SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Chloroform, stabilized with ethanol
CAS number	67-66-3
Synonyms	Formyl trichloride; Methane trichloride; Methenyl trichloride

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 Oral Toxicity	Category 4
Acute Inhalation Toxicity	Category 3
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2

Specific Target Organ Toxicity (single exposure)	Category 3
Target Organ(s) - Respiratory system, Central nervous system (CNS)	
Specific Target Organ Toxicity (repeated exposure)	Category 2
Target Organ(s) - Heart, Liver, Kidney, Blood	
Short-term (Acute) Aquatic Hazard	Category 3

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

Hazard statements:

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
Toxic if inhaled.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Suspected of damaging the unborn child.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life.

Precautionary statements:

Prevention: 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. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the environment. Response: IF exposed or concerned, get medical attention/advice. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazardsnototherwiseclassified(HNOC)ornotcovered by GHS

WARNING: Cancer - https://www.p65warnings.ca.gov/.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Chloroform	Formyl trichloride; Methenyl trichloride	67-66-3	>98%
Ethanol	Ethyl alcohol; EtOH	64-17-5	<2%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

Remove to fresh air. 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. 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. Remove contact lenses. Seek medical advice.

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

4.2 Mostimportantsymptomsandeffects, bothacuteanddelayed

Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. May cause decreases in blood pressure and other cardiac effects. Symptoms may be delayed.

4.3 Indication of any immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable extinguishing media

No information available.

5.2 Specific hazards arising from the substance or mixture

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
Hazardous Combustion Products: Carbon monoxide (CO). Carbon dioxide (CO2). Phosgene. Hydrogen chloride gas.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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	1	1	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for 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

Precautions on 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, seek immediate medical assistance.

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. Protect from direct sunlight. Store under an inert atmosphere. Protect from moisture.

Incompatibilities

Strong oxidizing agents. Alkali metals. Aluminium. Acetone.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US.OSHATable Z-1 LimitsforAir Contaminants(29CFR 1910.1000)

Component	Type	Value
Chloroform	(Vacated) TWA	2 ppm 9.78 mg/m3
	Ceiling	50 ppm 240 mg/m3
Ethanol	(Vacated) TWA	1000 ppm 1900 mg/m3
	TWA	1000 ppm 1900 mg/m3

US.ACGIHThreshold LimitValues

Component	Type	Value
Chloroform	TWA	10 ppm
Ethanol	STEL	1000 ppm

US.NIOSH:Pocket GuidetoChemical Hazards

Component	Type	Value
Chloroform	IDLH	500 ppm
	STEL	2 ppm 9.78 mg/m3
Ethanol	IDLH	3300 ppm
	TWA	1000 ppm 1900 mg/m3

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
Useonlyunder a chemical fumehood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

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 and clothing to prevent skin exposure.

Body Protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection
Followthe 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
Avoid release to theenvironment.Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses, or onto the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Sweet
Odor Threshold	No information available
pH	No information available
Melting Point/Range	-83.2 °F (-64 °C)
Boiling Point/Range	141.8 °F (61 °C)
Evaporation Rate	No information available

Flammability (solid)	Not applicable
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	160 mmHg (68 °F (20 °C))
Vapor Density	4.12 - (Air = 1.0)
Density	1.492 (77 °F (25 °C))
Solubility	Soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	Distillable in an undecomposed state at normal pressure
Viscosity	No information available
Molecular Formula	CHCl3
Molecular Weight	119.38 g/mol
VOC Content(%)	No information available
Oxidizing properties	None

9.2 Other safety information

Noinformationavailable.

SECTION 10: Stability and reactivity

10.1 Reactivity

Noinformation available.

10.2Chemical stability

Stableundernormalconditions. Unstable upon depletion of inhibitor. Light sensitive.

10.3 Possibility of hazardous reactions

Noneundernormalprocessing.

10.4 Conditions to avoid

Incompatibleproducts.Heat, flames and sparks. Excess heat. Exposure to light. Protect from moisture.

10.5 Incompatible materials

Strongoxidizingagents,Alkali metals, Aluminium, Acetone.

