Material Safety Data Sheet
Formaldehyde Solution 37%

ACC# 50002

Section 1 - Chemical Product and Company Identification

MSDS Name: Formaldehyde Solution 37%
Catalog Numbers: S74337MF, S74338MF, BF79-4LC, BP530-25, BP530-500, BP531-25, BP531-500, F75F-1GAL, F75P-20, F75P-4, F75P1GAL, F77-200LC, F77-20LC, F79-4LC, F79J4
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
7732-18-5	Water	48	231-791-2
50-00-0	Formaldehyde	37	200-001-8
67-56-1	Methyl alcohol	15	200-659-6
Not avail.	Odor mask	0.0-1.1	unlisted

Hazard Symbols: T C
Risk Phrases: 10 23/24/25 34 40 43

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: not available liquid. Flash Point: 50 deg C. May cause central nervous system depression. This substance has caused adverse reproductive and fetal effects in animals. May cause liver and kidney damage. Cannot be made non-poisonous. Potential cancer hazard. Contains formaldehyde. **Flammable liquid and vapor. Danger!** May be fatal or cause blindness if swallowed. Vapor harmful. May cause allergic skin and respiratory reaction. Causes eye, skin, and respiratory tract irritation.
Target Organs: Kidneys, central nervous system, liver, skin.

Potential Health Effects

Eye: Causes eye irritation. May cause chemical conjunctivitis and corneal damage.
Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause cyanosis of the extremities.
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. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause burning sensation in the chest.
Chronic: Repeated exposure may cause skin discoloration and thickening and nail decay. Repeated inhalation is associated with nasal and nasopharyngeal cancer.

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 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 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. 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.
Flash Point: 50 deg C (122.00 deg F)
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
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. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

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
Water	none listed	none listed	none listed
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 ha zard (29 CFR 1910.1048)
Methyl alcohol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA
Odor mask	none listed	none listed	none listed

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

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: not available
Odor: none reported
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: >1.0
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 212 deg F
Freezing/Melting Point:32 deg F
Decomposition Temperature: Not available.
Solubility: soluble in water
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: Incompatible materials, ignition sources, excess heat, oxidizers.
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.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 7732-18-5: ZC0110000
CAS# 50-00-0: LP8925000
CAS# 67-56-1: PC1400000
CAS# Not avail. unlisted.
LD50/LC50:
CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg;
CAS# 50-00-0:
Draize test, rabbit, eye: 37% Severe;
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, skin: 2 mg/24H Severe;
Draize test, rabbit, skin: 50 mg/24H Moderate;
Inhalation, mouse: LC50 = 505 mg/m3/2H;
Inhalation, mouse: LC50 = 454 gm/m3/4H;
Inhalation, rat: LC50 = 578 mg/m3/2H;
Inhalation, rat: LC50 = 250 ppm/2H;
Inhalation, rat: LC50 = 203 mg/m3;
Oral, mouse: LD50 = 385 mg/kg;
Oral, mouse: LD50 = 500 mg/kg;
Oral, mouse: LD50 = 42 mg/kg;
Oral, rat: LD50 = 500 mg/kg;
Oral, rat: LD50 = 100 mg/kg;
Skin, rabbit: LD50 = 270 mg/kg;
Skin, rabbit: LD50 = 270 uL/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;
Carcinogenicity:
CAS# 7732-18-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 50-00-0:
ACGIH: A2 - Suspected Human Carcinogen
California: carcinogen; initial date 1/1/88
NIOSH: potential occupational carcinogen
NTP: Suspect carcinogen
OSHA: Possible Select carcinogen
IARC: Group 2A carcinogen CAS# 67-56-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# Not avail.: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No data available.
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

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	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	FORMALDEHYDE, SOLUTIONS				No information available.
Hazard Class:	8				
UN Number:	UN2209				
Packing Group:	III				

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7732-18-5 is listed on the TSCA inventory.
CAS# 50-00-0 is listed on the TSCA inventory.
CAS# 67-56-1 is listed on the TSCA inventory.
Odor mask is not listed on the TSCA inventory. It is for research and development use only.
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 373. 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 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. 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

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
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# Not avail. is not present on state lists from CA, PA, MN, MA, FL, or NJ.
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 ug/day NSRL

European / International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T C

Risk Phrases:

R 10 Flammable.
R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R 34 Causes burns.
R 40 Limited evidence of a carcinogenic effect.
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# 7732-18-5: No information available.
CAS# 50-00-0: 2
CAS# 67-56-1: 1
CAS# Not avail.: No information available.

