

# Material Safety Data Sheet

## Formaldehyde Solution 37%

ACC# 50002

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Formaldehyde Solution 37%

**Catalog Numbers:** S74337, S74338, S80018-2, BP530-25, BP530-500, BP53025, BP531-25, BP531-500, F75P20, F75P4, F77 20, F77 200, F7720, F77200, F77200LC, F7720LC, F77P 20, F77P 4, F77P20, F77P4, F79 1, F79 20, F79 200, F79 4, F79 500, F791, F7920, F79200, F794, F79500, F79J4, F79P 20, F79P 4, F79P20, F79P4, NC9475399, S410CA4, S74337MF, S74338MF

**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	37	200-001-8
67-56-1	Methyl alcohol	15	200-659-6
7732-18-5	Water	48	231-791-2
Not avail.	Odor mask	0.0-1.1	unlisted

**Hazard Symbols:** T

**Risk Phrases:** 10 23/24/25 34 40 43

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: not available. Flash Point: 50 deg C. May cause allergic skin reaction. 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. Respiratory sensitizer. Contains formaldehyde. **Flammable liquid and vapor.** Causes eye and skin irritation. Causes digestive and respiratory tract irritation. **Danger!** May be fatal or cause blindness if swallowed. Vapor harmful.

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

**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 soap and 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 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.

## 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.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Formaldehyde	C 0.3 ppm	0.016 ppm TWA; NIOSH Potential Occupational Carcinogen - see Appendix A Potential NIOSH carcinogen.	0.75 ppm TWA PEL; 2 ppm STEL; 0.5 ppm TWA action level
Methyl alcohol	200 ppm TWA; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m <sup>3</sup> TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m <sup>3</sup> TWA
Water	none listed	none listed	none listed

**OSHA Vacated PELs:** Formaldehyde: 3 ppm TWA (unless specified in 1910.1048); 10 ppm STEL (30 min) (unless specified in 1910.1048); C 5 ppm (unless specified in 1910.1048) Methyl alcohol: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA; 250 ppm STEL; 325 mg/m<sup>3</sup> STEL Water: 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 29CFR 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

**Autoignition Temperature:** Not applicable.  
**Flash Point:** 50 deg C ( 122.00 deg F)  
**Decomposition Temperature:**Not available.  
**NFPA Rating:** (estimated) Health: 3; Flammability: 2; Reactivity: 0  
**Explosion Limits, Lower:**Not available.  
**Upper:** 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#** 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, skin: 2 mg/24H Severe;

Draize test, rabbit, skin: 50 mg/24H Moderate;

Inhalation, mouse: LC50 = 454 gm/m<sup>3</sup>/4H;

Inhalation, rat: LC50 = 203 mg/m<sup>3</sup>;

Oral, mouse: LD50 = 42 mg/kg;

Oral, rat: LD50 = 100 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, rat: LC50 = 64000 ppm/4H;

Oral, mouse: LD50 = 7300 mg/kg;

Oral, rabbit: LD50 = 14200 mg/kg;

Oral, rat: LD50 = 5628 mg/kg;

Skin, rabbit: LD50 = 15800 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

**NIOSH:** 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# 7732-18-5: 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
<b>Shipping Name:</b>	FORMALDEHYDE, SOLUTIONS, FLAMMABLE				No information available.
<b>Hazard Class:</b>	3				
<b>UN Number:</b>	UN1198				
<b>Packing Group:</b>	III				

## 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****Section 302 (RQ)**

CAS# 50-00-0: final RQ = 100 pounds (45.4 kg) CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)

**Section 302 (TPQ)**

CAS# 50-00-0: TPQ = 500 pounds; RQ = 100 pounds (does not meet toxicity criteria but because of high production volume and recognized toxicity is considered a chemical of concern)

**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 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:**

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, Florida, Pennsylvania, Minnesota, Massachusetts.

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

CAS# 7732-18-5 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: no significant risk level = 40 ug/day

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

T

**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 Possible risks of irreversible effects.

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 Wear suitable protective clothing and gloves.

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

This product has a WHMIS classification of B2, D1A, D2B.

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.

