

## Section 1 Chemical Product and Company Identification

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**HOME SCIENCE TOOLS**

665 Carbon Street  
Billings, MT 59102  
800-860-6272  
www.homesciencetools.com

**CHEMTREC 24 Hour Emergency USA**  
**Phone Number (800) 424-9300**  
**1 703-741-5500 (from anywhere in the world).**  
For laboratory and industrial use only.  
Not for drug, food or household use.

<b>Product</b>	<b>FORMALDEHYDE, 37%</b>
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<b>Synonyms</b>	Formalin Solution
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## Section 2 Hazards Identification

**Signal word:** DANGER**Pictograms:** GHS05 / GHS06 / GHS08**Target organs:** Eyes, Central nervous system, Liver, Kidneys.**GHS Classification:**

Flammable liquid (Category 4)  
Acute toxicity, oral (Category 3)  
Acute toxicity, dermal (Category 3)  
Skin corrosion (Category 1B)  
Skin sensitization (Category 1)  
Acute toxicity, inhalation (Category 3)  
Carcinogenicity (Category 2)

**GHS Label information: Hazard statement:**

H227: Combustible liquid.  
H301: Toxic if swallowed.  
H311: Toxic in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H331: Toxic if inhaled.  
H351: Suspected of causing cancer.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known  
Physical hazards not otherwise classified (PHNOC) - Not Known

**Precautionary statement:**

P201: Obtain special instructions before use.  
P202: Do not handle until all safety precautions have been read and understood.  
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P260: Do not breathe mist/vapours/spray.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P330: Rinse mouth.  
P331: Do NOT induce vomiting.  
P302+P352: IF ON SKIN: Wash with plenty of water and soap.  
P312: Call a POISON CENTER or doctor if you feel unwell.  
P361+P364: Take off immediately all contaminated clothing and wash it before reuse.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P310: Immediately call a POISON CENTER or doctor.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P370+P378: In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam to extinguish.  
P403+P235: Store in a well-ventilated place. Keep cool.  
P405: Store locked up.  
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	51.8%	231-791-2
Formaldehyde	50-00-0	37.2%	200-001-8
Methanol	67-56-1	11.0%	200-659-6

## Section 4 First Aid Measures

**INGESTION:** TOXIC IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** TOXIC IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** TOXIC IN CONTACT WITH SKIN. CAUSES SEVERE SKIN BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. The gas vaporizes readily from solution and is flammable in air. Ignition temperature for 37% solution: 424°C (795°F).

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Formaldehyde	STEL: C 0.3 ppm / C 0.37 mg/m <sup>3</sup> (A2)	TWA: 0.75 ppm / STEL: 2 ppm	TWA: 0.016 ppm / STEL: 0.1 ppm

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Clear, colorless liquid	<b>Evaporation rate ( Butyl acetate = 1):</b> >1	<b>Partition coefficient:</b> (n-octanol / water): Log Pow: 0.35
<b>Odor:</b> Pungent odor	<b>Flammability (solid/gas):</b> Data not available	<b>Auto-ignition temperature:</b> Data not available
<b>Odor threshold:</b> Data not available	<b>Explosion limits: Lower / Upper:</b> 7% / 73%	<b>Decomposition temperature:</b> Data not available
<b>pH:</b> 2.0-4.0	<b>Vapor pressure (mm Hg):</b> 1.33 @ 68°F	<b>Viscosity:</b> Data not available
<b>Melting / Freezing point:</b> Data not available	<b>Vapor density (Air = 1):</b> 1.04	<b>Molecular formula:</b> Mixture
<b>Boiling point:</b> 96°C (205°F)	<b>Relative density (Specific gravity):</b> 1.080 @ 60°F	<b>Molecular weight:</b> Mixture
<b>Flash point:</b> 60°C (140°F) ASTM D56	<b>Solubility(ies):</b> Soluble in water	

## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Heat, flame, ignition sources and incompatible materials. Trioxymethylene precipitate can be formed on long standing at very low temperature. Non-hazardous polymerization may occur at low temperatures, forming paraformaldehyde, a white solid.

**Incompatible materials:** Strong acids, phenols, strong oxidizers, hydrochloric acid, ammonia, iodine, alkalies, tannin, iron products, gelatin, bisulfite.

**Hazardous decomposition products:** Carbon oxides and gaseous formaldehyde.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: 100 mg/kg ; Inhalation-rat LC50: 250 ppm/4 hours ; Dermal-rat LD50: 270 mg/kg [Formaldehyde]

**Skin corrosion/irritation:** Skin-rabbit - 2 mg/24 hour - severe [Formaldehyde]

**Serious eye damage/irritation:** Eyes-rabbit - 750 µg/24 hour - severe [Formaldehyde]

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: This product contains a chemical known to be a human carcinogen.

IARC classified: Group 1: Carcinogenic to humans.

OSHA: Carcinogen defined with no further categorization.

CA Prop 65: ⚠️ WARNING! : This product can expose you to chemicals including Methanol and Formaldehyde, which are known to the State of California to cause cancer and birth defects or other reproductive harm.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Inhalation may cause cough, sore throat, burning sensation behind the breastbone, headache, shortness of breath.

Ingestion: Ingestion may cause burns in mouth and throat, nausea, abdominal pain, shock or collapse.

Skin: Contact with skin causes redness, pain and burns.

Eyes: Contact with eyes causes watering of the eyes, redness, pain, and severe burns.

**Signs and symptoms of exposure:** Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: LP8925000 [Formaldehyde]

## Section 12 Ecological Information

**Toxicity to fish:** No data available

**Toxicity to daphnia and other aquatic invertebrates:** No data available

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** UN2209

**Shipping name:** Formaldehyde, solutions

**Hazard class:** 8

**Packing group:** III

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Limited quantity equal to or less than 5 L

**2016 ERG Guide #** 132

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Formaldehyde	Listed	100 lbs (45.4 kg)	U122	Listed	Not listed	⚠️ WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

## Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.