

Section 1 Chemical Product and Company Information

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80 Northwest Blvd.
Nashua, NH 03063
(800) 225-3739

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	FORMALIN IN ALCOHOL SOLUTION
Synonyms	All Purpose Fixative / Preserving Fluid

Section 2 Hazards Identification

Signal word: DANGER**Pictograms:** GHS02 / GHS07 / GHS08 / GHS06**Target organs:** Eyes, Central nervous system, Liver, Kidneys.**GHS Classification:**

Flammable liquid (Category 2)
Acute toxicity, dermal (Category 3)
Skin irritation (Category 2)
Skin sensitization (Category 1)
Eye irritation (Category 2A)
Acute toxicity, inhalation (Category 3)
STOT-SE (Category 3)
Carcinogenicity (Category 2)
STOT-SE (Category 2)

GHS Label information: Hazard statement:

H225: Highly flammable liquid and vapour.
H311: Toxic in contact with skin.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H336: May cause drowsiness or dizziness.
H351: Suspected of causing cancer.
H371: May cause damage to organs.

Precautionary statement:

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P260: Do not breathe mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333+P313: If skin irritation or rash occurs: Get medical attention.
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.
P312: Call a POISON CENTER or doctor if you feel unwell.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65: This product contains a chemical(s) known to the State of California to cause cancer (Formaldehyde [gas]) or reproductive toxicity (Methanol, developmental).

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Ethyl alcohol (denatured)	64-17-5	72.21-72.89%	200-578-6
Formaldehyde, 37%	50-00-0	10.57%	200-001-8
Isopropyl alcohol	67-63-0	7.65%	200-661-7
Water	7732-18-5	5.00%	231-791-2
Methanol	67-56-1	3.39-3.65%	200-659-6
Methyl isobutyl ketone	108-10-1	0.76-0.85%	203-550-1

Section 4 First Aid Measures

INGESTION: HARMFUL 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. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. 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: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol 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. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

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, dry, 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 ³ (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 & Chemical Properties

Appearance: Clear, colorless liquid. Odor: Mild characteristic odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: -114°C (-173°F)* Boiling point: 74-80°C (165.2-176°F)* Flash point: 5°C (41°F)*	Evaporation rate (Butyl acetate = 1): Ca 2* Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: 4.0%(V) / 20.0%(V)* Vapor pressure (mm Hg): Ca 50 @ 20°C* Vapor density (Air = 1): Ca 1.5* Relative density (Specific gravity): 0.7919-0.7955°C @ 60/60°F* Solubility(ies): Soluble in water.	Partition coefficient: (n-octanol / water): Low Pow: -.32* Auto-ignition temperature: 400°C (752°F)* Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture *[200 Proof Ethanol]
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Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

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

Hazardous decomposition products: Carbon oxides and gaseous formaldehyde.

Section 11 Toxicological Information

Acute toxicity: Formaldehyde: Oral-rat LD50: 100 mg/kg ; Inhalation-rat LC50: 250 ppm/4 hours ; Dermal-rat LD50: 270 mg/kg / **Ethanol:** Inhalation-rat LC50: 124.7 mg/l/4hours [Ethanol]

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 [Formaldehyde].

IARC classified: Group 1: Carcinogenic to humans [Formaldehyde].

OSHA: Carcinogen defined with no further categorization [Formaldehyde].

Ca Prop 65: This product contains a chemical known to the State of California to cause cancer or reproductive toxicity [Formaldehyde, Methanol].

Reproductive toxicity: Data not available

STOT-single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Inhalation may cause dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat.

Ingestion: Ingestion causes dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, staggering gait and coma.

Skin: Contact with skin causes irritation defatting on prolonged contact.

Eyes: Contact with eyes may cause blindness.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated for this dilution.

Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: KQ6300000 [Ethanol]

Section 12 Ecological Information

Toxicity to fish: Oncorhynchus mykiss (fish, fresh water), LC50 = 11,200 mg/l/24 hours [Ethanol]

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacia), EC50 = 10,800 mg/l/24 hours [Ethanol, 99.8% pure]

Toxicity to algae: Chlorella pyrenoidosa (Algae), EC50 = 9,310 mg/l/growth rate [Ethanol, absolute]

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

UN/NA number: UN1170

Shipping name: Ethanol solution

Hazard class: 3

Packing group: II

Reportable Quantity: 5,000 lbs (2270 kg)

Marine pollutant: No

Exceptions: Limited quantity equal to or less than 1 L

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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	WHMIS Classification
Ethanol	Listed	Not listed	D001	Listed	Not listed	B2; D2B
Formaldehyde	Listed	100 lbs (45.4 kg)	U122	Listed	Not listed	B1; D1A; D2A; D2B



Section 16 Additional 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.