SAFETY DATA SHEET

Preparation Date: 1/23/2014 **Revision date** 1/22/2019 **Revision Number:** G3

1. Identification

Product identifier

Product code: C1121
Product Name: Chloroform

Other means of identification
Synonyms: CHLOROFORME (French)
CHLOROFORMO (TRICLOROMETANO) (Spanish)
FORMYL TRICHLORIDE
METHANE TRICHLORIDE
METHANE, TRICHLORO-
METHENYL CHLORIDE
METHENYL TRICHLORIDE
METHYL TRICHLORIDE
TRICHLOROFORM
TRICHLOROMETHANE
CAS #: 67-66-3
RTECS # FS9100000
CI#: Not available

Recommended use of the chemical and restrictions on use
Recommended use: Solvent. Chemical intermediate.
Uses advised against No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Warning

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

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Harmful to aquatic life

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
Wear protective gloves/protective clothing/eye protection/face protection
Do not eat, drink or smoke when using this product
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

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 ON SKIN: Wash with plenty of water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

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

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Chloroform	67-66-3	99-99.5
Ethyl Alcohol 200 proof	64-17-5	0.5-1

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes serious eye irritation
Moderate eye irritation
Causes skin irritation
Moderate skin irritation
Irritating to respiratory system
Central nervous system effects
Drowsiness
Dizziness
Ataxia
Fatigue
Headache
Narcosis
May cause cardiovascular effects
May affect respiration
Nausea
Vomiting
It may affect the kidneys
May affect the liver
May cause digestive (gastrointestinal) tract irritation

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products Chloroform does not burn, but may decompose upon heating to produce the following if involved in a fire: carbon monoxide, carbon dioxide, hydrogen chloride and chlorine.

Specific hazards No information available.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Protect from light. Sensitive to light. Store in light-resistant containers. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:
Oxidizing agents
Acids
Alkalis
Aluminum
Potassium t-butoxide

Alkali Metals
Lithium
Sodium
Potassium
Alkaline Earth metals
Magnesium sulfate
Chloroform reacts violently with or may explode if it comes in contact with the following: Perchloric acid + Methanol; Sodium + Methanol; Sodium methylate + Methanol; Sodium hydroxide + Methanol; Acetone; Carbon tetrachloride; disilane; Nitrogen tetroxide; Sodium methylate; Sodium-Potassium alloy; Triisopropyl phosphine; 2-Nitrophenylacetyl chloride; Perchloric acid + Phosphorus pentoxide

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	**OSHA**	**NIOSH**	**ACGIH**	**AIHA WEEL**
Chloroform	67-66-3	50 ppm Ceiling 240 mg/m³ Ceiling	2 ppm STEL 9.78 mg/m³ STEL	10 ppm TWA	None
Ethyl Alcohol 200 proof	64-17-5	1000 ppm TWA 1900 mg/m³ TWA	1000 ppm TWA 1900 mg/m³ TWA	1000 ppm STEL	None

Canada

Component	CAS No	**Canada - Alberta**	**Canada - British Columbia**	**Canada - Ontario**	**Canada - Quebec**
Chloroform	67-66-3	10 ppm TWA 49 mg/m³ TWA	2 ppm TWA	None	None
Ethyl Alcohol 200 proof	64-17-5	1000 ppm TWA 1880 mg/m³ TWA	1000 ppm STEL	1000 ppm STEL	None

Australia and Mexico

Component	CAS No	**Australia**	**Mexico**
Chloroform	67-66-3	2 ppm TWA 10 mg/m³ TWA	10 ppm TWA 50 mg/m³ TWA 50 ppm STEL 225 mg/m³ STEL
Ethyl Alcohol 200 proof	64-17-5	1000 ppm TWA 1880 mg/m³ TWA	1000 ppm TWA 1900 mg/m³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron
Long sleeved clothing
Gloves

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands and face before breaks and immediately after handling the product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Liquid

Appearance:
No information available.

Color:
No information available.

Odor:
Pleasant. Etheric. Non-irritating.

Taste
Sweet.

