

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

**Product identifier**

Product name **Hardness 5**

**Other means of identification**

Product Code(s) **4483**  
UN-No **3266**

**Recommended use of the chemical and restrictions on use**

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

**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

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

### EMERGENCY OVERVIEW

**DANGER**

**Hazard statements**

Causes severe skin burns and eye damage.



**Appearance** Clear, colorless      **Physical state** liquid      **Odor** Sulfur Rotten-egg like

**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. Do not taste or swallow. Do not breathe dust /fume /gas /mist /vapors /spray. Wash face, hands and any exposed skin thoroughly after handling.

**Response:** Immediately call a poison center or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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: Rinse mouth. Do NOT induce vomiting.

**Storage:**

Store locked up.

**Disposal:**

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

**Other Hazards**

Harmful to aquatic life.

**Unknown Acute Toxicity**

1% of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS\***

Chemical name	CAS No	Weight-%
Sodium hydroxide	1310-73-2	1
Potassium sodium tartrate	6381-59-5	1
Sodium sulfide	1313-84-4	1
Sodium borate decahydrate	1303-96-4	4
Water	7732-18-5	to 100%

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

Do not get in eyes, on skin, or on clothing. Do not breathe dust /fume /gas /mist /vapors /spray.

**Eye contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

**Skin contact**

Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.

**Inhalation**

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

**Ingestion**

Do NOT induce vomiting. Drink plenty of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

**Self-protection of the first aider**

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.

**5. FIREFIGHTING MEASURES****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**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**

Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.

**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** 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).

**Methods for cleaning up** Neutralize spills with acid such as acetic, hydrochloric or sulfuric, absorb with vermiculite or other inert substance, and package in a suitable container for disposal. Keep in suitable and closed containers for disposal. 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. Do not taste or swallow. Avoid contact with skin, eyes or clothing. 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. Separate from acids. Keep out of the reach of children.

**Incompatible Products** Acids.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> (vacated) Ceiling: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>
Potassium sodium tartrate 6381-59-5	*-	*-	Not Established
Sodium sulfide 1313-84-4	*-	*-	Not Established
Sodium borate decahydrate 1303-96-4	STEL: 6 mg/m <sup>3</sup> inhalable particulate matter TWA: 2 mg/m <sup>3</sup> inhalable particulate matter	(vacated) TWA: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Water 7732-18-5	*-	*-	Not Established

NIOSH IDLH: *Immediately Dangerous to Life or Health*

### Appropriate engineering controls

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

### 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. Gloves & Lab Coat. Nitrile rubber.

**Respiratory protection** Handle in an enclosing hood with exhaust ventilation. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Sulfur Rotten-egg like
<b>Appearance</b>	Clear, colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	12	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
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	

### 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

<b>Stability</b>	Stable under recommended storage conditions.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Incompatible Products.
<b>Incompatible materials</b>	Acids.
<b>Hazardous decomposition products</b>	

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### **Component identification**

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50

Sodium hydroxide 1310-73-2	= 325 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	Not Established
Potassium sodium tartrate 6381-59-5	Not Established	Not Established	Not Established
Sodium sulfide 1313-84-4	= 208 mg/kg ( Rat )	< 340 mg/kg ( Rabbit )	Not Established
Sodium borate decahydrate 1303-96-4	= 3493 mg/kg ( Rat ) = 2660 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit ) > 2000 mg/kg ( Rabbit )	> 2 mg/m <sup>3</sup> ( Rat ) 4 h
Water 7732-18-5	> 90 mL/kg ( Rat )	Not Established	Not Established

**Information on toxicological effects**

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium hydroxide 1310-73-2	Not Established	Not Established	Not Established	Not Established
Potassium sodium tartrate 6381-59-5	Not Established	Not Established	Not Established	Not Established
Sodium sulfide 1313-84-4	Not Established	Not Established	Not Established	Not Established
Sodium borate decahydrate 1303-96-4	Not Established	Group 2A	Not Established	X
Water 7732-18-5	Not Established	Not Established	Not Established	Not Established

