Fisher Scientific

Part of Thermo Fisher Scientific

Material Safety Data Sheet

Creation Date 20-Oct-2009 **Revision Date** 07-Jun-2013 **Revision Number** 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Chloroform, stabilized with amylene**

Cat No. **C297-4, C603-4, C607-1, C607-4, C607SK-1, C607SK-4**

Synonyms Methane trichloride; Methenyl trichloride; Formyl trichloride

Recommended Use Laboratory chemicals

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

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Harmful if swallowed. Irritating to eyes, respiratory system and skin. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Appearance Colorless **Physical State** Liquid **Odor** aromatic

Target Organs Skin, Respiratory system, Eyes, Liver, Heart, Kidney, Central nervous system (CNS)

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes	Irritating to eyes.
Skin	Irritating to skin. May be harmful in contact with skin.
Inhalation	Irritating to respiratory system. May be harmful if inhaled.
Ingestion	Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects Possible cancer hazard based on tests with laboratory animals.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system disorders. Cardiovascular. Preexisting eye disorders. Kidney disorders. Liver disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Chloroform	67-66-3	>95

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point No information available.
Method - No information available.

Autoignition Temperature No information available.

Explosion Limits
Upper No data available
Lower No data available

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition

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** 2 **Flammability** 0 **Instability** 0 **Physical hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

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. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Use only under a chemical fume hood.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
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

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Chloroform	TWA: 5 ppm TWA: 24.4 mg/m^3	TWA: 10 ppm TWA: 50 mg/m^3 STEL: 50 ppm STEL: 225 mg/m^3	TWA: 10 ppm

NIOSH IDLH: *Immediately Dangerous to Life or Health*

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 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colorless
Odor	aromatic
Odor Threshold	No information available.
pH	No information available.
Vapor Pressure	213 mbar @ 20 °C
Vapor Density	No information available.
Viscosity	0.56 mPa s at 20 °C
Boiling Point/Range	61 - 61°C / 141.8 - 142.7°F
Melting Point/Range	-63°C / -81.4°F
Decomposition temperature	No information available.
Flash Point	No information available.
Evaporation Rate	No information available.
Specific Gravity	1.480

9. PHYSICAL AND CHEMICAL PROPERTIES

Solubility	Slightly soluble in water
log Pow	No data available
Molecular Weight	119.38
Molecular Formula	C H Cl3

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions. Sensitivity to light.

Conditions to Avoid Incompatible products. Excess heat. Exposure to light.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2), Hydrogen chloride gas, Phosgene, Chlorine

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing..

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chloroform	695 mg/kg (Rat)	3980 mg/kg (Rabbit)	47,702 mg/L (Rat) 4 h

Irritation Irritating to eyes, respiratory system and skin

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Mexico
Chloroform	A3	Group 2B	Reasonably Anticipated	X	A3

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)
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

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Other Adverse Effects See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

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Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Chloroform	EC50 = 560 mg/L/48h	300 mg/L LC50 96 h 71 mg/L LC50 96 h 18 mg/L LC50 96 h	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 No information available

Bioaccumulation/ Accumulation No information available

Mobility .

Component	log Pow
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

14. TRANSPORT INFORMATION

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

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Chloroform	X	X	-	200-663-8	-		X	X	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Chloroform	67-66-3	>95	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Chloroform	10 lb	10 lb

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

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

State Right-to-Know

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:

Component	DHS Chemical Facility Anti-Terrorism Standard
Chloroform	15000 lb STQ

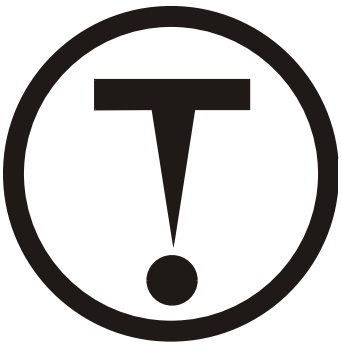
Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D2A Very toxic materials



16. OTHER INFORMATION

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
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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.

End of MSDS