Formula
CHCl3

Molecular/Formula weight (g/mole):
119.38

Flammability (solid, gas)
no data available

Flashpoint (°C/°F):
No information available

Flash Point Tested according to:
Not applicable

Autoignition Temperature (°C/°F):
No information available

Lower Explosion Limit (%):
No information available

Upper Explosion Limit (%):
No information available

Melting point/range(°C/°F):
-64 to -63 °C/-83.26-81.4 °F

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
61-62 °C/141.8-143.6 °F

Bulk density:
No information available

Density (g/cm3):
1.48-1.49

Specific gravity:
1.484 @ 20 °C
1.476-1.488 @ 25 °C

pH
No information available

Vapor pressure @ 20°C (kPa):
21.2-21.3 @ 20 deg. C
26.3 @ 25 deg. C.

Evaporation rate:
11.6 (butyl acetate =1)

Vapor density:
4.12-4.36

VOC content (g/L):
No information available

Odor threshold (ppm):
85

Partition coefficient (n-octanol/water):
log Kow = 1.97

Viscosity:
No information available

Miscibility:
Miscible with Carbon disulfide
Miscible with Carbon tetrachloride
Miscible with Benzene
Miscible with alcohol
Miscible with Acetone
Miscible with Petroleum Ether
Miscible with many organic solvents
Miscible with Ether

Solubility:
Slightly soluble in water
Soluble in Ether
Soluble in Benzene
Soluble in hot alcohol
Soluble in Acetone
Soluble in Carbon tetrachloride
Soluble in organic solvents
Soluble in Petroleum Ether
Soluble in Carbon Disulfide

10. STABILITY AND REACTIVITY

Reactivity
Reactive with oxidizing agents
Reactive with acids
Reactive with alkalis
Reacts with alkali metals
Reacts with alkaline earth metals
Chloroform reacts violently with or may explode if it comes in contact with the following: Perchloric acid + Methanol; Sodium + Methanol; Sodium methylate + Methanol; Sodium hydroxide + Methanol; Acetone; Carbon tetrachloride; disilane; Nitrogen tetroxide; Sodium methylate; Sodium-Potassium alloy; Triisopropyl phosphine; 2-Nitrophenylacetyl chloride; Perchloric acid + Phosphorus pentoxide

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Exposure to light. Incompatible materials.

Incompatible Materials:
Oxidizing agents
Acids
Alkalis
Aluminum
Potassium t-butoxide
Alkali Metals
Lithium
Sodium
Potassium
Alkaline Earth metals
Magnesium sulfate
Chloroform reacts violently with or may explode if it comes in contact with the following: Perchloric acid + Methanol; Sodium + Methanol; Sodium methylate + Methanol; Sodium hydroxide + Methanol; Acetone; Carbon tetrachloride; disilane; Nitrogen tetroxide; Sodium methylate; Sodium-Potassium alloy; Triisopropyl phosphine; 2-Nitrophenylacetyl chloride; Perchloric acid + Phosphorus pentoxide

Hazardous decomposition products: Hydrogen chloride gas. Chlorine. Carbon dioxide. Carbon monoxide.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Inhalation. Ingestion.

Acute Toxicity

Component Information

Chloroform	
CAS No	67-66-3

LD50/oral/rat = 450 mg/kg Oral LD50 Rat; 695 mg/kg Oral LD50 Rat
LD50/oral/mouse = 36 mg/kg (RTECS)
36-460 mg/kg (European Commission IUCLID Dataset)
353-1366 mgkg (European Commission IUCLID Dataset)

LD50/dermal/rabbit = >20 g/kg Dermal LD50Rabbit
>3980 mg/kg (LOLI; European Commission IUCLID Dataset)
LD50/dermal/rat = No information available
LC50/inhalation/rat = 47702 mg/m^3 Inhalation LC50 Rat 4 h
LC50/inhalation/mouse = 17200 mg/m^3 2 h
6000 mg/m^3 6 h
Other LD50 or LC50information = 820 mg/kg Oral LD50 Guinea Pig

