# Safety Data Sheet

OSHA format

**Issuing Date** Jul-08-2015 **Revision Date** Mar-02-2018 **Revision Number** 0

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

**Product identifier**

**Product name** **Hardness Soap**

**Other means of identification**

**Product Code(s)** **4768**

**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**

**Manufacturer Address**
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

| | |
|---|---|
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |
| Reproductive toxicity | Category 1A |
| Specific target organ toxicity (single exposure) | Category 2 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Physical hazards Flammable Liquids. | Category 2 |

**EMERGENCY OVERVIEW**

**DANGER**

**Hazard statements**
Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. .
Highly flammable liquid and vapor.

**Appearance** Clear yellow solution **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. Do not eat, drink or smoke when using this product. Wear eye/face protection. Do not breathe dust /fume /gas /mist /vapors /spray. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

**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 skin irritation occurs: Get medical advice/attention. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
In case of fire: Use CO2, dry chemical, or foam for extinction

**Storage:**
Store locked up. Store in a well-ventilated place. Keep cool.
**Disposal:**
Dispose of contents/container to an approved waste disposal plant.

**Other Hazards**
Toxic to aquatic life with long lasting effects.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS*

| Chemical name | CAS No | Weight-% |
|---|---|---|

| | | |
|---|---|---|
| Potassium hydroxide | 1310-58-3 | <2 |
| Methyl alcohol | 67-56-1 | <5 |
| Ethyl alcohol | 64-17-5 | 86 |

## 4. FIRST AID MEASURES

**First Aid Measures**

**General advice** Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist or gas.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. If irritation persists or develops, contact a physician.

**Skin contact** Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If irritation develops or persists, consult physician.

**Inhalation** Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel.

**Ingestion** Rinse mouth with water and afterwards drink plenty of water or milk. Immediate medical attention is required. Rinse mouth.

**Self-protection of the first aider** Use personal protective equipment. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**
Water spray, dry chemical, carbon dioxide ($CO_2$), or foam.

**Specific hazards arising from the chemical**
Vapors may travel to source of ignition and flash back. Flash back possible over considerable distance.

**Sensitivity to Static Discharge**
Yes

**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** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Ensure adequate ventilation. Wear protective gloves/clothing and eye/face protection.

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Soak up with inert absorbent material, containerize, and hold for disposal.

**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. Protect from light. Keep out of the reach of children.

**Incompatible Products** Strong inorganic acids and oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| Potassium hydroxide<br>1310-58-3 | Ceiling: 2 mg/m³ | (vacated) Ceiling: 2 mg/m³ | Ceiling: 2 mg/m³ |
| Methyl alcohol<br>67-56-1 | STEL: 250 ppm<br>TWA: 200 ppm<br>S* | TWA: 200 ppm<br>TWA: 260 mg/m³<br>(vacated) TWA: 200 ppm<br>(vacated) TWA: 260 mg/m³<br>(vacated) STEL: 250 ppm<br>(vacated) STEL: 325 mg/m³<br>(vacated) S* | IDLH: 6000 ppm<br>TWA: 200 ppm<br>TWA: 260 mg/m³<br>STEL: 250 ppm<br>STEL: 325 mg/m³ |
| Ethyl alcohol<br>64-17-5 | STEL: 1000 ppm | TWA: 1000 ppm<br>TWA: 1900 mg/m³<br>(vacated) TWA: 1000 ppm<br>(vacated) TWA: 1900 mg/m³ | IDLH: 3300 ppm<br>TWA: 1000 ppm<br>TWA: 1900 mg/m³ |

*NIOSH IDLH: Immediately Dangerous to Life or Health*

**Appropriate engineering controls**

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

**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.

**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
**Appearance** Clear yellow solution **Odor** Alcohol

| Property | Values | Remarks • Method |
|---|---|---|
| **pH** | | |
| **Melting point / freezing point** | No information available | |
| **Boiling point / boiling range** | 78.5 °C / 173.3 °F | for SDA (3A) Ethyl Alcohol |
| **Flash point** | Not Applicable 16 °C / 60.8 °F | Closed cup for SDA (3A) Ethyl Alcohol |
| **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** | 363 °C / 685.4 °F | for SDA (3A) Ethyl Alcohol |
| **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 | |

**Other Information**

| | |
|---|---|
| **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** Strong inorganic acids and 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 |
|---|---|---|---|
| Potassium hydroxide 1310-58-3 | = 284 mg/kg ( Rat ) | Not Established | 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** Ethanol has been shown to be carcinogenic in long-term studies only when consumed as an alcoholic beverage.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|
| Potassium hydroxide 1310-58-3 | 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 |

**Chronic toxicity** Repeated ingestion can cause adverse liver or kidney effects. Repeated or prolonged exposure may cause central nervous system damage. Prolonged skin contact may defat the skin and produce dermatitis.

**ATEmix (oral)** 1,764.00 mg/kg
**ATEmix (dermal)** 7,500.00 mg/kg
**ATEmix (inhalation-dust/mist)** 12.53 mg/l

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

| Chemical name | Toxicity to Algae | Toxicity to Fish | Daphnia Magna (Water Flea) |
|---|---|---|---|
| Potassium hydroxide 1310-58-3 | Not Established | 80: 96 h Gambusia affinis mg/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 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 | Not Established |
| 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**
No information available.

**Bioaccumulation/Accumulation**
No information available.

| Chemical name | Log Pow |
|---|---|
| Potassium hydroxide 1310-58-3 | 0.65<br>0.83 |
| 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 |
|---|---|---|---|---|
| Potassium hydroxide 1310-58-3 | Not Established | - | 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 |
|---|---|---|---|---|
| Potassium hydroxide 1310-58-3 | 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 | Not Established | Not Established | Not Established | Not Established |

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical name | California Hazardous Waste Status |
|---|---|
| Potassium hydroxide<br>1310-58-3 | Toxic<br>Corrosive |
| Methyl alcohol<br>67-56-1 | Toxic<br>Ignitable |
| Ethyl alcohol<br>64-17-5 | Toxic<br>Ignitable |

## 14. TRANSPORT INFORMATION

**DOT**

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

**IATA**

**UN-No** 1170
**Hazard Class** 3
**Packing group** II

**IMDG/IMO**

**UN-No** 1170
**Hazard Class** 3
**Packing group** II

## 15. REGULATORY INFORMATION

**International Inventories**

**TSCA** Does not comply
**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 % |
|---|---|
| Potassium hydroxide 1310-58-3 | Not Established |
| 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 |
|---|---|---|---|---|
| Potassium hydroxide 1310-58-3 | 1000 lb | Not Established | Not Established | 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 |
|---|---|---|---|
| Potassium hydroxide 1310-58-3 | 1000 lb | Not Established | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Methyl alcohol 67-56-1 | 5000 lb | Not Established | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |
| Ethyl alcohol 64-17-5 | *- | Not Established | - |

## US State Regulations

**California Proposition 65**

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

| Chemical name | California Proposition 65 |
|---|---|
| Potassium hydroxide 1310-58-3 | 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 |
|---|---|---|---|
| Potassium hydroxide 1310-58-3 | 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<br>1310-58-3 | Banned, 16 CFR 1500.17<br>Add POISON to label, 16 CFR 1500.129 |
| Methyl alcohol<br>67-56-1 | Special labeling, 16 CFR 1500.14 |

## 16. OTHER INFORMATION

**NFPA** **Health hazard** 1 **Flammability** 3 **Instability** 1 **Physical and Chemical Hazards** N/A


**Prepared by** Regulatory Affairs Department
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**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**