

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name Formalin-Aceto-Alcohol Fixative
CAS number N/A
Synonyms FAA Solution

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)

Acute Toxicity - Oral	Category 3
Acute Toxicity - Dermal	Category 2
Acute Toxicity - Inhalation	Category 2
Skin Corrosion/Irritation	Category 2
Eye Damage/Irritation	Category 1
Respiratory Sensitizer	Category 1
Skin Sensitizer	Category 1

Germ Cell Mutagenicity	Category 1
Carcinogenicity	Category 1
Reproductive Toxicity	Category 1
Specific Target Organ Toxicity (single exposure)	Category 1
Specific Target Organ Toxicity (repeated exposure)	Category 1
Flammable Liquids	Category 3
Hazardous to Aquatic Environment (acute)	Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	<p>Flammable liquid and vapor. Toxic if swallowed. Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.</p>
Precautionary statements	<p>Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust, fumes or mist. Do not get in eyes, on skin, or on clothing. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.</p> <p>Response: IF exposed or concerned: Call a POISON CENTER or physician. Get medical attention if you feel unwell.</p>

IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or physician.

IF ON SKIN (or hair): Wash with plenty of soap and water. Take off immediately all contaminated clothing. Specific treatment is urgent (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Wash contaminated clothing before re-use.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents in accordance with local, state, federal and international regulations.

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

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	Aqua; H ₂ O	7732-18-5	44.36%
Ethyl Alcohol	Ethanol	64-17-5	41.45%
Formaldehyde	Methanal; Methylene oxide; Morbucid	50-00-0	6.57%
Methyl Alcohol	Methanol	67-56-1	4.73%
Acetic Acid	Ethanoic acid; Vinegar acid	64-19-7	2.89%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water. Results in drying and cracking which can lead to secondary infections and dermatitis.

In case of eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. Get medical attention.

If swallowed Immediately call a POISON CENTER or physician. Dilute immediately with water or milk. Induce vomiting until vomitus is clear. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed

WARNING! Formaldehyde is a potential carcinogen. Flammable. Keep away from heat, sparks and open flames. Keep container closed. Use with adequate ventilation. Avoid prolonged breathing of vapor or contact with skin. Harmful if swallowed. Do not pipet by mouth. If ingested, call a physician. Wash areas of contact with plenty of water. For eyes, get medical attention.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water).

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use dry chemical, alcohol foam, or carbon dioxide for extinguishing the surrounding fire. Use water as fog in flooding quantities. Water can be used to dilute spills to non-flammable mixtures.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Flammable liquid and vapor. Vapors can flow along surfaces to distant ignition source and flashback. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire. Explosion hazard when exposed to heat, flame or oxidizers.

Hazardous Combustion Products: Carbon oxides, Formaldehyde.

5.3 Special protective equipment and precautions for firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	2	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2 Environmental precautions

Prevent from reaching drains, sewer, or waterway.

6.3 Methods and materials for containment and cleaning up

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

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

Precautions on safe handling

Prevent formation of aerosols. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Use personal protective equipment as required.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store locked up. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues. Store at controlled room temperature: 15 - 30°C.

Incompatibilities

Strong oxidizing agents, Alkaline substances, Ammonia.

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
Acetic Acid	TWA	10 ppm 25 mg/m3
Ethyl Alcohol	TWA	1000 ppm 1900 mg/m3
Formaldehyde	TWA	0.75 ppm
	PEL-STEL	2 ppm
Methyl Alcohol	TWA	200 ppm 260 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Acetic Acid	TLV-STEL	15 ppm
	TLV-TWA	10 ppm
Ethyl Alcohol	TLV-STEL	1000 ppm
Formaldehyde	TLV-Ceiling	0.3 ppm
Methyl Alcohol	TLV-STEL	250 ppm
	TLV-TWA	200 ppm

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling.

Personal protective equipment

Eye/face protection

Wear protective gloves and eye protection. Safety glasses or goggles.

Skin protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

Wear fire/flammable resistant/retardant clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Data not available
Odor Threshold	Data not available
pH	Data not available
Melting Point/Range	Data not available
Boiling Point/Range	Approximately 82°C
Evaporation Rate	Data not available
Flammability (solid)	Data not available
Flammability or explosive limit	Data not available
Upper	
Lower	
Vapor Pressure	Data not available
Vapor Density	Data not available
Density	Data not available
Solubility	Miscible
Partition coefficient; n-octanol/water	Data not available
Autoignition Temp	Data not available
Decomposition Temp	Data not available
Viscosity	Data not available
Molecular Formula	N/A
Molecular Weight	N/A
VOC Content(%)	Data not available
Oxidizing properties	Data not available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of use and storage.

