

Material Safety Data Sheet

Formaldehyde, 37 wt% solution, stabilized with methanol

ACC# 96726

Section 1 - Chemical Product and Company Identification

MSDS Name: Formaldehyde, 37 wt% solution, stabilized with methanol**Catalog Numbers:** AC119690000, AC119690025, AC119690050, AC410730000, AC410730040, AC410730200, 11969-0010, 41073-0010, 41073-1000**Synonyms:** Formol; Methanal; Formalin.**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 - 53	231-791-2
67-56-1	Methyl alcohol	10 - 15	200-659-6
50-00-0	Formaldehyde	37	200-001-8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 10 max liquid. Flash Point: 50 deg C.

Danger! Danger of very serious irreversible effects. Toxic if swallowed, inhaled or absorbed through the skin. Poison! Causes burns by all exposure routes. Contains formaldehyde which can cause cancer.**Flammable liquid and vapor.** May be fatal or cause blindness if swallowed. Vapor harmful. Cancer hazard. Cannot be made non-poisonous. May cause sensitization by skin contact.**Target Organs:** Blood, kidneys, heart, central nervous system, liver, spleen, respiratory system, gastrointestinal system, eyes, skin, optic nerve.**Potential Health Effects****Eye:** Causes eye burns. Lachrymator (substance which increases the flow of tears).**Skin:** Causes skin burns. Toxic in contact with skin. May cause sensitization by skin contact.**Ingestion:** May be fatal or cause blindness if swallowed. Poison by ingestion. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. Causes severe digestive tract burns.

Toxic if swallowed.

Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. May cause pulmonary edema and severe respiratory disturbances. Toxic if inhaled. Vapor harmful. May cause nausea, dizziness, and headache.

Chronic: May cause cancer in humans. Chronic exposure may cause lung damage. Adverse reproductive effects have been reported in animals. Laboratory experiments have resulted in mutagenic effects. Repeated or prolonged exposure may cause allergic reactions in sensitive individuals. Prolonged or repeated contact may cause possible eczema. Animal studies have reported the development of tumors.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

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

Ingestion: POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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. Vapors may form an explosive mixture with air. Will burn if involved in a fire. Containers may explode in the heat of a fire. Combustible liquid and vapor.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: 50 deg C (122.00 deg F)

Autoignition Temperature: 424 deg C (795.20 deg F)

Explosion Limits, Lower: 7 vol %

Upper: 73 vol %

NFPA Rating: (estimated) Health: 3; Flammability: 2; Instability: 1

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. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a dry area. Flammables-area. Store at around 20°C. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
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
Formaldehyde	0.3 ppm Ceiling	0.016 ppm TWA 20 ppm IDLH	0.75 ppm TWA; 0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29 CFR 1910.1048)

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

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: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear - APHA: 10 max

Odor: pungent odor

pH: 3 - 4.2

Vapor Pressure: 2 mbar @ 20 deg C

Vapor Density: >1.0
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 97 deg C @ 760 mmHg
Freezing/Melting Point: -15 deg C
Decomposition Temperature: Not available.
Solubility: Soluble.
Specific Gravity/Density: 1.083
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.
Incompatibilities with Other Materials: Strong oxidizing agents, reducing agents, strong acids, strong bases, acid chlorides, alkali metals, amines, anhydrides, phenols, isocyanates, acid anhydrides, aniline.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7732-18-5: ZC0110000

CAS# 67-56-1: PC1400000

CAS# 50-00-0: LP8925000

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/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# 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

Carcinogenicity:

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

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

CAS# 50-00-0:

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

Epidemiology: Considered to be a carcinogen in humans according to IARC. Tumorigenic effects have been reported in experimental animals.

Teratogenicity: Teratogenic effects have occurred in experimental animals.

Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.

Mutagenicity: Mutagenic effects have occurred in humans.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: Do not empty into drains.

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

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

Section 14 - Transport Information

	US DOT	Canada TDG

Shipping Name:	FORMALDEHYDE, SOLUTIONS, FLAMMABLE	FORMALDEHYDE SOLUTION FLAMMABLE
Hazard Class:	3	3(8)
UN Number:	UN1198	UN1198
Packing Group:	III	III
Additional Info:		FLASHPOINT 50 C

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

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

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

SARA Section 302 Extremely Hazardous Substances

CAS# 50-00-0: 500 lb TPQ

SARA Codes

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

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

Section 313

This material contains Methyl alcohol (CAS# 67-56-1, 10 - 15%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

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.

Clean Air Act:

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

CAS# 50-00-0 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:

CAS# 50-00-0 is 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# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

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

California Prop 65

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 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 16 Keep away from sources of ignition - No smoking.
- 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# 67-56-1: 1
- CAS# 50-00-0: 2

Canada - DSL/NDSL

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

Canada - WHMIS

This product has a WHMIS classification of B3, D1A, 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# 67-56-1 is listed on the Canadian Ingredient Disclosure List.
- CAS# 50-00-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/12/1999

Revision #12 Date: 3/03/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no

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