



## Material Safety Data Sheet

Issuing Date 2/3/2011

Revision Number 0

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** Fluoride A-Z Tablets

**Product Code(s)** 6974

**Recommended Use** Industrial (not for food or food contact use). Test kit reagent.

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

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

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

May irritate eyes and skin

Harmful if swallowed

**Appearance** Off-white

**Physical State** Tablet

**Odor** Odorless

#### Potential Health Effects

**Principle Routes of Exposure** Skin and eye contact, and, Ingestion

#### Acute Toxicity

**Eyes**

Moderately irritating to the eyes.

**Skin**

May cause irritation.

**Inhalation**

May cause irritation of respiratory tract.

**Ingestion**

May cause irritation. May be harmful if swallowed. Tablets are acidic in water and may irritate mouth, throat, and stomach if many are swallowed.

#### Chronic Effects

Boric acid may cause adverse liver and kidneys effects. .

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Potassium hydrogen sulfate	7646-93-7	69
Boric acid (H <sub>3</sub> BO <sub>3</sub> )	10043-35-3	24.5
Sodium Bicarbonate	144-55-8	6
Ferrous ammonium sulfate.6H <sub>2</sub> O	7783-85-9	0.3
Alizarin Red S	130-22-3	0.2

### 4. FIRST AID MEASURES

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists or develops, contact a physician.

<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If skin irritation persists, call a physician.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.
<b>Ingestion</b>	Call a physician immediately. Drink plenty of water. Clean mouth with water. Never give anything by mouth to an unconscious person.
<b>Protection of First-aiders</b>	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Not a fire hazard.
<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , alcohol-resistant foam or water spray.
<b>Explosion Data</b>	
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus and full protective gear.
<b>NFPA</b>	<b>Health Hazard</b> 1 <b>Flammability</b> 0 <b>Stability</b> 0 <b>Physical and Chemical Hazards</b> -

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Use personal protective equipment. Refer to Section 8.
<b>Methods for Cleaning Up</b>	Avoid dust formation. Clean up spill in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Keep in suitable and closed containers for disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Refer to Section 8. Use only in area provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink, or smoke when using this product.
<b>Storage</b>	Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat and incompatibles. Keep out of the reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydrogen sulfate 7646-93-7	None Known	None Known	None Known
Boric acid (H <sub>3</sub> BO <sub>3</sub> ) 10043-35-3	= 6 mg/m <sup>3</sup> STEL TWA: 2 mg/m <sup>3</sup>	None Known	None Known
Sodium Bicarbonate 144-55-8	None Known	None Known	None Known
Ferrous ammonium sulfate.6H <sub>2</sub> O 7783-85-9	TWA: 1 mg/m <sup>3</sup>	None Known	TWA: 1 mg/m <sup>3</sup>
Alizarin Red S 130-22-3	None Known	None Known	None Known

### Personal Protective Equipment

<b>Eye/Face Protection</b>	Safety glasses with side-shields.
<b>Skin and Body Protection</b>	Wear protective gloves/clothing.
<b>Respiratory Protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

<b>Hygiene Measures</b>	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.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Off-white	<b>Odor</b>	Odorless
<b>Physical State</b>	Tablet	<b>pH</b>	Acidic (1 tablet in 10mL of water)
<b>Boiling Point/Range</b>	Not applicable		
<b>Water Solubility</b>	Partially miscible	<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	No information available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable.
<b>Incompatible Products</b>	Strong bases.
<b>Conditions to Avoid</b>	Excessive heat. Moisture.
<b>Hazardous Decomposition Products</b>	Sulfur oxides.
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium hydrogen sulfate	2340 mg/kg ( Rat )	None Known	None Known
Boric acid (H3BO3)	2660 mg/kg ( Rat )	2000 mg/kg ( Rabbit )	None Known
Sodium Bicarbonate	4220 mg/kg ( Rat )	None Known	None Known
Ferrous ammonium sulfate.6H2O	3250 mg/kg ( Rat )	None Known	None Known
Alizarin Red S	None Known	None Known	None Known

### Chronic Toxicity

<b>Chronic Toxicity</b>	Boric acid may cause adverse liver and kidneys effects. .
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Chemical Name	ACGIH	IARC	NTP	OSHA
Potassium hydrogen sulfate	None Known	None Known	None Known	None Known
Boric acid (H3BO3)	None Known	None Known	None Known	None Known
Sodium Bicarbonate	None Known	None Known	None Known	None Known
Ferrous ammonium sulfate.6H2O	None Known	None Known	None Known	None Known
Alizarin Red S	None Known	None Known	None Known	None Known

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Potassium hydrogen sulfate	None Known	None Known	None Known
Boric acid (H3BO3)	None Known	None Known	None Known
Sodium Bicarbonate	None Known	None Known	None Known
Ferrous ammonium sulfate.6H2O	None Known	None Known	None Known
Alizarin Red S	None Known	None Known	None Known

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Potassium hydrogen sulfate	None Known	None Known	None Known	None Known
Boric acid (H3BO3)	None Known	None Known	None Known	EC50 658 - 875 mg/L 48 h EC50 = 115.0 mg/L 48 h
Sodium Bicarbonate	EC50 = 650 mg/L 120 h	LC50 8250 - 9000 mg/L Lepomis macrochirus 96 h	None Known	EC50 = 2350 mg/L 48 h
Ferrous ammonium sulfate.6H2O	None Known	None Known	None Known	None Known
Alizarin Red S	None Known	None Known	None Known	None Known

Chemical Name	Log Pow
Potassium hydrogen sulfate	None Known
Boric acid (H3BO3)	= -0.757 25 °C
Sodium Bicarbonate	None Known
Ferrous ammonium sulfate.6H2O	None Known
Alizarin Red S	None Known

## 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Method

Dispose of contents/container in accordance with local regulation.