Ethyl Alcohol 200 proof	
CAS No	64-17-5

LD50/oral/rat = 7060 mg/kg Oral LD50 Rat
LD50/oral/mouse = 3450 mg/kg Oral LD50 Mouse
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = 124.7 mg/L Inhalation LC50 Rat 4 h
LC50/inhalation/mouse = 39000 mg/m^3 4 h
Other LD50 or LC50information = >60000 ppm Inhalation LC50 Mouse 1 h
5900 mg/m^3 Inhalation LC50 Rat 6 h
20000 ppm Inhalation LC50 Rat 10 h
5560 mg/kg Oral LD50 Guinea Pig
6300 mg/kg Oral LD50 Rabbit

Product Information

LD50/oral/rat =
Value - Acute Tox = 695 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 353-1366 mg/kg

LD50/dermal/rabbit
Value - Acute Tox = > 3980 mg/kg

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = 47.7 mg/l (4-hr)
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = 17200 mg/m^3 2 h
6000 mg/m^3 6 h
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation. Mildly to highly irritating. It may be absorbed through the skin.

Eye Contact: Causes eye irritation. Moderately irritating to the eyes. Causes conjunctivitis. May cause reversible eye damage.

Inhalation Irritating to respiratory system. May cause nausea, vomiting. May cause salivation. May cause dry mouth, thirst. May cause dizziness and headache. Inhalation of high concentrations of vapor may cause anesthetic effects. May affect behavior/central nervous system (excitaton, followed by central nervous system depression, nervousness, irritability, halucinations, delirum, euphoria, apathy, ataxia, loss of judgement, disorientaton, inebriation, fatigue, lassitude, mental dullness, weakness, narcosis, fainting sensation, unconciousness (anesthesia), coma). It may affect the cardiovascular system (hypotension, cardiac arrhythmias, cardiac arrest). May affect respiration (respiratory depression). May affect respiration (anoxia, increase in rate and depth of respiration). May cause anorexia. It may affect the liver. May affect the kidneys. May produce a sensation of bodily

warmth. May cause pupilary dilation with decreased reaction to light.

Ingestion Harmful if swallowed. Causes digestive (gastrointestinal) tract irritation. It causes irritation or a burning sensation of the mouth and throat. May affect urinary system (kidneys). May affect liver. It may affect the blood (leukocytosis, fall in the plamsa prothrombin level and an increase in time for the blood to clot).

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated inhalation may cause peumoconiosis. Prolonged or repeated inhalation may cause dry mouth, thirst, gastroenteritis, nausea, vomiting, diarrhea, loss of appetite or anorexia, weight loss. Prolonged or repeated inhalation may affect behavior/central nervous system (headache, hallucinations, ataxia, loss of reflexes, psychotic behavior, dysarthria (motor speech disorder)), and cause degenerative changes of the brain. Prolonged or repeated inhalation may affect the liver. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect the heart. Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated ingestion may cause loss of appetite. Prolonged or repeated ingestion may cause weight loss. Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin. Prolonged or repeated inhalation may affect the blood (changes in white blood cell count). Prolonged or repeated inhalation may affect the blood (change in clotting factors). Prolonged or repeated inhalation may affect the spleen. Prolonged or repeated inhalation may cause hyperglycemia. Prolonged or repeated inhalation may cause ketosis (ketone bodies formed in the blood when liver glycogen stores are depleted).

Sensitization: No information available.

Mutagenic Effects: May affect genetic material
Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Mutagenic effects in mammalian somatic cells
Animal experiments showed mutagenic effects

Carcinogenic effects: May cause cancer based on animal test data. Limited evidence of a carcinogenic effect. Possibly carcinogenic to humans.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Chloroform	67-66-3	Group 2B - Possibly carcinogenic to humans -Monograph 73 [1999]	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Reasonably Anticipated To Be A Human Carcinogen	Present	Not listed	Not listed
Ethyl Alcohol 200 proof	64-17-5	Group 1 - Monograph 100E [2012] in alcoholic beverages Monograph 96 [2010] in alcoholic beverages	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Present	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity Suspected of damaging fertility or the unborn child