10.6Hazardous decomposition products

Carbonmonoxide(CO),Carbondioxide(CO2), Phosgene, Hydrogen chloride gas.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chloroform	908 mg/kg (Rat) 695 mg/kg (Rat) 450 mg/kg (Rat)	> 20 g/kg (Rabbit)	10.5 mg/L (Rat) 4 h
Ethanol	10470 mg/kg (Rat) 3450 mg/kg (Mouse)	-	20000 ppm/10H (Rat) 117-125 mg/L (Rat) 4 h

Skin corrosion/irritation
Irritating to skin.

Serious eye damage/eye irritation
Irritating to eyes.

Respiratory or skin sensitization
Noinformation available.

Germ cell mutagenicity
Noinformation available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Chloroform	67-66-3	Group 2B	Reasonably Anticipated	A3	X	A3
Ethanol	64-17-5	Not listed	Known	A3	Not listed	A3

Specific target organ toxicity - single exposure
Respiratory system, Central nervous system (CNS).

Specific target organ toxicity - repeated exposure
Heart, Liver, Kidney, Blood.

Reproductive toxicity
Suspectedofdamagingfertility or the unborn child.

Chronic effects
Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. May cause decreases in blood pressure and other cardiac effects. Symptoms may be delayed.

11.2 AdditionalInformation

Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.

SECTION 12: Ecological information

12.1 Toxicity

Do not empty into drains. Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Product		Species	Test Results
Chloroform	EC50	Freshwater Algae	560 mg/L/48h
	LC50	Poecilia reticulata	300 mg/L/96h static
	LC50	Lepomis macrochirus	18 mg/L/96h flow-through
	LC50	Oncorhynchus mykiss	18 mg/L/96h flow-through
	LC50	Pimephales promelas	71 mg/L/96h flow-through
	EC50	Photobacterium phosphoreum	520 mg/L/5 min 670 mg/L/15 min 670 mg/L/30 min
	EC50	Water Flea	28.9 mg/L/48h
Ethanol	EC50	Chlorella vulgaris	275 mg/L/72h
	LC50	Pimephales promelas	14200 mg/l/96h
	EC50	Photobacterium phosphoreum	34634 mg/L/30 min 35470 mg/L/5 min
	EC50	Water Flea	9268 mg/L/48h 10800 mg/L/24h

12.2 Persistenceanddegradability
Persistence is unlikely based on information available.

12.3 Bioaccumulativepotential
No information available.

12.4 Mobilityinsoil
Will likely be mobile in the environment due to its volatility.

12.5ResultsofPBTandvPvB assessment
No information available.

12.6 Endocrinedisruptingproperties
No information available.

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1Waste 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

Chloroform - 67-66-3	U044	-

SECTION 14: Transport information

DOT (US)

UN-no	UN1888
Proper Shipping Name	CHLOROFORM
Hazard Class	6.1
Packing Group	III

IMDG

UN-no	UN1888
Proper Shipping Name	CHLOROFORM
Hazard Class	6.1
Packing Group	III

IATA

UN-no	UN1888
Proper Shipping Name	CHLOROFORM
Hazard Class	6.1
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 Section12(b)Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA HazardousSubstanceList(40CFR302.4)

Listed, Chloroform (CAS #67-66-3), RQ: 10 lb.

SARA 304Emergencyreleasenotification

Listed, Chloroform (CAS #67-66-3), RQ: 10 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302Extremelyhazardoussubstance

Listed, Chloroform (CAS #67-66-3), TPQ: 10000 lb.

SARA 311/312Hazardous

See Section 2 for more information.

SARA 313(TRIreporting)

Listed, Chloroform (CAS #67-66-3).

Other federal regulations

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

Listed, Chloroform (CAS #67-66-3).

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

Listed, Chloroform (CAS #67-66-3),TQ: 20000 lb.

Safe Drinking Water Act

Containscomponent(s) regulated under the Safe Drinking Water Act.

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

Listed, Ethanol (CAS #64-17-5).

US state regulations

US. Massachusetts RTK - Substance List

Listed, Chloroform(CAS#67-66-3).
Listed, Ethanol (CAS #64-17-5).

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

Listed, Chloroform(CAS#67-66-3).
Listed, Ethanol (CAS #64-17-5).

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

Listed, Chloroform(CAS#67-66-3).
Listed, Ethanol (CAS #64-17-5).

California Proposition 65

Listed, Chloroform (CAS #67-66-3).
Listed, Ethanol (CAS #64-17-5).

SECTION 16: Other information

Issue date: 01/22/2019
Revision 1: 08/09/2023
Revision 2: 11/13/2024
Revision 3: 06/24/2025

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.