

## 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.

**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 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

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

**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**

<b>General advice</b>	Do not get in eyes, on skin, or on clothing. If symptoms persist, call a physician.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Consult a physician if necessary.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately.
<b>Ingestion</b>	Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Call a physician immediately.
<b><u>Self-protection of the first aider</u></b>	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 (CO<sub>2</sub>), 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.

**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.

**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 <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
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 <sup>3</sup> (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m <sup>3</sup> (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m <sup>3</sup> (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m <sup>3</sup> STEL: 250 ppm STEL: 325 mg/m <sup>3</sup>
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup> (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m <sup>3</sup>	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

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

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	Alcohol
<b>Appearance</b>	dark green		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
<b>pH</b>		Not Applicable	
<b>Melting point / freezing point</b>	No information available		
<b>Boiling point / boiling range</b>	ca 78.5 °C / 173.3 °F	(Calculated based on percent denatured alcohol)	
<b>Flash point</b>	ca 23 °C / 70 °F	(Calculated based on percent denatured alcohol)	
<b>Evaporation rate</b>			
<b>Flammability (solid, gas)</b>	No information available		
<b>Flammability Limit in Air</b>			
<b>Upper flammability limit:</b>	19% Ethanol		
<b>Lower flammability limit:</b>	3.3% Ethanol		
<b>Vapor pressure</b>	48	mmHg @ 20°C for SDA (3A) Ethyl Alcohol	
<b>Vapor density</b>	1.6	@ 20°C (Air=1) for SDA (3A) Ethyl Alcohol	
<b>Specific gravity</b>	No information available		
<b>Water solubility</b>	No information available		
<b>Solubility in other solvents</b>	No information available		
<b>Partition coefficient</b>	No information available		
<b>Autoignition temperature</b>	No information available		
<b>Decomposition temperature</b>	No information available		
<b>Kinematic viscosity</b>	No information available		
<b>Dynamic viscosity</b>	No information available		
<b>Explosive properties</b>	No information available		
<b>Oxidizing properties</b>	No information available		

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under normal conditions of use and storage.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible materials</b>	NITRIC ACID. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	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 )	= 15800 mg/kg ( Rabbit )	= 64000 ppm ( Rat ) 4 h = 22500 ppm ( Rat ) 8 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.

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

**12. ECOLOGICAL INFORMATION**Ecotoxicity

**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	13590 - 17460: 96 h Lepomis macrochirus µg/L LC50 static 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 390: 96 h Oncorhynchus mykiss µg/L LC50 static	Not Established
Methyl alcohol 67-56-1	Not Established	13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50	Not Established

		static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	
Ethyl alcohol 64-17-5	Not Established	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/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**

No information available.

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	1.54
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	Not Established	Not Established	Not Established	Not Established

64-17-5			
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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**

**Proper shipping name** ETHANOL SOLUTION (Ethyl Alcohol Solution)  
**UN-No** 1170  
**Hazard Class** 3  
**Packing group** II

**IATA**

**Proper shipping name** ETHANOL SOLUTION (Ethyl Alcohol Solution)  
**UN-No** 1170  
**Hazard Class** 3  
**Packing group** II

**IMDG/IMO**

**Proper shipping name** ETHANOL SOLUTION (Ethyl Alcohol Solution)  
**UN-No** 1170  
**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**

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

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

Chemical name	California Proposition 65
Phenolphthalein	Carcinogen



77-09-8	
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

Instability 0

Physical and Chemical  
Hazards N/A

Health hazard 2

Flammability 3



HEALTH	2
FLAMMABILITY	3
REACTIVITY	0

Prepared by  
Issuing Date  
Revision Date  
Reason for revision  
Disclaimer

Regulatory Affairs Department  
May-03-2012  
Sep-29-2016  
New US GHS format

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**