

SAFETY DATA SHEET

Creation Date 21-Apr-2009

Revision Date 19-Dec-2025

Revision Number 7

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

1. Identification

Product Name	Chloroform-d
Cat No. :	AC426770000; AC426771000
CAS No	865-49-6
Synonyms	Methane Trichloride-D; Formyl Trichloride-D; Methane-D, Trichloro-
Recommended Use	Laboratory chemicals.
Uses advised against	Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Vapors	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 Organs - Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Kidney, Liver, Heart.	

Label Elements**Signal Word**

Danger

Hazard Statements

Toxic if inhaled

May cause drowsiness or dizziness

Suspected of causing cancer

Harmful if swallowed

Causes skin irritation

Causes serious eye irritation

Suspected of damaging the unborn child

Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

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

Wear protective gloves/protective clothing/eye protection/face protection

Response

IF exposed or concerned: Get medical attention/advice

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Call a POISON CENTER or doctor

Skin

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing

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

Ingestion

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

Hazards not otherwise classified (HNOC)

None identified

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

WARNING. Cancer and Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/information on Ingredients

Component	CAS No	Weight %
Methane-d, trichloro-	865-49-6	<=100
Chloroform	67-66-3	-

4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
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.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	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.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms and effects	. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	982 °C / 1799.6 °F
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Phosgene. Chlorine. Hydrogen chloride gas.

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. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
1

Instability
1

Physical hazards
N/A

6. Accidental release measures

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

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and Storage

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.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Air sensitive. Store under an inert atmosphere. Incompatible Materials. Strong oxidizing agents.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Chloroform	TWA: 10 ppm	(Vacated) TWA: 2 ppm (Vacated) TWA: 9.78 mg/m ³ Ceiling: 50 ppm Ceiling: 240 mg/m ³	IDLH: 500 ppm STEL: 2 ppm STEL: 9.78 mg/m ³	TWA: 10 ppm TWA: 50 mg/m ³ STEL: 50 ppm STEL: 225 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Use only under a chemical fume hood. 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. Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin 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.

Recommended Filter type: low boiling organic solvent. Type AX. Brown. conforming to EN371.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<u>Appearance</u>			
Physical State	Liquid		
Color	Colorless		
Odor	aromatic		
Odor Threshold	No information available		
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>• Method</u>
Melting Point/Range	-64 °C / -83.2 °F		
Softening Point	No data available		
Boiling Point/Range	60 °C / 140 °F	@ 760mmHg	
Flash Point	No information available	Method -	No information available
Flammability (liquid)	No data available		
Flammability (solid,gas)	Not applicable	Liquid	
Explosion Limits	No data available		
Autoignition Temperature	982 °C / 1799.6 °F		
Decomposition Temperature	No data available		
pH	No information available		
Viscosity	No data available		
Water Solubility	8.2 g/L (20°C)		
Solubility in other solvents	No information available		
Partition Coefficient (n-octanol/water)			
Component	log Pow		
Methane-d, trichloro-	2		
Chloroform	2		
Vapor Pressure	211 mbar @ 20 °C		
Density / Specific Gravity	1.500		
Bulk Density	Not applicable	Liquid	
Vapor Density	No data available	(Air = 1.0)	
Particle characteristics	Not applicable (liquid)		
<u>Other Information</u>			
Molecular Formula	C Cl3 D		
Molecular Weight	120.39		

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Light sensitive. Hygroscopic.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to moist air or water. Protect from light. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Phosgene, Chlorine, Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation	May be harmful if inhaled. May cause irritation of respiratory tract. INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.
Ingestion	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and

Eyes diarrhea. Ingestion may cause irritation to mucous membranes.
 Irritating to eyes. Contact with eyes may cause irritation.
Skin Irritating to skin. May be harmful in contact with skin. May cause eye/skin irritation.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chloroform	LD50 = 908 mg/kg (rat) LD50 = 695 mg/kg (Rat) LD50 = 450 mg/kg (Rat)	LD50 > 20 g/kg (Rabbit)	LC50 = 10.5 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available

(e) germ cell mutagenicity; No data available
 Not mutagenic in AMES Test

(f) carcinogenicity; Category 2
 Limited evidence of a carcinogenic effect The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Methane-d, trichloro-Chloroform	865-49-6	Not listed	Not listed	Not listed	Not listed	Not listed
Chloroform	67-66-3	Group 2B	Reasonably Anticipated	A3	X	A3

