

Safety Data Sheet

Chloroform

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Chloroform
Recommended Use: Science education applications
Synonyms: Methyl Trichloride
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



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

GHS Classification:

Carcinogenicity Category 1B, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Reproductive Toxicity Category 2, Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 2, Acute Toxicity - Inhalation Vapor Category 3, Acute Toxicity - Oral Category 3, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3, Hazardous to the aquatic environment - Acute Category 3

Other Safety Precautions: IF exposed or concerned: Get medical advice/attention.

Acute Toxicity Dermal Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Ethyl Alcohol	64-17-5	1
Chloroform	67-66-3	99

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: 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.
Skin Contact: 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.
Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

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Fire and/or Explosion Hazards:
Hazardous Combustion Products:

Fire or excessive heat may produce hazardous decomposition products.
Carbon dioxide, Carbon monoxide, Hydrogen chloride

Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Clean up spills immediately using Protective Equipment recommended in Section 8 at a minimum. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Section 7

Handling and Storage

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Avoid direct sunlight and heat. Avoid creating and inhaling spray or mist.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Suitable for any general chemical storage.
Keep locked up and out of the reach of children.

Storage Code: Blue - Toxic. Store separately in a secured area.

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Ethyl Alcohol	10 ppm TWA	N/A	N/A	N/A

Control Parameters

Engineering Measures: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use. Wear a NIOSH approved respirator if any exposure is possible.

Respirator Type(s): NIOSH approved air purifying respirator with dust/mist filter.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Use impervious gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Where use can result in skin contact, practice good personal hygiene. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly.

Gloves: Impervious rubber

Section 9

Physical Data

Formula: CHCl ₃	Vapor Pressure: 160 mmHg at 20 °C
Molecular Weight: 119.39	Evaporation Rate (BuAc=1): 11.6
Appearance: Colorless Liquid	Vapor Density (Air=1): 4.13
Odor: Mild Sweet	Specific Gravity: 1.472
Odor Threshold: 276 ppm OT (Dravnieks); 1350 mg/m ³ OT	Solubility in Water: Slightly Soluble

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(Dravnieks); 133 ppm OT (Punter); 650 mg/m3 OT (Punter)

pH: No data available

Melting Point: No data available -64 C

Boiling Point: No data available 61 - 61 C

Flash Point: No data available

Flammable Limits in Air: N/A

Log Pow (calculated): 2 at 25 °C

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: 100%

Section 10

Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Lithium, Strong oxidizing agents, Magnesium, Caustics (bases)
Hazardous Decomposition Products: Hydrogen chloride, Carbon dioxide, Carbon monoxide, Sodium Oxides, Sodium,
Hazardous Polymerization: Will not occur

Section 11

Toxicity Data

Routes of Entry: Inhalation, Ingestion, and Skin contact.
Symptoms (Acute): Liver disorders, Impaired Kidney Function, Cardiovascular system, Pregnancy,, Alcoholism,
Delayed Effects: No data available

Acute Toxicity:

Chemical Name

Ethyl Alcohol

CAS Number

64-17-5

67-66-3

Oral LD50

Oral LD50

GUINEA PIG 820

mg/kg

Oral LD50 Rat 300

mg/kg

Dermal LD50

Not determined

Inhalation LC50

INHALATION

LC50 Rat 6000

MG/M3

Carcinogenicity:

Chemical Name

Ethyl Alcohol

CAS Number

64-17-5

67-66-3

IARC

Listed

NTP

Listed

OSHA

Listed

Chronic Effects:

Mutagenicity:

No evidence of a mutagenic effect.

Teratogenicity:

Evidence of a teratogenic effect (birth defect).

Sensitization:

No evidence of a sensitization effect.

Reproductive:

Evidence of negative reproductive effects.

Target Organ Effects:

Acute:

See Section 2

Chronic:

Mutation data cited., Reproductive data cited., Tumorigenic data cited., Tests on laboratory animals indicate material may produce adverse mutagenic and reproductive effects., Certain components or species of this product are considered potential carcinogens.

Section 12

Ecological Data

Overview: Moderate ecological hazard. This product may be dangerous to plants and/or wildlife. Highly/very toxic to fish and other water organisms.

Mobility:

No data

Persistence:

No data

Bioaccumulation:

No data

Degradability:

No data

Other Adverse Effects:

No data

Chemical Name

Ethyl Alcohol

CAS Number

64-17-5

67-66-3

Eco Toxicity

96 HR LC50 POECILIA RETICULATA 300 MG/L [STATIC]

48 HR EC50 DAPHNIA MAGNA 29 MG/L

48 HR EC50 DESMODESMUS SUBSPICATUS 560 MG/L

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

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Waste Disposal Code(s):

Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name:

UN1888, Chloroform, 6.1, III ***4 L bottle is a reportable quantity.***

Air - IATA Proper Shipping Name:

UN number: 1888 Class: 6.1 Packing group: III Proper shipping name: Chloroform

Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name

CAS Number

§ 313 Name

§ 304 RQ

CERCLA RQ

§ 302 TPQ

CAA 112(2) TQ

Ethyl Alcohol

64-17-5
67-66-3

Chloroform

10 lb RQ

10 lb final RQ;
4.54 kg final
RQ

10000 lb
TPQ

No

California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16

Additional Information

Revised: 09/09/2015

Replaces: 09/03/2014

Printed: 10-29-2015

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health