

Issuing Date 12/8/2011

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	NITRATE REAGENT 1
Product Code(s)	5146
Synonyms	none / ninguno / aucun
Recommended Use	Test kit reagent. 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**

Irritant

Harmful if swallowed

Can cause severe irritation to eyes, skin, and respiratory system

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Appearance Clear, Pink**Physical State** Liquid**Odor** Odorless**Potential Health Effects****Principle Routes of Exposure** Ingestion**Acute Toxicity****Eyes**

Severely irritating to eyes.

Skin

Contact causes severe skin irritation. Symptoms can include redness, itching, and pain.

Inhalation

May be harmful if inhaled. Irritating to mucous membranes.

Ingestion

Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects**Interactions with Other Chemicals** None known.**Environmental Hazard** No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Cresol red	1733-12-6	<0.1
Ammonium sulfate	7783-20-2	5-10
Sodium hydrogen sulfate, monohydrate	10034-88-5	25-30
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. Immediate medical attention is required.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use. Seek immediate medical attention/advice.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and contact emergency personnel. Call a physician immediately.
Ingestion	DO NOT INDUCE VOMITING. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.
Protection of First-aiders	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

Flammable Properties	Not a fire hazard.			
Flash Point	Not applicable			
Suitable Extinguishing Media	Water spray, dry chemical, carbon dioxide (CO ₂), or foam.			
Explosion Data				
Sensitivity to Mechanical Impact	Not applicable.			
Sensitivity to Static Discharge	Not applicable.			
NFPA	Health Hazard 1	Flammability 0	Stability 0	Physical and Chemical Hazards N/A
HMIS	Health Hazard 2	Flammability 0	Stability 0	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Refer to Section 8. Wear protective gloves/clothing and eye/face protection. Ensure adequate ventilation.
Methods for Containment	Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal. Dispose according to federal, state, and local regulations.
Methods for Cleaning Up	Containerize spill material and hold for later disposal. If local regulations permit, dissolve with large volume of water, neutralize with alkaline material (sodium bicarbonate), then rinse to drain with excess 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 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
Cresol red 1733-12-6	None Known	None Known	None Known
Ammonium sulfate 7783-20-2	None Known	None Known	None Known
Sodium hydrogen sulfate, monohydrate 10034-88-5	None Known	None Known	None Known
Water 7732-18-5	None Known	None Known	None Known

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields. If splashes are likely to occur, wear: Face-shield.

Skin and Body Protection

Gloves & Lab Coat.

Respiratory Protection

None required under normal usage.

Hygiene Measures

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

Appearance	Clear Pink	Odor	Odorless
Physical State	Liquid	pH	<1
Flash Point	Not applicable	Autoignition Temperature	Not applicable
Boiling Point/Range	No data available	Freezing Point	No information available
Explosion Limits	Not applicable		
Molecular Weight	No data available	Vapor Pressure	No data available
Vapor Density	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of use and storage.
Incompatible Products	Strong oxidizing agents. Strong bases.
Conditions to Avoid	Excessive heat.
Hazardous Decomposition Products	Sulfur oxides (SOx). Sodium oxides. Ammonia.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cresol red	None Known	None Known	None Known
Ammonium sulfate	2000 mg/kg (Rat)	None Known	None Known
Sodium hydrogen sulfate, monohydrate	None Known	None Known	None Known
Water	90 mL/kg (Rat)	None Known	None Known

Chronic Toxicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Cresol red	None Known	None Known	None Known	None Known
Ammonium sulfate	None Known	None Known	None Known	None Known
Sodium hydrogen sulfate, monohydrate	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Endocrine Disruptor Information

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Cresol red	None Known	None Known	None Known
Ammonium sulfate	None Known	None Known	None Known
Sodium hydrogen sulfate, monohydrate	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)
Cresol red	None Known	None Known	None Known	None Known
Ammonium sulfate	None Known	LC50 460 - 1000 mg/L Leuciscus idus 96 h LC50= 18 mg/L Cyprinus carpio 96 h LC50= 250 mg/L Brachydanio rerio 96 h LC50> 100 mg/L Pimephales promelas 96 h	None Known	EC50 = 14 mg/L 48 h EC50 = 423 mg/L 24 h
Sodium hydrogen sulfate, monohydrate	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Chemical Name	Log Pow
Cresol red	None Known
Ammonium sulfate	= -5.1 25 °C
Sodium hydrogen sulfate, monohydrate	None Known
Water	None Known

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose according to federal, state, and local regulations. If permitted, dissolve in large volume of water, neutralize pH with dilute base, rinse to drain with excess water.

