

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Identification:**Key:** 50002**Name:** Formaldehyde solution 37%**Catalog Numbers:**

, S74337MF, S74338MF, BP531-25, BP531-500, F75F-1GAL, F75P-20, F75P-4, F75P1GAL, F77-20, F77-200, F77P-20, F77P-4, F79-1, F79-20, F79-200, F79-4, F79-500, F79J-1, F79J-4, F79P-20, F79P-4, NC9527860

Synonyms:

Formalin.

Company Identification:

Fisher Scientific

1 Reagent Lane

Fairlawn, 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	%	EINECS#	Haz Symbols	Risk Phrases
50-00-0	Formaldehyde	37	200-001-8	XI	43
67-56-1	Methyl alcohol	15	200-659-6	F T	11 23/24/25 39/23/24/25
7732-18-5	Water	48	231-791-2		

Text for R-phrases: see Section 16**Hazard Symbols:** T C**Risk Phrases:** 10 23/24/25 34 43 45

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance: colorless liquid. Flash Point: 50 deg C. Danger! Flammable liquid and vapor. May cause central nervous system depression. Cannot be made non-poisonous. Causes eye and skin burns. Causes digestive and respiratory tract burns. May cause liver and kidney damage. May be fatal or cause blindness if swallowed. Contains formaldehyde which can cause cancer. Vapor harmful. May cause allergic respiratory and skin reaction.

Target Organs: Kidneys, central nervous system, liver, skin.

POTENTIAL HEALTH EFFECTS

Eye: Causes eye burns.

Skin: Causes skin burns. 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. May cause liver and kidney damage. May cause burns to the digestive tract. 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. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause burning sensation in the chest.

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: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. 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

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. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Autoignition Temperature: Not applicable.

Flash Point: 50 deg C (122.00 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 2; Instability: 0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. 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. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

SECTION 7 - HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Do not breathe vapor or mist.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Keep containers tightly closed.

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; 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
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

Water: No OSHA Vacated PELs are listed for this chemical.

PERSONAL PROTECTIVE EQUIPMENT

Eyes: Wear chemical splash goggles and face shield.

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

Color: colorless

Odor: pungent odor

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: >1.0

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 101 deg C

Freezing/Melting Point: 32 deg F

Decomposition Temperature: Not available.

Solubility in water: Soluble.

Specific Gravity/Density: Not available.

Molecular Formula: Mixture

Molecular Weight: Not available

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Ignition sources, excess heat, confined spaces.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 50-00-0: LP8925000
CAS# 67-56-1: PC1400000
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 = 385 mg/kg; Oral, mouse: LD50 = 500 mg/kg; Oral, rat: LD50 = 100 mg/kg; Oral, rat: LD50 = 500 mg/kg; Skin, rabbit: LD50 = 270 uL/kg; Skin, rabbit: LD50 = 270 mg/kg.
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# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

Carcinogenicity:

Formaldehyde -

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

Methyl alcohol -

Not listed by ACGIH, IARC, or NTP.

Water -

Not listed by ACGIH, IARC, or NTP.

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:

No data available.

Reproductive Effects:

No data available.

Neurotoxicity:

No data available.

Mutagenicity:

No data available.

Other Studies:

No data available.

SECTION 12 - ECOLOGICAL INFORMATION

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

Shipping Name: FORMALDEHYDE, SOLUTIONS, FLAMMABLE Hazard Class: 3 UN
Number: UN1198 Packing Group: III

Canadian TDG

Shipping Name: FORMALDEHYDE, SOLUTIONS, FLAMMABLE Hazard Class: 3 UN
Number: UN1198 Packing Group: III

USA RQ: CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ

USA RQ:

CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

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# 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.

SARA

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

SARA Section 302 Extremely Hazardous Substances

CAS# 50-00-0: 500 lb TPQ

SARA Codes

CAS# 50-00-0: acute, chronic.
CAS# 67-56-1: acute, flammable.

Section 313

This material contains Formaldehyde (CAS# 50-00-0, 37%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372. This

material contains Methyl alcohol (
CAS# 67-56-1, 15%), which is subject to the reporting requirements of Section 313 of
SARA Title III and 40 CFR Part 372.

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 depleters. This material does not contain any Class 2 Ozone
depleters.

Clean Water Act:

CAS# 50-00-0 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:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Formaldehyde can be found on the following state right to know lists: California, New Jersey, Pennsylvania,
Minnesota, Massachusetts.

Methyl alcohol can be found on the following state right to know lists: California, New Jersey, Pennsylvania,
Minnesota, Massachusetts.

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

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 C Risk Phrases:

R 45 May cause cancer.

R 10 Flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

R 43 May cause sensitization by skin contact.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and
seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately
(show the label where possible).

S 51 Use only in well-ventilated areas.

WGK (Water Danger/Protection)

CAS# 50-00-0: 2

CAS# 67-56-1: 1

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

Canada

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

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

CAS# 7732-18-5 is listed on Canada's DSL List. This product does not have a WHMIS classification.

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

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

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

SECTION 16 - ADDITIONAL INFORMATION

MSDS Creation Date: 7/12/1999 **Revision #10 Date:** 12/20/2004

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 way shall the company 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 the company has been advised of the possibility of such damages.