

Issuing Date 4/5/2012

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Calcium Hardness Buffer

Product Code(s) 7042

Synonyms none

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

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

WARNING!

Emergency Overview
May be harmful if swallowed
May cause skin and eye irritation

Appearance Clear, Colorless

Physical State Liquid

Odor Slight

Potential Health Effects

Principle Routes of Exposure Skin contact, Eye contact.

Acute Toxicity

Eyes May cause irritation.

Skin May cause irritation.

Inhalation Not an expected route of exposure. May cause irritation of respiratory tract.

Ingestion May be harmful if swallowed. May cause gastrointestinal discomfort if consumed in large amounts.

Chronic Effects

Boric acid may cause adverse liver and kidney effects May impair fertility Damage to fetus possible

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Chelant	-	<0.5
Boric acid	10043-35-3	3
Citrate salt	-	5-10
Ethanolamine	141-43-5	10
Water	7732-18-5	to 100%

4. FIRST AID MEASURES

General Advice Do not get in eyes, on skin, or on clothing.

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.

Skin Contact Wash skin with soap and water. If irritation develops or persists, consult physician.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion Drink 1 or 2 glasses of water. If gastrointestinal distress occurs contact physician.

Notes to Physician Treat symptomatically.

Protection of First-aiders Use personal protective equipment. 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

Flammable Properties Not a fire hazard.

Flash Point Not applicable

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

Explosion Data

NFPA	Health Hazard 1	Flammability 0	Stability 1	Physical and Chemical Hazards -
HMIS	Health Hazard 2	Flammability 0	Stability 1	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Refer to Section 8.

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

Handling Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not ingest. Do not eat, drink, or smoke when using this product.

Storage Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Chelant	None Known	None Known	None Known
Boric acid 10043-35-3	= 6 mg/m ³ STEL TWA: 2 mg/m ³	None Known	None Known
Citrate salt	None Known	None Known	None Known

Ethanolamine 141-43-5	= 6 ppm STEL TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m ³	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m ³ STEL: 15 mg/m ³ STEL: 6 ppm
Water 7732-18-5	None Known	None Known	None Known

Engineering Measures Showers. Eyewash stations. Ventilation systems.

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields.

Skin and Body Protection

Protective gloves.

Respiratory Protection

None required under normal usage. Maintain adequate ventilation.

Hygiene Measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear Colorless	Odor	Slight
Physical State	Liquid	pH	9.5
Flash Point	Not applicable	Boiling Point/Range	> 100°C/212°F

Vapor Pressure	<17 mmHg @ 20°C	Vapor Density	>1 (Air = 1)
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10. STABILITY AND REACTIVITY

Stability Stable under normal conditions of use and storage.

Incompatible Products Strong oxidizing agents. Alkalis.

Conditions to Avoid Temperature extremes.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chelant	5000 mg/kg (Rat)	None Known	None Known
Boric acid	2660 mg/kg (Rat)	2000 mg/kg (Rabbit)	None Known
Citrate salt	3000 mg/kg (Rat)	None Known	None Known
Ethanolamine	1720 mg/kg (Rat)	1 mL/kg (Rabbit)	None Known
Water	90 mL/kg (Rat)	None Known	None Known

Chronic Toxicity

Chronic Toxicity Boric acid may cause adverse liver and kidney effects. May impair fertility. Damage to fetus possible.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Chelant	None Known	None Known	None Known	None Known
Boric acid	None Known	None Known	None Known	None Known
Citrate salt	None Known	None Known	None Known	None Known
Ethanolamine	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Chelant	None Known	None Known	None Known
Boric acid	None Known	None Known	None Known
Citrate salt	None Known	None Known	None Known
Ethanolamine	None Known	None Known	None Known
Water	None Known	None Known	None Known

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Chelant	None Known	LC50= 24000 mg/L Gambusia affinis 96 h	None Known	None Known
Boric acid	None Known	None Known	None Known	EC50 658 - 875 mg/L 48 h EC50 = 115.0 mg/L 48 h
Citrate salt	None Known	LC50= 1516 mg/L Lepomis macrochirus 96 h LC50= 440 mg/L Leuciscus idus 96 h	EC50 = 14 mg/L 15 min	EC50 = 120 mg/L 72 h
Ethanolamine	EC50 = 15 mg/L 72 h	LC50= 150 mg/L Oncorhynchus mykiss 96 h LC50= 227 mg/L Pimephales promelas 96 h LC50= 329.16 mg/L Lepomis macrochirus 96 h LC50= 3684 mg/L Brachydanio rerio 96 h	EC50 = 110 mg/L 17 h EC50 = 12200 mg/L 2 h EC50 = 13.7 mg/L 30 min	EC50 = 65 mg/L 48 h
Water	None Known	None Known	None Known	None Known

Persistence and Degradability No information available.