10.2 Chemical stability

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Data not available.

10.4 Conditions to avoid

Keep away from heat, sparks, and open flame. No smoking. Keep container tightly closed and away from incompatible products.

10.5 Incompatible materials

Oxidizers, platinum, Sodium, Potassium Dioxide, Bromine Pentafluoride, Acetyl Bromide, Acetyl Chloride, Alkaline substances, Ammonia.

10.6 Hazardous decomposition products

Carbon oxides, Formaldehyde.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	5628 mg/kg (Rat)	-	-
Formaldehyde	100 mg/kg (Rat)	-	203 mg/m ³ (Rat)
Acetic Acid	3310 mg/kg (Rat)	-	-
Ethanol	7060 mg/kg (Rat)	-	-

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Irritating to respiratory system.

Germ cell mutagenicity

May cause genetic defects.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
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Formaldehyde	50-00-0	Group 1	Known	A1	X	A2
Acetic Acid	64-19-7	Not listed	Not listed	Not listed	Not listed	Not listed
Methanol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed
Ethanol	64-17-5	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Causes damage to organs.

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Reproductive toxicity

May damage fertility or the unborn child.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2 Persistence and degradability

Data not available.

12.3 Bio accumulative potential

Data not available.

12.4 Mobility in soil

Data not available.

12.5 Results of PBT and vPvB assessment

Data not available.

12.6 Endocrine disrupting properties

Data not available.

12.7 Other adverse effects

Data not 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.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-
Formaldehyde - 50-00-0	U122	-

SECTION 14: Transport information

DOT (US)

UN-no UN1987
Proper Shipping Name Alcohols, n.o.s.
Hazard Class 3
Packing Group III

IMDG

UN-no UN1987
Proper Shipping Name Alcohols, n.o.s.
Hazard Class 3
Packing Group III

IATA

UN-no UN1987
Proper Shipping Name Alcohols, n.o.s.
Hazard Class 3
Packing 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 applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, Acetic acid (CAS #64-19-7), RQ: 5000 lbs.
Listed, Methyl alcohol (CAS #67-56-1), RQ: 5000 lb.
Listed, Formaldehyde (CAS #50-00-0), RQ: 100 lb.

SARA 304 Emergency release notification
Listed, Formaldehyde (CAS #50-00-0), RQ: 100 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Listed, Formaldehyde (CAS # 50-00-0): 2 ppm STEL (See 29 CFR 1910.1048, 15 min); 0.5 ppm Action Level (See 29 CFR 1910.1048); 0.75 ppm TWA (See 29 CFR 1910.1048).

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Listed, Formaldehyde (CAS #50-00-0), EPCRA RQ: 100 lb, TPQ: 500 lb.

SARA 311/312 Hazardous

Acute Health Hazard, Chronic Health Hazard, Fire Hazard.

SARA 313 (TRI reporting)

Listed, Methyl alcohol (CAS #67-56-1), 1.0 % de minimis concentration.
Listed, Formaldehyde (CAS #50-00-0), 0.1 % de minimis concentration.

Other federal regulations

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

Listed, Methyl alcohol (CAS #67-56-1).
Listed, Formaldehyde (CAS #50-00-0).

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

Listed, Formaldehyde (CAS #50-00-0), RQ: 15,000 lb.

Clean Water Act (CWA - Hazardous Substances)

Listed, Acetic acid (CAS #64-19-7), RQ: 5000 lb.
Listed, Formaldehyde (CAS #50-00-0), RQ: 100 lb.

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

Listed, Acetic acid (CAS #64-19-7).
Listed, Ethyl alcohol (CAS #64-17-5).

US state regulations

US. Massachusetts RTK - Substance List

Listed, Acetic acid (CAS #64-19-7).
Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Methyl alcohol (CAS #67-56-1).
Listed, Formaldehyde (CAS #50-00-0).

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

Listed, Acetic acid (CAS #64-19-7).
Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Methyl alcohol (CAS #67-56-1).
Listed, Formaldehyde (CAS #50-00-0).

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

Listed, Acetic acid (CAS #64-19-7).
Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Methyl alcohol (CAS #67-56-1).
Listed, Formaldehyde (CAS #50-00-0).

California Proposition 65

Listed, Ethyl alcohol (CAS #64-17-5).
Listed, Methyl alcohol (CAS #67-56-1).
Listed, Formaldehyde (CAS #50-00-0).

SECTION 16: Other information

Issue date: 05/01/2019
Revision 1: 09/30/2024

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.