

Material Safety Data Sheet

Formalde-Fresh Solution, Buffered

ACC# 41043

Section 1 - Chemical Product and Company Identification

MSDS Name: Formalde-Fresh Solution, Buffered

Catalog Numbers: HC20015, SF93-20, SF93-4

Synonyms: None.

Company Identification:

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
50-00-0	Formaldehyde	4.0-4.5	200-001-8
67-56-1	Methyl alcohol	<3.0	200-659-6
	Odormask	<0.5	unlisted
7558-79-4	Sodium phosphate dibasic	<0.1	231-448-7
7558-80-7	Sodium dihydrogen phosphate	<0.1	231-449-2
7732-18-5	Water	Balance	231-791-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid.

Warning! Contains formaldehyde which can cause cancer. Causes eye, skin, and respiratory tract irritation. May cause allergic respiratory and skin reaction. May cause central nervous system depression. May cause blindness if swallowed.

Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes

evident upon re-exposure to this material.

Ingestion: May be fatal or cause blindness if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause central nervous system depression.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract.

Chronic: Contains formaldehyde which can cause cancer in humans. There is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries. There is limited evidence that formaldehyde causes cancer of the nasal cavity and paranasal sinuses and strong but not sufficient evidence for leukemia. Repeated exposure may cause skin discoloration and thickening and nail decay.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use only with adequate ventilation. Do not breathe vapor or mist.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. See 29CFR 1910.1048 for regulatory requirements pertaining to all occupational exposures to formaldehyde, i.e., from formaldehyde gas, its solutions, and materials that release formaldehyde.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Formaldehyde	0.3 ppm Ceiling	0.016 ppm TWA 20 ppm IDLH	0.75 ppm TWA; 2 ppm STEL; 0.5 ppm Action Level (Irritant and potential cancer hazard - see 29 CFR 1910.1048)
Methyl alcohol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m ³ TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m ³ TWA
Odormask	none listed	none listed	none listed
Sodium phosphate dibasic	none listed	none listed	none listed
Sodium dihydrogen phosphate	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Formaldehyde: 3 ppm TWA (unless specified in 1910.1048) Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA Odormask: No OSHA Vacated PELs are listed for this chemical. Sodium phosphate dibasic: No OSHA Vacated PELs are listed for this chemical. Sodium dihydrogen phosphate: No OSHA Vacated PELs are listed for this chemical. Water: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: colorless
Odor: formaldehyde
pH: 6.9-7.1 @ 25°C
Vapor Pressure: Not available.
Vapor Density: > 1.00
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: > 212 deg F
Freezing/Melting Point: Not available.
Decomposition Temperature: Not available.
Solubility: Soluble.
Specific Gravity/Density: ~ 1.0
Molecular Formula: Mixture
Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Excess heat, confined spaces.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, oxides of phosphorus, irritating and toxic fumes and gases, carbon dioxide, toxic fumes of sodium oxide, formaldehyde.
Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:
CAS# 50-00-0: LP8925000
CAS# 67-56-1: PC1400000
CAS# unlisted.
CAS# 7558-79-4: WC4500000
CAS# 7558-80-7: WA1900000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
CAS# 50-00-0:
Draize test, rabbit, eye: 750 ug/24H Severe;
Draize test, rabbit, eye: 750 ug Severe;

Draize test, rabbit, eye: 10 mg Severe;
Draize test, rabbit, eye: 37% Severe;
Draize test, rabbit, skin: 2 mg/24H Severe;
Draize test, rabbit, skin: 50 mg/24H Moderate;
Inhalation, mouse: LC50 = 454 mg/m³/4H;
Inhalation, mouse: LC50 = 505 mg/m³/2H;
Inhalation, rat: LC50 = 203 mg/m³;
Inhalation, rat: LC50 = 578 mg/m³/2H;
Inhalation, rat: LC50 = 250 ppm/2H;
Oral, mouse: LD50 = 42 mg/kg;
Oral, mouse: LD50

