Material Safety Data Sheet

Issuing Date 5/25/2010 **Revision Date** New **Revision Number** 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Chloroform Reagent**

Product Code(s) 6203

Recommended Use Laboratory chemicals. Industrial (not for food or food contact use).

Company

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620
USA

Emergency Telephone Number

24 Hour Emergency Number (CHEM-TEL):
USA, Canada, Puerto Rico 1-800-255-3924
Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

May be fatal if inhaled, absorbed through skin, or swallowed
Irritating to eyes, respiratory system and skin
Contains a known or suspected carcinogen
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm

Appearance Clear, colorless solution **Physical State** Liquid **Odor** Characteristic, Ethereal

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Principle Routes of Exposure Skin contact, Inhalation, and, Ingestion

Acute Toxicity

Eyes Vapors cause pain and irritation. . Liquid may cause severe irritation and possible eye damage.

Skin Harmful if absorbed through skin. Contact causes severe skin irritation and possible burns.

Inhalation Relatively potent anesthetic. Irritates respiratory tract and causes central nervous system issues, including headache, drowsiness, and dizziness. Prolonged exposure may lead to death due to irregular heartbeat and kidney/liver disorders. High concentrations can cause unconsciousness and death.

Ingestion May be fatal if swallowed. Swallowing causes severe burning of mouth and throat, pain in chest, and vomiting. Ingesting large quantities may cause symptoms similar to that of inhalation.

Chronic Effects Experiments have shown reproductive toxicity effects on laboratory animals. Repeated or prolonged exposure may cause central nervous system damage. May cause adverse liver effects. May cause adverse kidney effects.

Aggravated Medical Conditions Preexisting eye disorders. Skin disorders. Kidney disorders. Respiratory disorders. Liver disorders.

Environmental Hazard See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Chloroform	67-66-3	99-100%
Ethyl alcohol	64-17-5	0-1%

WARNING! This product contains Chloroform, a chemcial know to the State of California to cause cancer, birth defects, or other reproductive harm..

4. FIRST AID MEASURES

General Advice Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Take off contaminated clothing and shoes immediately. Immediate medical attention is required.

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

Skin Contact Remove material from skin immediately. Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Remove and wash contaminated clothing before re-use. Seek immediate medical attention/advice.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately.

Ingestion Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

Notes to Physician See MSDS (material safety data sheet) for additional information. Product is a corrosive material. Perform endoscopy in all cases of suspected potassium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steriods should be considered..

Protection of First-aiders Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

5. FIRE-FIGHTING MEASURES

Flammable Properties Slight fire hazard when exposed to high heat, otherwise practically not flammable.

Suitable Extinguishing Media Water spray, dry chemical, carbon dioxide (CO_2), or foam.

Uniform Fire Code

- CORROSIVE: BASE-LIQUID
- Toxic: Liquid

Explosion Data

NFPA **Health Hazard** 2 **Flammability** 0 **Stability** 0 **Physical and Chemical Hazards** N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. If you have not donned special protective clothing approved for this material, do not expose yourself to any risk of this material touching you. Evacuate personnel to safe areas.

Methods for Containment Dike to collect large liquid spills. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Do not flush to sewer..

Methods for Cleaning Up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Keep in suitable and closed containers for disposal. Prevent product and washings from entering drains, sewers or surface water due to high toxicity to aquatic organisms.

Other Information Ventilate the area.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes and clothing. Do not ingest. Do not eat, drink or smoke when using this product. Do not breathe vapors or spray mist.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Chloroform 67-66-3	TWA: 10 ppm	None Established	IDLH: 500 ppm STEL: 2 ppm STEL: 9.78 mg/m^3
Ethyl alcohol 64-17-5	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields. Avoid contact with eyes.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection Maintain adequate ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear suitable gloves and eye/face protection. Wash hands and face before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless solution	**Odor**	Characteristic, Ethereal
Physical State	Liquid	**pH**	No data available
Autoignition Temperature	Not applicable	**Boiling Point/Range**	62 °C
Freezing Point	No information available °F	**Flammability Limits in Air**	No information available
Explosion Limits	No data available		
Specific Gravity	1.48 @ 20°C	**Solubility**	0.8 g/100ml water @ 20°C
Evaporation Rate	11.6 (BuAc = 1)	**Vapor Pressure**	160 mmHg @ 20 °C
Vapor Density	4.1 (air = 1)		

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions. Stable under recommended storage conditions.

Incompatible Products Chemically active metals. Aluminium. Magnesium powder. Sodium or potassium. Acetone, methanol, fluorine.

Conditions to Avoid Incompatible products. Direct sunlight. Heating can release hazardous gases. Exposure to air.

Hazardous Decomposition Products May produce the following when heated to decomposition:. Carbon monoxide (CO). Carbon dioxide (CO_2). Phosgene gas. Hydrogen chloride.

Hazardous Reactions Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Harmful if swallowed, inhaled, or absorbed through skin.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chloroform	908 mg/kg (Rat)	3980 mg/kg (Rabbit)	47.7 mg/L (Rat) 4 h
Ethyl alcohol	1501 mg/kg (Rat)	None Established	124.7 mg/L (Rat) 4 h

Chronic Toxicity

Chronic Toxicity Experiments have shown reproductive toxicity effects on laboratory animals. Repeated or prolonged exposure may cause central nervous system damage. May cause adverse liver effects. May cause adverse kidney effects.

Chemical Name	ACGIH	IARC	NTP	OSHA
Chloroform	A3	Group 2B	Reasonably Anticipated	X
Ethyl alcohol	None Established	None Established	Known	None Established

Reproductive Toxicity Experiments have shown reproductive toxicity effects on laboratory animals. May cause birth defects.

Developmental Toxicity May be a developmental hazard based on animal data. Component substance is listed on California Proposition 65 as a developmental hazard.

Target Organ Effects Skin, Kidney

Chemical Name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Chloroform	None Established	None Established	None Established
Ethyl alcohol	None Established	None Established	None Established

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains a substance which is:. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)

Chloroform	EC50 = 560 mg/L 48 h	LC50= 18 mg/L Lepomis macrochirus 96 h LC50= 18 mg/L Oncorhynchus mykiss 96 h LC50= 300 mg/L Poecilia reticulata 96 h LC50= 70.7 mg/L Pimephales promelas 96 h	EC50 = 520 mg/L 5 min EC50 = 670 mg/L 15 min EC50 = 670 mg/L 30 min	EC50 = 28.9 mg/L 48 h
Ethyl alcohol	None Established	LC50= 12900 mg/L Oncorhynchus mykiss 96 h LC50= 14.2 mg/L Pimephales promelas 96 h	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	EC50 = 10800 mg/L 24 h EC50 = 9268 mg/L 48 h

Bioaccumulation/Accumulation This material is not expected to significantly bioaccumulate. When released into the soil, this material is expected to leach into ground water. When released into water or soil, this product is expected to quickly evaporate and have a half life of 1-10 days. When released into the air, this material may be moderately degraded by photolysis. When released into the air, this material is expected to have a half life of greater than 30 days.

Chemical Name	Log Pow
Chloroform	= 2 25 °C
Ethyl alcohol	= -0.32

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Dispose of in accordance with local regulations. Should not be released into the environment.

Contaminated Packaging Dispose of in accordance with local regulations.

Chemical Name
Chloroform - 67-66-3
Ethyl alcohol - 64-17-5

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Chloroform - 67-66-3	Category I - Volatiles	None Established	Toxic waste; (waste number F025); Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated	Toxic waste; waste number K021; Waste description: Aqueous spent antimony catalyst waste from fluoromethanes production.
Ethyl alcohol - 64-17-5	None Established	None Established	None Established	None Established

Chemical Name	California Hazardous Waste Status
Chloroform	Toxic
Ethyl alcohol	Toxic; Ignitable

14. TRANSPORT INFORMATION

DOT Regulated

Proper Shipping Name CHLOROFORM
Hazard Class 6.1
UN-No 1888
Packing Group III
Reportable Quantity (RQ) 10

IATA

UN-No	1888
Proper Shipping Name	CHLOROFROM
Hazard Class	6.1
Packing Group	III

IMDG/IMO

Proper Shipping Name	CHLOROFORM
Hazard Class	6.1
UN-No	1888
Packing Group	III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Chloroform 67-66-3 (99-100%)	Present	X	X	2-37	X	KE-34076	X	X
Ethyl alcohol 64-17-5 (0-1%)	Present	X	X	2-202	X	KE-13217	X	X

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Chloroform	67-66-3	99-100%	0.1
Ethyl alcohol	64-17-5	0-1%	None Established

SARA 311/312 Hazard Categories

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

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Chloroform 67-66-3 (99-100%)	10 lb	X	X	X
Ethyl alcohol 64-17-5 (0-1%)	None Established	None Established	None Established	None Established

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs: .

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Chloroform	67-66-3	99-100%	Present	Group I	None Established	None Established
Ethyl alcohol	64-17-5	0-1%	None Established	None Established	None Established	None Established

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Chloroform	10 lb	10 lb
Ethyl alcohol	None Established	None Established

U.S. State Regulations

California Proposition 65
WARNING! This product contains a chemcial know to the State of California to cause cancer Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage

Chemical Name	CAS-No	California Prop. 65
Chloroform	67-66-3	Carcinogen
Ethyl alcohol	64-17-5	Developmental

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Chloroform	X	X	X	X	X
Ethyl alcohol	X	X	X	None Established	X

International Regulations

Mexico - Grade Mexico - Grade

Chemical Name	Carcinogen Status	Exposure Limits
Chloroform	A3	Mexico: TWA= 10 ppm Mexico: TWA= 50 mg/m^3
Ethyl alcohol	None Established	Mexico: TWA= 1000 ppm Mexico: TWA= 1900 mg/m^3

Canada

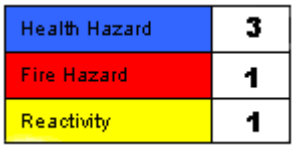
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D1B - Poisonous and Infectious material - immediate and serious effects - Toxic
D2A - Poisonous and infectious material - Other effects - Very toxic

D2B - Poisonous and infectious material - Other effects - Toxic

Chemical Name	NPRI
Chloroform	X

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol
			Regulated 

Prepared By Regulatory Affairs Department

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Revision Date

Revision Note Initial Release.

Disclaimer

The information provided on this MSDS 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