Contaminated Packaging Dispose of in accordance with local regulations.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Cresol red - 1733-12-6	None Known	None Known	None Known	None Known
Ammonium sulfate - 7783-20-2	None Known	None Known	None Known	None Known
Sodium hydrogen sulfate, monohydrate - 10034-88-5	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name BISULFATE, AQUEOUS SOLUTION
Hazard Class 8
UN-No 2837
Packing Group II

IATA

UN-No 2837
Proper Shipping Name BISULPHATES, AQUEOUS SOLUTION
Hazard Class 8
Packing Group II

IMDG/IMO

Proper Shipping Name BISULPHATES, AQUEOUS SOLUTION
Hazard Class 8
UN-No 2837
Packing Group II

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Cresol red 1733-12-6 (<0.1)	Present	X	X	ENCS	X	KECL	X	X
Ammonium sulfate 7783-20-2 (5-10)	Present	X	X	1-400	X	KE-01743	X	X
Sodium hydrogen sulfate, monohydrate 10034-88-5 (25-30)	TSCA	DSL	EINECS/ELINCS	ENCS	X	KECL	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 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	CAS-No	Weight %	SARA 313 - Threshold Values %
Cresol red	1733-12-6	<0.1	None Known
Ammonium sulfate	7783-20-2	5-10	1.0
Sodium hydrogen sulfate, monohydrate	10034-88-5	25-30	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

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Cresol red 1733-12-6 (<0.1)	None Known	None Known	None Known	None Known
Ammonium sulfate 7783-20-2 (5-10)	None Known	None Known	None Known	None Known
Sodium hydrogen sulfate, monohydrate 10034-88-5 (25-30)	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 does not contain any HAPs.

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Cresol red	1733-12-6	<0.1	None Known	None Known	None Known	None Known
Ammonium sulfate	7783-20-2	5-10	None Known	None Known	None Known	None Known
Sodium hydrogen sulfate, monohydrate	10034-88-5	25-30	None Known	None Known	None Known	None Known

Water	7732-18-5	to 100%	None Known	None Known	None Known	None Known
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CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Cresol red	None Known	None Known
Ammonium sulfate	None Known	None Known
Sodium hydrogen sulfate, monohydrate	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
Cresol red	1733-12-6	None Known
Ammonium sulfate	7783-20-2	None Known
Sodium hydrogen sulfate, monohydrate	10034-88-5	None Known
Water	7732-18-5	None Known

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Cresol red	None Known	None Known	None Known	None Known	None Known
Ammonium sulfate	X	X	X	None Known	X
Sodium hydrogen sulfate, monohydrate	None Known	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known	None Known

International Regulations**Mexico - Grade**



Chemical Name	Carcinogen Status	Exposure Limits
Cresol red	None Known	None Known
Ammonium sulfate	None Known	None Known
Sodium hydrogen sulfate, monohydrate	None Known	None Known
Water	None Known	None Known

Canada

Component	WHMIS Hazard Class
Cresol red 1733-12-6 (<0.1)	Not determined
Ammonium sulfate 7783-20-2 (5-10)	1 % Uncontrolled product according to WHMIS classification criteria
Sodium hydrogen sulfate, monohydrate 10034-88-5 (25-30)	1 % 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 data-bbox="508 233 716 275">Health Hazard</td> <td data-bbox="724 233 792 275">2</td> </tr> <tr> <td data-bbox="508 285 716 327">Fire Hazard</td> <td data-bbox="724 285 792 327">0</td> </tr> <tr> <td data-bbox="508 338 716 380">Reactivity</td> <td data-bbox="724 338 792 380">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

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Revision Date 08-Dec-2011

Revision Note
Initial Release

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