ATEmix (oral) 28,541.00 mg/kg  
ATEmix (dermal) 17,600.00 mg/kg

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sodium hydroxide 1310-73-2	Not Established	45.4: 96 h Oncorhynchus mykiss mg/L LC50 static	Not Established
Potassium sodium tartrate 6381-59-5	Not Established	Not Established	Not Established
Sodium sulfide 1313-84-4	Not Established	7.7 - 29.1: 96 h Poecilia reticulata mg/L LC50	2.1: 48 h Daphnia magna mg/L EC50
Sodium borate decahydrate 1303-96-4	2.6 - 21.8: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 158: 96 h Desmodesmus subspicatus mg/L EC50	340: 96 h Limanda limanda mg/L LC50	1085 - 1402: 48 h Daphnia magna mg/L LC50
Water 7732-18-5	Not Established	Not Established	Not Established

**Persistence and degradability**

No information available.

**Bioaccumulation/Accumulation**

No information available.

Chemical name	Log Pow
Sodium hydroxide 1310-73-2	Not Established
Potassium sodium tartrate 6381-59-5	Not Established
Sodium sulfide 1313-84-4	-3.5 - 3.5
Sodium borate decahydrate 1303-96-4	Not Established
Water 7732-18-5	Not Established

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods** Dispose according to federal, state, and local regulations.

**Contaminated packaging** Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sodium hydroxide 1310-73-2	Not Established	-	Not Established	Not Established
Potassium sodium tartrate 6381-59-5	Not Established	-	Not Established	Not Established
Sodium sulfide 1313-84-4	Not Established	-	Not Established	Not Established
Sodium borate decahydrate 1303-96-4	Not Established	-	Not Established	Not Established
Water 7732-18-5	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium hydroxide 1310-73-2	Not Established	Not Established	Not Established	Not Established
Potassium sodium tartrate 6381-59-5	Not Established	Not Established	Not Established	Not Established
Sodium sulfide 1313-84-4	Not Established	Not Established	Not Established	Not Established
Sodium borate decahydrate 1303-96-4	Not Established	Not Established	Not Established	Not Established
Water 7732-18-5	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
Sodium hydroxide 1310-73-2	Toxic Corrosive
Potassium sodium tartrate 6381-59-5	*-
Sodium sulfide 1313-84-4	*-
Sodium borate decahydrate 1303-96-4	Toxic
Water 7732-18-5	*-

**14. TRANSPORT INFORMATION**

**DOT**  
**Proper shipping name** CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (1% Sodium sulfide)  
**UN-No** 3266  
**Hazard Class** 8  
**Packing group** III

**TDG** Not regulated

**MEX** Not regulated

**ICAO** Not regulated

**IATA**  
**UN-No** 3266  
**Proper shipping name** CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (1% Sodium sulfide)

Hazard Class 8  
Packing group III

IMDG/IMO

UN-No 3266  
Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (1% Sodium sulfide)  
Hazard Class 8  
Packing group III

RID

UN-No 3266  
Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (1% Sodium sulfide)  
Hazard Class 8  
Packing group III

ADR

UN-No 3266  
Proper shipping name CORROSIVE LIQUID, BASIC, INORGANIC N.O.S. (1% Sodium Sulfide)  
Hazard Class 8  
Packing group III

ADN

Not regulated

**15. REGULATORY INFORMATION**International Inventories

TSCA Complies  
DSL/NDL Does not comply  
EINECS/ELINCS Does not comply  
ENCS Does not comply  
IECSC Does not comply  
KECL Does not comply  
PICCS Complies  
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDL - 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 RegulationsSARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any 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 %
Sodium hydroxide 1310-73-2	Not Established
Potassium sodium tartrate 6381-59-5	Not Established
Sodium sulfide 1313-84-4	Not Established
Sodium borate decahydrate 1303-96-4	Not Established
Water 7732-18-5	Not Established