Bioaccumulation/Accumulation No information available.

Chemical Name	Log Pow
Chelant	None Known
Boric acid	= -0.757 25 °C
Citrate salt	-1.72 20 °C
Ethanolamine	= -1.91 25 °C
Water	None Known

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of contents/container in accordance with local regulation.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Chelant -	None Known	None Known	None Known	None Known
Boric acid - 10043-35-3	None Known	None Known	None Known	None Known
Citrate salt -	None Known	None Known	None Known	None Known
Ethanolamine - 141-43-5	None Known	None Known	None Known	None Known
Water - 7732-18-5	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
Chelant (<0.5)	TSCA	X	EINECS/ELINCS	1-503	X	KECL	X	X
Boric acid 10043-35-3 (3)	Present	X	X	1-63	X	KE-03499	X	X
Citrate salt (5-10)	Present	X	X	2-1318	X	KE-20831	X	X
Ethanolamine 141-43-5 (10)	Present	X	X	2-301	X	KE-20493	X	X
Water 7732-18-5 (to 100%)	Present	X	X	ENCS	X	KE-35400	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 %
Chelant		<0.5	None Known
Boric acid	10043-35-3	3	None Known
Citrate salt		5-10	None Known
Ethanolamine	141-43-5	10	None Known
Water	7732-18-5	to 100%	None Known

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
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
Chelant (<0.5)	None Known	None Known	None Known	None Known
Boric acid 10043-35-3 (3)	None Known	None Known	None Known	None Known
Citrate salt (5-10)	None Known	None Known	None Known	None Known
Ethanolamine 141-43-5 (10)	None Known	None Known	None Known	None Known
Water 7732-18-5 (to 100%)	None Known	None Known	None Known	None Known

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs: .

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors

Chelant		<0.5	None Known	None Known	None Known	None Known
Boric acid	10043-35-3	3	None Known	None Known	None Known	None Known
Citrate salt		5-10	None Known	None Known	None Known	None Known
Ethanolamine	141-43-5	10	None Known	Group I	None Known	None Known
Water	7732-18-5	to 100%	None Known	None Known	None Known	None Known

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Chelant	None Known	None Known
Boric acid	None Known	None Known
Citrate salt	None Known	None Known
Ethanolamine	None Known	None Known
Water	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
Chelant		None Known
Boric acid	10043-35-3	None Known
Citrate salt		None Known
Ethanolamine	141-43-5	None Known
Water	7732-18-5	None Known

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Chelant	None Known	X	None Known	None Known	None Known
Boric acid	None Known	X	None Known	None Known	None Known
Citrate salt	None Known	None Known	None Known	None Known	None Known
Ethanolamine	X	X	X	X	X
Water	None Known	None Known	None Known	None Known	None Known

International Regulations**Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Chelant	None Known	None Known
Boric acid	None Known	None Known
Citrate salt	None Known	None Known
Ethanolamine	None Known	Mexico: TWA= 3 ppm Mexico: TWA= 8 mg/m ³
Water	None Known	None Known

Canada

Component	WHMIS Hazard Class
Chelant (<0.5)	Uncontrolled product according to WHMIS classification criteria

Boric acid 10043-35-3 (3)	1 % D2A
Citrate salt (5-10)	1 % E
Ethanolamine 141-43-5 (10)	1 % B3 E
Water 7732-18-5 (to 100%)	Uncontrolled product according to WHMIS classification criteria



16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td style="text-align: center;">2</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">1</td> </tr> </table>	Health Hazard	2	Fire Hazard	0	Reactivity	1		
Health Hazard	2								
Fire Hazard	0								
Reactivity	1								

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Disclaimer

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End of MSDS