### **Exposure Limits**

CAS# 50-00-0: OEL-ARAB Republic of Egypt:TWA 2 ppm (3 mg/m<sup>3</sup>) OEL-AUSTRALIA:TWA 1 ppm (1.5 mg/m<sup>3</sup>);STEL 2 ppm (3 mg/m<sup>3</sup>);CAR OEL-BELGIUM:TWA 1 ppm (1.2 mg/m<sup>3</sup>);STEL 2 ppm (2.5 mg/m<sup>3</sup>);CAR OEL-CZECHOSLOVAKIA:TWA 0.5 mg/m<sup>3</sup>;STEL 1 mg/m<sup>3</sup> OEL-DENMARK:STEL 0.3 ppm (0.4 mg/m<sup>3</sup>);Carcinogen OEL-FINLAND:STEL 1 ppm (1.3 mg/m<sup>3</sup>);Skin OEL-FRANCE:STEL 2 ppm (3 mg/m<sup>3</sup>) OEL-GERMANY:TWA 0.5 ppm (0.6 mg/m<sup>3</sup>);Carcinogen OEL-HUNGARY:STEL 0.6 mg/m<sup>3</sup>;Carcinogen OEL-JAPAN:TWA 0.5 ppm (0.61 mg/m<sup>3</sup>);Carcinogen OEL-THE NETHERLANDS:TWA 1 ppm (1.5 mg/m<sup>3</sup>);STEL 2 ppm (3 mg/m<sup>3</sup>) OEL-THE PHILIPPINES:TWA 5 ppm (6 mg/m<sup>3</sup>) OEL-POLAND:TWA 2 mg/m<sup>3</sup> OEL-RUSSIA:TWA 0.5 ppm;STEL 0.5 mg/m<sup>3</sup>;Skin OEL-SWEDEN:TWA 0.5 ppm (0.6 mg/m<sup>3</sup>);STEL 1 ppm (1. mg/m<sup>3</sup>) OEL-SWITZERLAND:TWA 0.5 ppm (0.6 mg/m<sup>3</sup>);STEL 1 ppm (1.2 mg/m<sup>3</sup>) OEL-THAILAND:TWA 3 ppm;STEL 5 ppm OEL-TURKEY:TWA 5 ppm (6 mg/m<sup>3</sup>) OEL-UNITED KINGDOM:TWA 2 ppm (2.5 mg/m<sup>3</sup>);STEL 2 ppm (2.5 mg/m<sup>3</sup>) 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/m<sup>3</sup>);Skin OEL-AUSTRALIA:TWA 200 ppm (260 mg/m<sup>3</sup>);STEL 250 ppm;Skin OEL-BELGIUM:TWA 200 ppm (262 mg/m<sup>3</sup>);STEL 250 ppm;Skin OEL-CZECHOSLOVAKIA:TWA 100 mg/m<sup>3</sup>;STEL 500 mg/m<sup>3</sup> OEL-DENMARK:TWA 200 ppm (260 mg/m<sup>3</sup>);Skin OEL-FINLAND:TWA 200 ppm (260 mg/m<sup>3</sup>);STEL 250 ppm;Skin OEL-FRANCE:TWA 200 ppm (260 mg/m<sup>3</sup>);STEL 1000 ppm (1300 mg/m<sup>3</sup>) OEL-GERMANY:TWA 200 ppm (260 mg/m<sup>3</sup>);Skin OEL-HUNGARY:TWA 50 mg/m<sup>3</sup>;STEL 100 mg/m<sup>3</sup>;Skin OEL-JAPAN:TWA 200 ppm (260 mg/m<sup>3</sup>);Skin OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m<sup>3</sup>);Skin OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m<sup>3</sup>) OEL-POLAND:TWA 100 mg/m<sup>3</sup> OEL-RUSSIA:TWA 200 ppm;STEL 5 mg/m<sup>3</sup>;Skin OEL-SWEDEN:TWA 200 ppm (250 mg/m<sup>3</sup>);STEL 250 ppm (350 mg/m<sup>3</sup>);Skin OEL-SWITZERLAND:TWA 200 ppm (260 mg/m<sup>3</sup>);STEL 400 ppm;Skin OEL-THAILAND:TWA 200 ppm (260 mg/m<sup>3</sup>) OEL-TURKEY:TWA 200 ppm (260 mg/m<sup>3</sup>) OEL-UNITED KINGDOM:TWA 200 ppm (260 mg/m<sup>3</sup>);STEL 250 ppm;Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

## Section 16 - Additional Information

**MSDS Creation Date:** 7/12/1999

**Revision #6 Date:** 11/29/2001

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