SARA 311/312 Hazard Categories

Acute health hazard

Yes

Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as 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
Sodium hydroxide 1310-73-2	1000 lb	Not Established	Not Established	X
Potassium sodium tartrate 6381-59-5	Not Established	Not Established	Not Established	Not Established
Sodium sulfide 1313-84-4	Not Established	Not Established	Not Established	Not Established
Sodium borate decahydrate 1303-96-4	Not Established	Not Established	Not Established	Not Established
Water 7732-18-5	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
Sodium hydroxide 1310-73-2	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ
Potassium sodium tartrate 6381-59-5	*-	Not Established	-
Sodium sulfide 1313-84-4	*-	Not Established	-
Sodium borate decahydrate 1303-96-4	*-	Not Established	-
Water 7732-18-5	*-	Not Established	-

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical name	California Proposition 65
Sodium hydroxide 1310-73-2	Not Established
Potassium sodium tartrate 6381-59-5	Not Established
Sodium sulfide 1313-84-4	Not Established
Sodium borate decahydrate 1303-96-4	Not Established
Water 7732-18-5	Not Established

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium hydroxide 1310-73-2	X	X	X
Potassium sodium tartrate 6381-59-5	Not Established	Not Established	Not Established
Sodium sulfide 1313-84-4	X	X	Not Established



Sodium borate decahydrate 1303-96-4	X	X	X
Water 7732-18-5	Not Established	Not Established	X

**CPSC (Consumer Product Safety Commission) - Specially Regulated Substances**

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Sodium hydroxide 1310-73-2	Banned, 16 CFR 1500.17 Add POISON to label, 16 CFR 1500.129
<b>16. OTHER INFORMATION</b>	

NFPA

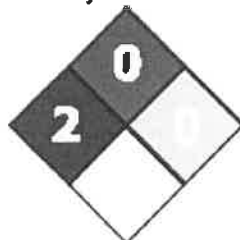
Health hazard 2

HMIS

Health hazard 2

Flammability 0

Stability 1



Health Hazard	<b>2</b>
Fire Hazard	<b>0</b>
Reactivity	<b>1</b>

**Prepared by**

Regulatory Affairs Department

**Issuing Date**

Feb-16-2017

**Revision Date**

Jul-21-2021

**Reason for revision**

SDS sections updated 2 4 12 16

**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**

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

Product identifier

Product name **HARDNESS REAGENT #6 TABLETS**

Other means of identification

Product Code(s) **4484**

Recommended use of the chemical and restrictions on use

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

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

**OSHA Regulatory Status**

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### EMERGENCY OVERVIEW

Appearance purple Physical state Tablet Odor unpleasant Phenolic

**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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 in a well-ventilated place. Keep cool.

**Other Hazards**

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS\*

Chemical name	CAS No	Weight-%
Potassium chloride	7447-40-7	99

#### 4. FIRST AID MEASURES

##### First Aid Measures

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Do not get in eyes, on skin, or on clothing.
<b>Eye contact</b>	Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off with warm water and soap. If symptoms persist, call a physician.
<b>Inhalation</b>	Not expected to require first aid measures. Remove to fresh air.
<b>Ingestion</b>	Drink plenty of water. Clean mouth with water. If gastrointestinal distress occurs contact physician. Consult a physician if necessary.
<b><u>Self-protection of the first aider</u></b>	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. Use personal protection recommended in Section 8.

#### 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

<b>Personal precautions</b>	See section 8. Avoid contact with the skin and the eyes. Avoid dust formation.
<b>Environmental precautions</b>	No special environmental precautions required. 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

<b>Methods for containment</b>	Sweep up in a manner that does not disperse dust and shovel into suitable containers for disposal. Dispose according to local regulations, if permitted dissolve in water and rinse to drain.
<b>Methods for cleaning up</b>	After cleaning, flush away traces with water.

