling. Wash hands thoroughly after handling.

- **Storage:** Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers tightly closed when not in use. Store away from heat, sparks, and open flame.

Exposure Controls/Personal Protection:

- **Engineering Controls:** Provide adequate ventilation to maintain airborne concentrations below recommended exposure limits.
- **Personal Protective Equipment:**
 - **Eye/Face Protection:** Safety goggles or face shield.
 - **Skin Protection:** Wear chemical-resistant gloves and protective clothing to prevent skin contact.
 - **Respiratory Protection:** Use appropriate respiratory protection if ventilation is inadequate to maintain exposure limits.

Physical and Chemical Properties:

- **Appearance:** Clear colorless liquid
- **Odor:** Pungent
- **pH:** 2.7 - 4.0
- **Boiling Point:** 95°C (203°F)
- **Melting Point:** -15°C (5°F)
- **Density:** 1.09 - 1.11 g/cm³
- **Solubility:** Miscible with water

Stability and Reactivity:

- **Stability:** Stable under normal conditions.
- **Incompatibility:** Avoid contact with strong oxidizing agents, strong bases, and strong acids.
- **Hazardous Decomposition Products:** Formaldehyde, carbon monoxide, carbon dioxide.

Toxicological Information:

- **Acute Toxicity:** LD₅₀ (Oral, Rat): 800 mg/kg
- **Skin Corrosion/Irritation:** Causes severe skin burns.
- **Serious Eye Damage/Irritation:** Causes serious eye damage.
- **Carcinogenicity:** Suspected of causing cancer.

Ecological Information:

- **Ecotoxicity:** Toxic to aquatic life. Do not allow material to enter waterways.

Disposal Considerations:

- Dispose of in accordance with local, regional, and national regulations. Consult with relevant authorities for proper disposal methods.

Transport Information:

- Proper Shipping Name: Formaldehyde solution
- Hazard Class: 8
- UN Number: UN2209

Regulatory Information:

- This product is classified and labeled according to the Globally Harmonized System (GHS) and local regulations.

Other Information:

- For industrial use only. Keep out of reach of children. Avoid contact with incompatible materials. Observe good industrial hygiene practices. This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety, and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.