CAS# 67-56-1:

Draize test, rabbit, eye: 40 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, rabbit: LC50 = 81000 mg/m³/14H;
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 14200 mg/kg;
Oral, rat: LD50 = 5600 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;

CAS# :

CAS# 7558-79-4:

Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Oral, rat: LD50 = 17 gm/kg;

CAS# 7558-80-7:

Draize test, rabbit, eye: 150 mg Mild;
Oral, rat: LD50 = 8290 mg/kg;

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity:

CAS# 50-00-0:

- ACGIH: A2 - Suspected Human Carcinogen
- California: carcinogen, initial date 1/1/88 (gas)
- NTP: Suspect carcinogen
- IARC: Group 1 carcinogen

CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# : Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7558-79-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7558-80-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: In June 2004 an expert IARC group determined that there is now sufficient

evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries.

Teratogenicity: Formaldehyde effects on Newborn: behavioral, ihl-rat TCLO= 50 ug/m3/4H; biochemical/metabolic and reduced weight gain, ihl-rat TCLO= 12 ug/m3/24H. Embryo or Fetus: cytological changes, ihl-rat TCLO= 1 mg/m3/24H; stunted fetus and death, ipr-mouse TDLo=240 mg/kg. Specific Developmental Abnormalities: craniofacial and musculoskeletal, ipr-mouse TDLo= 240 mg/kg.

Reproductive Effects: Formaldehyde effects on fertility: male index, itt-rat TDLo= 400 mg/kg; post- implantation mortality, ims-mouse TDLo= 259 mg/kg. Paternal Effects: spermatogenesis, orl-rat TDLo= 200 mg/kg; testes/sperm duct/epididymis, ipr-rat TDLo= 80 mg/kg.

Mutagenicity: Formaldehyde DNA Damage: human fibroblast 100 umol/L DNA Inhibition: human cell types 210 umol/L Unscheduled DNA Synthesis: rat cell types 50 umol/L Gene Mutation in Mammalian Cells: human lymphocyte 130 umol/L.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series:

CAS# 50-00-0: waste number U122.

CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	AVIATION REGULATED LIQUID, N.O.S.	No information available.
Hazard Class:	9	
UN Number:	UN3334	
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 50-00-0 is listed on the TSCA inventory.

CAS# 67-56-1 is listed on the TSCA inventory.

CAS# is not listed on the TSCA inventory. It is for research and development use only.

CAS# 7558-79-4 is listed on the TSCA inventory.

CAS# 7558-80-7 is listed on the TSCA inventory.

CAS# 7732-18-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ CAS# 7558-79-4: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 50-00-0: 500 lb TPQ

SARA Codes

CAS # 50-00-0: immediate, delayed.

CAS # 67-56-1: immediate, fire.

Section 313

This material contains Formaldehyde (CAS# 50-00-0, 4.0-4.5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Methyl alcohol (CAS# 67-56-1, <3.0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 50-00-0 is listed as a hazardous air pollutant (HAP).

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 50-00-0 is listed as a Hazardous Substance under the CWA. CAS# 7558-79-4 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 50-00-0 is considered highly hazardous by OSHA.

STATE

CAS# 50-00-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7558-79-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

CAS# 7558-80-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Formaldehyde, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 50-00-0: 40 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T

Risk Phrases:

R 45 May cause cancer.

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 50-00-0: 2

CAS# 67-56-1: 1

CAS# : No information available.

CAS# 7558-79-4: 1

CAS# 7558-80-7: 1

CAS# 7732-18-5: No information available.

Canada - DSL/NDSL

CAS# 50-00-0 is listed on Canada's DSL List.

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 7558-79-4 is listed on Canada's DSL List.

CAS# 7558-80-7 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D1B, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 50-00-0 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/07/1999

Revision #6 Date: 12/16/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.