Reproductive Effects: No information available
Developmental Effects: May cause adverse developmental effects
Possible risk of harm to the unborn child
Teratogenic Effects: May cause birth defects (teratogenic effects) based on animal test data

Specific Target Organ Toxicity

STOT - single exposure respiratory system. central nervous system.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.
Target Organs: Central nervous system. Respiratory system. Kidneys. Liver. Skin. Heart.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Chloroform - 67-66-3
Algae/aquatic plants 560 mg/L EC50 Desmodesmus subspicatus 48 h
Fish 71 mg/L LC50 Pimephales promelas 96 h flow-through 1 18 mg/L LC50 Oncorhynchus mykiss 96 h flow-through 1 18 mg/L LC50 Lepomis macrochirus 96 h flow-through 1 300 mg/L LC50 Poecilia reticulata 96 h static 1
Crustacea 29 mg/L EC50 Daphnia magna 48 h
Ethyl Alcohol 200 proof - 64-17-5
Fish 12.0 - 16.0 mL/L LC50 Oncorhynchus mykiss 96 h static 1 100 mg/L LC50 Pimephales promelas 96 h static 1 13400 - 15100 mg/L LC50 Pimephales promelas 96 h flow-through 1
Crustacea 9268 - 14221 mg/L LC50 Daphnia magna 48 h 2 mg/L EC50 Daphnia magna 48 h 10800 mg/L EC50 Daphnia magna 24 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes

Chloroform	67-66-3	None	None	None	U044
Ethyl Alcohol 200 proof	64-17-5	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1888
Proper Shipping Name:	Chloroform
Hazard Class	6.1
Subsidiary Class	No information available
Packing group:	III
Emergency Response Guide Number	151
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	IB3, N36, T7, TP2
Symbol(s):	[DOT]: (R2) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 10 pounds (4.54 Kilograms).
Description:	UN1888, Chloroform, 6.1, III

TDG (Canada)

UN-No:	UN1888
Proper Shipping Name:	Chloroform
Hazard Class	6.1
Subsidiary Risk:	No information available
Packing Group:	III
Marine Pollutant	No Information available
Description:	UN1888, Chloroform, 6.1, III

ADR

UN Number	UN1888
Proper Shipping Name:	Chloroform
Transport hazard class(es)	6.1
Packing group	III
Subsidiary Risk:	No information available
Description:	UN1888, Chloroform, 6.1, III

IMDG

UN-No:	UN1888
Proper Shipping Name:	Chloroform
Hazard Class:	6.1
Subsidiary Risk:	No information available
Packing Group:	III
Marine Pollutant	No information available
EMS:	F-A
Description	UN1888, Chloroform, 6.1, III

RID

UN Number	UN1888
Proper Shipping Name:	Chloroform
Transport hazard class(es)	6.1
Subsidiary Risk:	6.1
Packing group	III
Description:	UN1888, Chloroform, 6.1, III

ICAO (air)

UN-No:	UN1888
Proper Shipping Name:	Chloroform

Hazard Class 6.1
Subsidiary Risk: No information available
Packing Group: III
Description: UN1888, Chloroform, 6.1, III

IATA
UN Number UN1888
Proper Shipping Name: Chloroform
Transport hazard class(es) 6.1
Subsidiary Risk: No information available
Packing group III
Precautionary Statements - Response 6A
Special Provisions No information available
Description: UN1888, Chloroform, 6.1, III

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
Chloroform	67-66-3	PresentACTIVE	Present KE-34076	Present	Present (2)-37	Present	Present	Present 200-663-8
Ethyl Alcohol 200 proof	64-17-5	Present(ACTIVE)	KE-13217	Present	(2)-202	Present	Present	Present 200-578-6

U.S. Regulations

Chloroform
Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0388
New Jersey (EHS) List: 0388 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 20000lbTQ
Pennsylvania RTK: Environmental hazard
Special hazardous substance
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
Michigan - Critical Materials List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
10 lb RQ
1 lb RQ
Louisana Reportable Quantity List for Pollutants: 10lbfinal RQ
4.54kgfinal RQ
California Directors List of Hazardous Substances: Present
FDA - 21 CFR - Total Food Additives - List Sourced from EAFUS 175.105, 177.1580, 177.1585