IARC (International Agency for Research on Cancer)

*IARC (International Agency for Research on Cancer)
 Group 1 - Carcinogenic to Humans
 Group 2A - Probably Carcinogenic to Humans
 Group 2B - Possibly Carcinogenic to Humans
 NTP: (National Toxicity Program)*

NTP: (National Toxicity Program)

*Known - Known Carcinogen
 Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*

ACGIH: (American Conference of Governmental Industrial Hygienists)

*A1 - Known Human Carcinogen
 A2 - Suspected Human Carcinogen
 A3 - Animal Carcinogen
 ACGIH: (American Conference of Governmental Industrial Hygienists)*

Mexico - Occupational Exposure Limits - Carcinogens

*Mexico - Occupational Exposure Limits - Carcinogens
 A1 - Confirmed Human Carcinogen
 A2 - Suspected Human Carcinogen
 A3 - Confirmed Animal Carcinogen
 A4 - Not Classifiable as a Human Carcinogen
 A5 - Not Suspected as a Human Carcinogen*

(g) reproductive toxicity; Category 2

Reproductive Effects Experiments have shown reproductive toxicity effects on laboratory animals.
Teratogenicity Teratogenic effects have occurred in experimental animals.

(h) STOT-single exposure;	Category 3
Results / Target organs	Central nervous system (CNS).
(i) STOT-repeated exposure;	Category 1
Target Organs	Liver, Kidney, Skin, Central nervous system (CNS), Heart, Eyes.
(j) aspiration hazard;	No data available
Other Adverse Effects	Tumorigenic effects have been reported in experimental animals.
Symptoms / effects,both acute and delayed	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Other Adverse Effects	Tumorigenic effects have been reported in experimental animals.
Endocrine Disrupting Properties	This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methane-d, trichloro-	Not listed	Lepomis macrochirus: LC50: 18 mg/L/96h Pimephales promelas: LC50: 71 mg/L/96h	Not listed	Daphnia magna: EC50: 79 mg/LL48h
Chloroform	EC50 = 560 mg/L/48h	LC50: = 300 mg/L, 96h static (Poecilia reticulata) LC50: = 18 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 18 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 71 mg/L, 96h flow-through (Pimephales promelas)	Photobacterium phosphoreum: EC50 = 520 mg/L/5 min Photobacterium phosphoreum: EC50 = 670 mg/L/15 min Photobacterium phosphoreum: EC50 = 670 mg/L/30min	EC50 = 28.9 mg/L/48h

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

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

Component	log Pow
Methane-d, trichloro-	2
Chloroform	2

13. Disposal considerations

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
Chloroform - 67-66-3	U044	-

14. Transport information

DOT

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

TDG

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

IMDG/IMO

UN-No UN1888
 Proper Shipping Name Chloroform
 Hazard Class 6.1
 Packing Group III

15. Regulatory Information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Methane-d, trichloro-	865-49-6	-	-	-
Chloroform	67-66-3	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT) Not applicable

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Methane-d, trichloro-	865-49-6	X	-	212-742-4	X	-		X	X	-
Chloroform	67-66-3	X	-	200-663-8	X	X	X	X	X	X

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations**SARA 313**

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting thresholds
Chloroform	67-66-3	-	0.1	-

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Chloroform	X	10 lb	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Chloroform	X		-

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Chloroform	10 lb 1 lb	10 lb	RQ 10 lb final RQ RQ 4.54 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ

California Proposition 65 This product contains the following Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Chloroform	67-66-3	Carcinogen Developmental	20 µg/day 40 µg/day	Developmental Carcinogen

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Chloroform	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:
Legend - STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Chloroform	Release STQs - 20000lb

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances	REACH (1907/2006) - Annex XVII - Restrictions	REACH Regulation (EC 1907/2006) article 59 -

		Subject to Authorization	on Certain Dangerous Substances	Candidate List of Substances of Very High Concern (SVHC)
Methane-d, trichloro-Chloroform	865-49-6 67-66-3	- -	- Use restricted. See item 32. (see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907:EN ; NOT for restriction details)	- -

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Methane-d, trichloro-Chloroform	865-49-6 67-66-3	Not applicable Listed	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Methane-d, trichloro-Chloroform	865-49-6 67-66-3	Not applicable Not applicable	Not applicable Not applicable	Not applicable Not applicable	Not applicable Annex I - Y45

16. Other Information

Prepared By

Product stewardship (Regulatory Affairs)
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Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

End of SDS