SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Formaldehyde 37%
CAS number	50-00-0
Synonyms	Formalin, Formol

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4)
Acute oral toxicity (Category 3)
Acute dermal toxicity (Category 3)
Acute inhalation toxicity - vapors (Category 3)
Skin Corrosion/Irritation (Category 1B)

Serious Eye Damage/Eye Irritation (Category 1)
Skin Sensitization (Category 1)
Germ Cell Mutagenicity (Category 2)
Carcinogenicity (Category 1A)
Specific target organ toxicity - single exposure (Category 1)
Target Organs - Respiratory system, Central nervous (CNS), Optic nerve

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word: Danger

Hazard statements:
Combustible liquid
Causes severe skin burns and eye damage
May cause respiratory irritation
May cause an allergic skin reaction
Suspected of causing genetic defects
May cause cancer
Causes damage to organs
Toxic if swallowed, in contact with skin or if inhaled

Precautionary statements:
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep cool

Immediately call a POISON CENTER or doctor/physician
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation or rash occurs: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Rinse mouth
Do NOT induce vomiting
In case of fire: Use CO2, dry chemical, or foam for extinction
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Dispose of contents/container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Poison, may be fatal or cause blindness if swallowed. Vapor harmful. CANNOT BE MADE NON POISONOUS.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	H2O	7732-18-5	49.5-52%
Formaldehyde	formalin	50-00-0	37-37.5%
Methyl alcohol	Methanol	67-56-1	11-13%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled — If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Immediate medical attention is required.

In case of skin contact — Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

In case of eye contact — Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed — Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. May cause allergic skin reaction. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Note to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide. Do not use water jet as an extinguisher, as this will spread the fire.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

5.3 Special protective equipment and precautions for firefighters

5.4 Further information

Flash Point 60 °C / 140 °F

Autoignition Temperature 300 °C / 552 °F

Explosion limits

Upper 73%
Lower 7.00%

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	2	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

6.2 Environmental precautions

Do not contaminate water sources or sewer. Avoid discharge into drains, water courses or onto the ground. Prevent further leakage or spillage if safe to do so.

6.3 Methods and materials for containment and cleaning up

Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep away from heat, sparks and flame.

Incompatibilities

Strong oxidizing agents. Potassium permanganate. Peroxides. Perchloric acid + aniline. Strong bases. Sodium hydroxide. Ammonia. Hydroxides. Sodium bisulfite. Strong acids. Hydrogen chloride. Isocyanates. Acid anhydrides. Magnesium carbonates. Iodine.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Formaldehyde	TWA	0.75 ppm
	STEL	2 ppm
Methyl alcohol	TWA	200 ppm 260 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Formaldehyde	STEL	0.3 ppm
	TWA	0.1 ppm
Methyl alcohol	TWA	200 ppm
	STEL	250 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Formaldehyde	IDLH	20 ppm
	TWA	0.016 ppm
	Ceiling	0.1 ppm
Methyl alcohol	IDLH	6000 ppm
	TWA	200 ppm 260 mg/m3
	STEL	250 ppm 325 mg/m3

Biological occupational exposure limits

No information available

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

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 protection

Wear appropriate protective gloves.

Body Protection

Wear appropriate clothing to prevent exposure.

Respiratory protection

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.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Pungent
Odor Threshold	No information available
pH	3
Melting Point/Range	-15 °C / 5 °F
Boiling Point/Range	96 °C / 205 °F
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	73%
Lower	7%
Vapor Pressure	0.17 kPa
Vapor Density	No information available.
Density	1.08 (20 °C)
Solubility	Completely soluble in water.
Partition coefficient; n-octanol/water	No information available.
Autoignition Temp	300 °C / 552 °F
Decomposition Temp	No information available.
Viscosity	No information available.
Molecular Formula	CH2O
Molecular Weight	30.03
VOC Content(%)	No information available.
Oxidizing properties	No information available.

9.2 Other safety information No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions. Stabilized with methanol. Hazardous polymerization may occur upon depletion of inhibitor.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Temperatures above 65°C. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents. Potassium permanganate. Peroxides. Perchloric acid + aniline. Strong bases. Sodium hydroxide. Ammonia. Hydroxides. Sodium bisulfite. Strong acids. Hydrogen chloride. Isocyanates. Acid anhydrides. Magnesium carbonates. Iodine.

10.6 Hazardous decomposition products

Oxygen from the air can oxidize formaldehyde to formic acid, especially when heated. Carbon monoxide (CO). Carbon dioxide (CO_2).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Formaldehyde	500 mg/kg (rat)	270 mg/kg (rabbit)	0.578 mg/L (rat)
Methyl alcohol	1187-2769 mg/kg	17100 mg/kg (rabbit)	128.2 mg/L (rat)

Skin corrosion/irritation

Causes burns by all exposure routes.

Serious eye damage/eye irritation

Causes burns by all exposure routes.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

Mutagenic effects have occurred in humans.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Formaldehyde	50-00-0	Group 1	Known	A1	Listed	A2
Methyl alcohol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Respiratory system, Central nervous system (CNS), Optic nerve.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity
No information available.

Chronic effects
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

11.2 Additional Information
No information available.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Formaldehyde	EC50	Desmodesmus subspicatus	4.89 mg/L 72h
	LC50	Leuciscus idus	15 mg/L 96h
	EC50	Water Flea	20 mg/L 96h
	EC50	Water Flea	2 mg/L 48h
Methyl alcohol	LC50	Pimephales promelas	>10000 mg/L 96h
	EC50	Microtox	39000 mg/L 25 min
	EC50	Microtox	40000 mg/L 15 min
	EC50	Microtox	43000 mg/L 5 min
	EC50	Water Flea	>10000 mg/L 24h

12.2 Persistence and degradability
Soluble in water. Persistence is unlikely based on information available.
Miscible with water.

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	UN1198
Proper Shipping name	Formaldehyde solution, flammable
Hazard Class	3
Subsidiary Hazard Class	8
Packaging Group	III

IMDG

UN Number	UN1198
Proper Shipping name	Formaldehyde solution, flammable
Hazard Class	3
Subsidiary Hazard Class	8
Packaging Group	III

IATA

UN Number	UN1198
Proper Shipping name	Formaldehyde solution, flammable
Hazard Class	3
Subsidiary Hazard Class	8
Packaging Group	III

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Formaldehyde (50-00-0) RQ: 100 lb
Methyl Alcohol (67-56-1) RQ: 5000 lb

SARA 304 Emergency release notification

Formaldehyde (50-00-0) RQ: 100 lb

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Formaldehyde (50-00-0) RQ: 100 lb; Threshold Planning Quantity: 500 lb

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Formaldehyde (50-00-0) Weight: 37.0 -37.5%; Threshold values: 0.1%
Methyl Alcohol (67-56-1) Weight: 11.0 - 13.0%; Threshold values: 1.0%

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Regulated: Formaldehyde (50-00-0) and Methyl Alcohol (67-56-1).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Listed: Formaldehyde (50-00-0) and Methyl Alcohol (67-56-1).

US. New Jersey Worker and Community Right-to-Know Act

Listed: Formaldehyde (50-00-0) and Methyl Alcohol (67-56-1).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed: Formaldehyde (50-00-0) and Methyl Alcohol (67-56-1).

California Proposition 65

Listed: Formaldehyde (50-00-0) and Methyl Alcohol (67-56-1).

SECTION 16: Other information

Date of Issue: 6/26/2014
Revision Date: 10/28/2026

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.