Ethyl Alcohol 200 proof
Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0844
Pennsylvania RTK: Present
Minnesota - Hazardous Substance List: Present
Louisana Reportable Quantity List for Pollutants: Present (listed as Volatile Organic Compounds)
California Directors List of Hazardous Substances: Present
FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1293
FDA - 21 CFR - Total Food Additives - List Sourced from EAFUS 169.175, 169.176, 169.177, 169.181, 172.340, 172.560, 172.580, 175.105, 176.180, 176.200, 177.1200, 177.1650, 178.1010, 184.1293, 73.30, 73.345, 73.615

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

⚠WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov.

Chemicals Known to the State of California to Cause Reproductive Toxicity:

⚠WARNING: This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause birth defects or other reproductive harm. For more information go to www.p65warnings.ca.gov.

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Chloroform	67-66-3	carcinogen	developmental toxicity	Not Listed	Not Listed
Ethyl Alcohol 200 proof	64-17-5	carcinogen (Ethanol in alcoholic beverages)	developmental toxicity (Ethyl alcohol in alcoholic beverages)	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Chloroform	67-66-3	10 lb final RQ 4.54 kg final RQ	10 lb EPCRA RQ	None	None	0.1 % de minimis concentration
Ethyl Alcohol 200 proof	64-17-5	None	None	None	None	None

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Chloroform	67-66-3	Not Applicable	Not Applicable
Ethyl Alcohol 200 proof	64-17-5	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: .

Component	WHMIS 2015 Hazard Classification
Chloroform 67-66-3 (99-99.5)	Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Carcinogenicity - Category 2: H351 Suspected of causing cancer.; Reproductive Toxicity - Category 2: H361 Suspected of damaging fertility or the unborn child.; Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure.
Ethyl Alcohol 200 proof 64-17-5 (0.5-1)	Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Category 2B: H320 Causes eye irritation.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Chloroform	67-66-3	Present	Not Listed
Ethyl Alcohol 200 proof	64-17-5	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Chloroform	67-66-3	Not listed
Ethyl Alcohol 200 proof	64-17-5	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Chloroform	67-66-3	Not listed
Ethyl Alcohol 200 proof	64-17-5	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Chloroform	67-66-3	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Acute toxicity - Inhalation - Acute Tox. 3: H331 Toxic if inhaled.; Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation.; Carcinogenicity - Carc. 2: H351 Suspected of causing cancer.; Reproductive Toxicity - Repr. 2: H361d Suspected of damaging the unborn child.; Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure.602-006-00-4
Ethyl Alcohol 200 proof	64-17-5	Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.603-002-00-5

EU - CLP (1272/2008)

R-phrase(s)

R40 - Limited evidence of a carcinogenic effect
R63 - Possible risk of harm to the unborn child
R20/22 - Harmful by inhalation and if swallowed
R48/20 - Harmful: danger of serious damage to health by prolonged exposure through inhalation
R36/38 - Irritating to eyes and skin

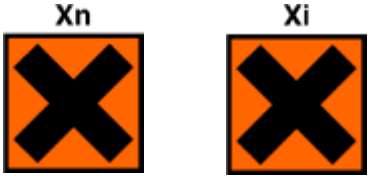
S -phrase(s)

S 2 - Keep out of the reach of children.
S36/37 - Wear suitable protective clothing and gloves

Component	CAS No	**Classification**	**Concentration Limits:**	**Safety Phrases**
Chloroform	67-66-3	Xn; R20/22-48/20 Xi; R36/38 Carc.Cat.3; R40 Repr.Cat.3; R63	5%<=C Xn; R22 5%<=C Xn; R48/20/22	S: (2)-36/37
Ethyl Alcohol 200 proof	64-17-5	F; R11	No information	S(2) S7 S16

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xn - Harmful
Xi - Irritant



16. OTHER INFORMATION

Preparation Date:	1/23/2014
Revision date	1/22/2019
Prepared by:	Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet