

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name Wide Range Indicator

Other means of identification

Product Code(s) 2218
UN-No 1170

Recommended use of the chemical and restrictions on use

Recommended Use Use as a laboratory reagent. Industrial (not for food or food contact use). Laboratory chemicals.

Uses advised against This product should not be used in applications other than those listed

Details of the supplier of the safety data sheet

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

Emergency telephone numbers

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

2. HAZARDS IDENTIFICATION

Serious eye damage/eye irritation	Category 2A
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Physical hazards Flammable Liquids.	Category 3

EMERGENCY OVERVIEW

DANGER

Hazard statements

Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. FLAMMABLE LIQUID AND VAPOR.



Appearance dark green

Physical state liquid

Odor Alcohol

Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection. Do

not breathe dust /fume /gas /mist /vapors /spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

Response: IF exposed or concerned: Get medical advice/attention. 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 soap and water. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store locked up. Keep container tightly closed and in a well-ventilated place.

Disposal:

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

May be harmful if swallowed. Toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

Chemical name	CAS No	Weight-%
Phenolphthalein	77-09-8	<0.05
Potassium hydroxide	1310-58-3	<0.1
2,4-Dinitrophenol	51-28-5	0.05
Methyl alcohol	67-56-1	2
Ethyl alcohol	64-17-5	52

WARNING! This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm

4. FIRST AID MEASURES**First Aid Measures**

General advice	Do not get in eyes, on skin, or on clothing. If symptoms persist, call a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Consult a physician if necessary.
Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing.
Ingestion	Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a physician immediately.
<u>Self-protection of the first aider</u>	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.

5. FIREFIGHTING MEASURES**Suitable extinguishing media**

Water spray, dry chemical, carbon dioxide (CO₂), or foam.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	See section 8. Ensure adequate ventilation. Remove all sources of ignition.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for containment	Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose according to federal, state, and local regulations.
Methods for cleaning up	After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.
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Conditions for safe storage, including any incompatibilities

Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not store near combustible materials. Keep out of the reach of children.
Incompatible Products	NITRIC ACID. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phenolphthalein 77-09-8	*_	*_	Not Established
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³
2,4-Dinitrophenol 51-28-5	*_	*_	Not Established
Methyl alcohol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³

Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/Face Protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective gloves/clothing. Nitrile rubber. Gloves & Lab Coat.
Respiratory protection	Use only with adequate ventilation.
Hygiene Measures	Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	Odor	Alcohol
Appearance	dark green		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH		Not Applicable	
Melting point / freezing point	No information available		
Boiling point / boiling range	ca 78.5 °C / 173.3 °F	(Calculated based on percent denatured alcohol)	
Flash point	ca 22.5 °C / 72.5 °F	(Calculated based on percent denatured alcohol) (based on .?)	
Evaporation rate			
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	19% Ethanol		
Lower flammability limit:	3.3% Ethanol		
Vapor pressure	48	mmHg @ 20°C for SDA (3A) Ethyl Alcohol	
Vapor density	1.6	@ 20°C (Air=1) for SDA (3A) Ethyl Alcohol	
Specific gravity	No information available		
Water solubility	No information available		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
<u>Other Information</u>			
Softening point	No information available		
Molecular weight	No information available		
VOC Content (%)	No information available		
Density	No information available		
Bulk density	No information available		

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of use and storage.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	NITRIC ACID. Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	= 30 mg/kg (Rat)	= 25 mg/kg (Rat)	Not Established
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit) = 15800 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	Not Established	= 124.7 mg/L (Rat) 4 h

Information on toxicological effects

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

Chemical name	ACGIH	IARC	NTP	OSHA
Phenolphthalein 77-09-8	Not Established	Group 2B	Reasonably Anticipated	X
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	Not Established	Not Established	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	A3	Group 1	Known	X

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

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

X - Present

Chronic toxicity

Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Prolonged skin contact may cause skin irritation and/or dermatitis.

ATEmix (oral)	5,000.00 mg/kg
ATEmix (dermal)	15,000.00 mg/kg
ATEmix (inhalation-dust/mist)	25.05 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life with long lasting effects

Unknown Aquatic Toxicity 0.0683 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	80: 96 h Gambusia affinis mg/L LC50 static	Not Established
2,4-Dinitrophenol 51-28-5	Not Established	210 - 330: 96 h Cyprinus carpio mg/L LC50 5.86 - 7.39: 96 h Pimephales promelas mg/L LC50 flow-through 910 - 1480: 96 h Oncorhynchus mykiss µg/L LC50 flow-through 13590 - 17460: 96 h Lepomis macrochirus µg/L LC50 static 390: 96 h Oncorhynchus mykiss µg/L LC50 static	Not Established
Methyl alcohol	Not Established	28200: 96 h Pimephales	Not Established

67-56-1		promelas mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	
Ethyl alcohol 64-17-5	Not Established	100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability

Ethanol: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into water, this material may evaporate to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulation/Accumulation

Ethanol:

When released into the soil, this material is expected to quickly evaporate.