Canada - DSL / NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 50-00-0 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B3, D1A, D2A.

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.

Exposure Limits

CAS# 50-00-0: OEL-ARAB Republic of Egypt:TWA 2 ppm (3 mg/m3) OEL-AU STRALIA:TWA 1 ppm (1.5 mg/m3);STEL 2 ppm (3 mg/m3);CAR OEL-BELGIUM:TW A 1 ppm (1.2 mg/m3);STEL 2 ppm (2.5 mg/m3);CAR OEL-CZECHOSLOVAKIA:TWA 0.5 mg/m3;STEL 1 mg/m3 OEL-DENMARK:STEL 0.3 ppm (0.4 mg/m3);Carcinog en OEL-FINLAND:STEL 1 ppm (1.3 mg/m3);Skin OEL-FRANCE:STEL 2 ppm (3 mg/m3) OEL-GERMANY:TWA 0.5 ppm (0.6 mg/m3);Carcinogen OEL-HUNGARY:ST EL 0.6 mg/m3;Carcinogen OEL-JAPAN:TWA 0.5 ppm (0.61 mg/m3);Carcinogen OEL-THE NETHERLANDS:TWA 1 ppm (1.5 mg/m3);STEL 2 ppm (3 mg/m3) OEL-THE PHILIPPINES:TWA 5 ppm (6 mg/m3) OEL-POLAND:TWA 2 mg/m3 OEL-RUSSI A:TWA 0.5 ppm;STEL 0.5 mg/m3;Skin OEL-SWEDEN:TWA 0.5 ppm (0.6 mg/m3); STEL 1 ppm (1. mg/m3) OEL-SWITZERLAND:TWA 0.5 ppm (0.6 mg/m3);STEL 1 pp (1.2 mg/m3) OEL-THAILAND:TWA 3 ppm;STEL 5 ppm OEL-TURKEY:TWA 5 pp m (6 mg/m3) OEL-UNITED KINGDOM:TWA 2 ppm (2.5 mg/m3);STEL 2 ppm (2.5 mg/m3) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV
CAS# 67-56-1: OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m3);Ski n OEL-AUSTRALIA:TWA 200 ppm (260 mg/m3);STEL 250 ppm;Skin OEL-BELGIU M:TWA 200 ppm (262 mg/m3);STEL 250 ppm;Skin OEL-CZECHOSLOVAKIA:TWA 10 0 mg/m3;STEL 500 mg/m3 OEL-DENMARK:TWA 200 ppm (260 mg/m3);Skin OEL-FINLAND:TWA 200 ppm (260 mg/m3);STEL 250 ppm;Skin OEL-FRANCE:TWA 200 ppm (260 mg/m3);STEL 1000 ppm (1300 mg/m3) OEL-GERMANY:TWA 200 ppm (2 60 mg/m3);Skin OEL-HUNGARY:TWA 50 mg/m3;STEL 100 mg/m3;Skin JAN9 OEL -JAPAN:TWA 200 ppm (260 mg/m3);Skin OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m3);Skin OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m3) OEL-POLA ND:TWA 100 mg/m3 OEL-RUSSIA:TWA 200 ppm;STEL 5 mg/m3;Skin OEL-SWEDEN :TWA 200 ppm (250 mg/m3);STEL 250 ppm (350 mg/m3);Skin OEL-SWITZERLAN D:TWA 200 ppm (260 mg/m3);STEL 400 ppm;Skin OEL-THAILAND:TWA 200 ppm (260 mg/m3) OEL-TURKEY:TWA 200 ppm (260 mg/m3) OEL-UNITED KINGDOM:TW A 200 ppm (260 mg/m3);STEL 250 ppm;Skin OEL IN BULGARIA, COLOMBIA, JO RDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM ch eck ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 7/12/1999
Revision #7 Date: 11/29/2001

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.