#### 7. HANDLING AND STORAGE

##### Precautions for safe handling

<b>Handling</b>	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

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

**Incompatible Products** Strong oxidizing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium chloride 7447-40-7	*-	*-	Not Established

Appropriate engineering controls

**Engineering Measures** Eyewash stations.

Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear latex or nitrile gloves.

**Respiratory protection** None required under normal usage.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes, skin 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**

Information on basic physical and chemical properties

<b>Physical state</b>	Tablet	<b>Odor</b>	unpleasant Phenolic
<b>Appearance</b>	purple		
<b>Color</b>	purple		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6	(1 tablet in 10mL of water)
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	No information available	
Water solubility	Soluble in water	
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	

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	Exposure to air or moisture over prolonged periods. Excessive heat.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of Chlorine. Potassium Oxides.

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Inhalation	Not an expected route of exposure.
Eye contact	May cause irritation.
Skin contact	May cause irritation.
Ingestion	May be harmful if swallowed.

#### Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Potassium chloride 7447-40-7	= 2600 mg/kg ( Rat )	Not Established	Not Established

#### Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

Chronic toxicity None known.

ATEmix (oral) 2,637.00 mg/kg

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Harmful to aquatic life with long lasting effects

Unknown Aquatic Toxicity 1.4 % 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)
Potassium chloride 7447-40-7	2500: 72 h Desmodesmus subspicatus mg/L EC50	750 - 1020: 96 h Pimephales promelas mg/L LC50 static 1060: 96 h Lepomis macrochirus mg/L LC50 static	825: 48 h Daphnia magna mg/L EC50 83: 48 h Daphnia magna mg/L EC50 Static

#### Persistence and degradability

No information available.

#### Bioaccumulation/Accumulation

No information available.

Chemical name	Log Pow
Potassium chloride 7447-40-7	Not Established

### 13. DISPOSAL CONSIDERATIONS

**Disposal Methods** Dispose according to federal, state, and local regulations. If permitted, dissolve in large volume of water and rinse to drain with excess water.

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

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Potassium chloride 7447-40-7	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 chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Potassium chloride 7447-40-7	*_

**14. TRANSPORT INFORMATION**

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

TSCA Complies

DSL/NDL Complies

EINECS/ELINCS Does not comply

ENCS Complies

IECSC Complies

KECL Complies

PICCS Complies

AICS Complies

**Legend:**

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

DSL/NDL - 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 does not contain any 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 chloride 7447-40-7	Not Established

**SARA 311/312 Hazard Categories**

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

**CWA (Clean Water Act)**

This product does not contain any substances regulated as 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 chloride 7447-40-7	Not Established	Not Established	Not Established	Not Established

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Potassium chloride 7447-40-7	*	Not Established	-

**US State Regulations**

**California Proposition 65**

Chemical name	California Proposition 65
Potassium chloride 7447-40-7	Not Established

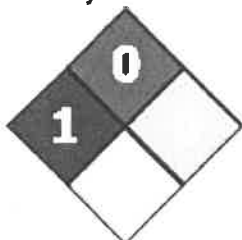
**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Potassium chloride 7447-40-7	Not Established	Not Established	Not Established

**CPSC (Consumer Product Safety Commission) - Specially Regulated Substances**

**16. OTHER INFORMATION**

**NFPA**                      Health hazard 1                      Physical and Chemical Hazards N/A                      Health hazard 1                      Flammability 0  
Stability 0



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Health Hazard	1
Fire Hazard	0
Reactivity	0

Prepared by  
Issuing Date  
Reason for revision

Regulatory Affairs Department  
Apr-12-2017

**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**



**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Identifier****Product name** HARDNESS REAGENT 7**Other means of identification****Product Code(s)** 4487**Recommended use of the chemical and restrictions on use****Recommended Use** Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).**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****OSHA Regulatory Status**

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**EMERGENCY OVERVIEW****Appearance** Clear, colorless **Physical state** liquid **Odor** Odorless**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep out of reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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 in a well-ventilated place. Keep cool.