Chemical Name
Potassium hydrogen sulfate - 7646-93-7
Boric acid (H3BO3) - 10043-35-3
Sodium Bicarbonate - 144-55-8
Ferrous ammonium sulfate.6H2O - 7783-85-9
Alizarin Red S - 130-22-3

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Potassium hydrogen sulfate - 7646-93-7	None Known	None Known	None Known	None Known
Boric acid (H3BO3) - 10043-35-3	None Known	None Known	None Known	None Known
Sodium Bicarbonate - 144-55-8	None Known	None Known	None Known	None Known
Ferrous ammonium sulfate.6H2O - 7783-85-9	None Known	None Known	None Known	None Known
Alizarin Red S - 130-22-3	None Known	None Known	None Known	None Known

## 14. TRANSPORT INFORMATION

### DOT

Not regulated

### IATA

Not regulated

**IMDG/IMO**

Not regulated

**15. REGULATORY INFORMATION****International Inventories**

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Potassium hydrogen sulfate 7646-93-7 ( 69 )	Present	X	X	1-454	X	KE-32642	X	X
Boric acid (H3BO3) 10043-35-3 ( 24.5 )	Present	X	X	1-63	X	KE-03499	X	X
Sodium Bicarbonate 144-55-8 ( 6 )	Present	X	X	1-164; 1-310	X	KE-31360	X	X
Ferrous ammonium sulfate.6H2O 7783-85-9 ( 0.3 )	TSCA	DSL	EINECS/ELINCS	ENCS	X	KECL	X	X
Alizarin Red S 130-22-3 ( 0.2 )	Present	X	X	5-2061	X	KE-07785	X	X

**U.S. Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product 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	CAS-No	Weight %	SARA 313 - Threshold Values %
Potassium hydrogen sulfate	7646-93-7	69	None Known
Boric acid (H3BO3)	10043-35-3	24.5	None Known
Sodium Bicarbonate	144-55-8	6	None Known
Ferrous ammonium sulfate.6H2O	7783-85-9	0.3	None Known
Alizarin Red S	130-22-3	0.2	None Known

**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

**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).

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydrogen sulfate 7646-93-7 ( 69 )	None Known	None Known	None Known	None Known
Boric acid (H3BO3) 10043-35-3 ( 24.5 )	None Known	None Known	None Known	None Known
Sodium Bicarbonate 144-55-8 ( 6 )	None Known	None Known	None Known	None Known
Ferrous ammonium sulfate.6H2O 7783-85-9 ( 0.3 )	None Known	None Known	None Known	None Known
Alizarin Red S 130-22-3 ( 0.2 )	None Known	None Known	None Known	None Known

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Potassium hydrogen sulfate	7646-93-7	69	None Known	None Known	None Known	None Known

Boric acid (H3BO3)	10043-35-3	24.5	None Known	None Known	None Known	None Known
Sodium Bicarbonate	144-55-8	6	None Known	None Known	None Known	None Known
Ferrous ammonium sulfate.6H2O	7783-85-9	0.3	None Known	None Known	None Known	None Known
Alizarin Red S	130-22-3	0.2	None Known	None Known	None Known	None Known

**CERCLA**

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Potassium hydrogen sulfate	None Known	None Known
Boric acid (H3BO3)	None Known	None Known
Sodium Bicarbonate	None Known	None Known
Ferrous ammonium sulfate.6H2O	None Known	None Known
Alizarin Red S	None Known	None Known

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical Name	CAS-No	California Prop. 65
Potassium hydrogen sulfate	7646-93-7	None Known
Boric acid (H3BO3)	10043-35-3	None Known
Sodium Bicarbonate	144-55-8	None Known
Ferrous ammonium sulfate.6H2O	7783-85-9	None Known
Alizarin Red S	130-22-3	None Known

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Potassium hydrogen sulfate	None Known	X	None Known	None Known	None Known
Boric acid (H3BO3)	None Known	X	None Known	None Known	None Known
Sodium Bicarbonate	None Known	None Known	None Known	None Known	None Known
Ferrous ammonium sulfate.6H2O	None Known	None Known	X	None Known	X
Alizarin Red S	None Known	None Known	None Known	None Known	None Known

**International Regulations****Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Potassium hydrogen sulfate	None Known	None Known
Boric acid (H3BO3)	None Known	None Known
Sodium Bicarbonate	None Known	None Known
Ferrous ammonium sulfate.6H2O	None Known	Mexico: TWA= 1 mg/m <sup>3</sup>
Alizarin Red S	None Known	None Known

**Canada**



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

**WHMIS Hazard Class**

D2B - Poisonous and infectious material - Other effects - Toxic



## 16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table><tr><td>Health Hazard*</td><td>2</td></tr><tr><td>Fire Hazard</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard*	2	Fire Hazard	0	Reactivity	0		
Health Hazard*	2								
Fire Hazard	0								
Reactivity	0								

Prepared By Regulatory Affairs Department

Issuing Date 2/3/2011

Revision Date

Revision Note Update to Format.

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**