When released into water, this material may evaporate to a moderate extent. This material is not expected to significantly bioaccumulate.

When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to be readily removed from the atmosphere by dry and wet deposition. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Chemical name	Log Pow
Phenolphthalein 77-09-8	Not Established
Potassium hydroxide 1310-58-3	0.65 0.83
2,4-Dinitrophenol 51-28-5	1.5
Methyl alcohol 67-56-1	-0.77
Ethyl alcohol 64-17-5	-0.32

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Phenolphthalein 77-09-8	Not Established	-	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	-	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	P048	Included in waste streams: F039, K001	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Included in waste stream: F039	Not Established	U154
Ethyl alcohol 64-17-5	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established
2,4-Dinitrophenol 51-28-5	Not Established	P048	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Phenolphthalein 77-09-8	*_
Potassium hydroxide 1310-58-3	Toxic Corrosive
2,4-Dinitrophenol 51-28-5	*_
Methyl alcohol 67-56-1	Toxic Ignitable
Ethyl alcohol 64-17-5	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

UN-No 1170
 Proper shipping name ETHANOL SOLUTION
 Hazard Class 3
 Packing group II

IATA

UN-No 1170
 Proper shipping name ETHANOL / ETHYL ALCOHOL SOLUTION
 Hazard Class 3
 Packing group II

IMDG/IMO

UN-No 1170
 Proper shipping name ETHANOL / ETHYL ALCOHOL SOLUTION
 Hazard Class 3
 Packing group II

RID

UN-No 1170
 Proper shipping name ETHANOL / ETHYL ALCOHOL SOLUTION
 Hazard Class 3
 Packing group II

ADR

UN-No 1170
 Proper shipping name ETHANOL / ETHYL ALCOHOL SOLUTION
 Hazard Class 3
 Packing group II

15. REGULATORY INFORMATION**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US 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	SARA 313 - Threshold Values %
Phenolphthalein 77-09-8	0.1
Potassium hydroxide 1310-58-3	Not Established
2,4-Dinitrophenol 51-28-5	1.0
Methyl alcohol 67-56-1	1.0
Ethyl alcohol 64-17-5	Not Established

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	1000 lb	Not Established	Not Established	X
2,4-Dinitrophenol 51-28-5	10 lb	X	X	X
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	Not Established	Not Established	Not Established	Not Established

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)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Phenolphthalein 77-09-8	*-	Not Established	-
Potassium hydroxide 1310-58-3	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ
2,4-Dinitrophenol 51-28-5	10 lb	Not Established	RQ 10 lb final RQ RQ 4.54 kg final RQ
Methyl alcohol 67-56-1	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RQ
Ethyl alcohol 64-17-5	*-	Not Established	-

US State Regulations**California Proposition 65**

(Ethyl alcohol is only considered a Proposition 65 cancer and developmental hazard when it is ingested as an alcoholic beverage)



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Chemical name	California Proposition 65
Phenolphthalein 77-09-8	Carcinogen
Potassium hydroxide 1310-58-3	Not Established
2,4-Dinitrophenol 51-28-5	Not Established
Methyl alcohol 67-56-1	Developmental
Ethyl alcohol 64-17-5	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Phenolphthalein 77-09-8	X	Not Established	Not Established
Potassium hydroxide 1310-58-3	X	X	X
2,4-Dinitrophenol 51-28-5	X	X	X
Methyl alcohol 67-56-1	X	X	X
Ethyl alcohol 64-17-5	X	X	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Potassium hydroxide 1310-58-3	Banned, 16 CFR 1500.17 Add POISON to label, 16 CFR 1500.129
Methyl alcohol 67-56-1	Special labeling, 16 CFR 1500.14

16. OTHER INFORMATION**NFPA****Health hazard 2****Flammability 3****Health hazard 2****Flammability 3**



HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Prepared by
Issuing Date
Revision Date
Reason for revision

Regulatory Affairs Department
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SDS sections updated 9

Disclaimer

The information provided on this SDS 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 Safety Data Sheet