**Unknown Acute Toxicity**

1% of the mixture consists of ingredient(s) of unknown toxicity.

**3. COMPOSITION/INFORMATION ON INGREDIENTS\***

#### 4. FIRST AID MEASURES

##### First Aid Measures

<b>General advice</b>	Do not get in eyes, on skin, or on clothing.
<b>Eye contact</b>	Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. If eye irritation persists, consult a specialist.
<b>Skin contact</b>	Wash off immediately with plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Drink plenty of water. Never give anything by mouth to an unconscious person.
<b><u>Self-protection of the first aider</u></b>	Use personal protective equipment. See section 8 for more information. 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

Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant 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

<b>Personal precautions</b>	Ensure adequate ventilation. Avoid contact with skin, eyes, and inhalation of vapors. Use personal protective equipment. See section 8.
<b>Environmental precautions</b>	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

<b>Methods for containment</b>	Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal. Dispose according to local regulations, if permitted dissolve in water and rinse to drain.
<b>Methods for cleaning up</b>	After cleaning, flush away traces with water.

#### 7. HANDLING AND STORAGE

##### Precautions for safe handling

<b>Handling</b>	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

<b>Storage:</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.
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**Incompatible Products** Strong oxidizing agents. copper. Aluminium.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Appropriate engineering controls

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

#### 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** No special protective equipment required under normal use conditions.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	<b>Odor</b>	Odorless
<b>Appearance</b>	Clear, colorless		
<b>Color</b>	Clear, colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks - Method</u>
pH	4	
Melting point / freezing point	No information available	
Boiling point / boiling range	ca 100 °C / 212 °F	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
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	

### Other Information

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	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 Reactions	Contact with metals may evolve flammable hydrogen gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Temperature extremes.
Incompatible materials	Strong oxidizing agents. copper. Aluminium.
Hazardous decomposition products	Carbon oxides (COx). Nitrogen oxides (NOx).

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

Component identification

#### Information on toxicological effects

Chronic toxicity None known.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Unknown Aquatic Toxicity 1.006 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

#### Persistence and degradability

No information available.

#### Bioaccumulation/Accumulation

No information available.

### 13. DISPOSAL CONSIDERATIONS

Disposal Methods	Dispose of waste product or used containers according to local regulations.
Contaminated packaging	Do not reuse empty containers.

### 14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated

<b>IMDG/IMO</b>	Not regulated
<b>RID</b>	Not regulated
<b>ADR</b>	Not regulated
<b>ADN</b>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL/NDL</b>	Complies
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Complies
<b>IECSC</b>	Does not comply
<b>KECL</b>	Does not comply
<b>PICCS</b>	Does not comply
<b>AICS</b>	Complies

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
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#### **SARA 313**

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#### **SARA 311/312 Hazard Categories**

<b>Acute health hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire hazard</b>	No
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

#### **CWA (Clean Water Act)**

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#### **CERCLA**

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### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals

### U.S. State Right-to-Know Regulations

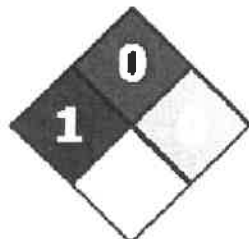
**CPSC (Consumer Product Safety Commission) - Specially Regulated Substances**

**16. OTHER INFORMATION**

**NFPA**

Health hazard 1

Physical and Chemical Hazards \*  
Health hazard 1



Health Hazard	1
Fire Hazard	0
Reactivity	0

**Prepared by**  
**Issuing Date**  
**Reason for revision**  
**Disclaimer**

Regulatory Affairs Department  
Jan-09-2018  
Initial Release

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**End of Safety Data Sheet**