



Issuing Date 2/9/2012

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Revision Number no data available

1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** NITRATE REDUCING POWDER  
**Product Code(s)** V-6279  
**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

**DANGER**

**EMERGENCY OVERVIEW**  
May be fatal if inhaled or swallowed  
Harmful if swallowed, inhaled, or absorbed through skin  
Irritating to eyes, respiratory system, and skin

**Appearance** Gray      **Physical state** powder      **Odor** Slight

**OSHA Regulatory Status** Safety information is given for exposure to the reagent as sold and considers exposure to the chemical if user has direct eye and skin contact.

**Potential health effects**  
**Principle Routes of Exposure** Eye Contact, Inhalation, skin contact, and ingestion.

**Acute toxicity**  
**EYES** Irritating to eyes.  
**skin** Irritating to skin. HARMFUL IF ABSORBED THROUGH SKIN.  
**Inhalation** Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. MAY BE FATAL IF INHALED. Irritating to respiratory system.  
**Ingestion** MAY BE FATAL IF SWALLOWED.

**Chronic effects** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS-No	Weight %
N-(1-Naphthyl)ethylenediamine dihydrochloride	1465-25-4	<1
Sulfanilamide	63-74-1	<2
Cadmium and compounds (as Cd)	7440-43-9	2.68
Manganese sulfate monohydrate	10034-96-5	10
Sodium citrate, dihydrate	6132-04-3	30-40
Ammonium chloride	12125-02-9	45-55

**4. FIRST AID MEASURES**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. Consult a physician.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult 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. Remove and wash contaminated clothing before re-use. Consult 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>	Immediate medical attention is required. Do not induce vomiting without medical advice. Drink plenty of water. Clean mouth with water. Never give anything by mouth to an unconscious person.
<b>Notes to Physician</b>	See MSDS (material safety data sheet) for additional information.
<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 flammable.
<b>Flash point</b>	Not Applicable
<b>Suitable extinguishing media</b>	Dry chemical or CO <sub>2</sub> .
<b>Specific hazards arising from the chemical</b>	Thermal decomposition can lead to release of toxic and corrosive gases/vapors.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

<b>NFPA</b>	Health hazard 3	flammability 0	stability 0	<b>Physical and Chemical Hazards</b> N/A
<b>HMIS</b>	Health hazard 3	flammability 0	stability 0	

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Wear respiratory protection. If you have not donned special protective clothing approved for this material, do not expose yourself to any risk of this material touching you. Evacuate personnel to safe areas.
<b>Methods for containment</b>	Sweep up in a manner that does not disperse dust and shovel into suitable containers for disposal. Dike to collect large liquid spills. Do not flush to sewer.
<b>Methods for cleaning up</b>	Clean contaminated surface thoroughly. After cleaning, flush away traces with water.
<b>OTHER INFORMATION</b>	Ventilate the area.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not ingest. Do not breathe vapors/dust.
<b>Storage</b>	Keep containers tightly closed in a dry, cool, and well-ventilated place. Protect from moisture. Do not allow contact with air. 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
N-(1-Naphthyl)ethylenediamine dihydrochloride 1465-25-4	None known	None known	None known
Sulfanilamide 63-74-1	None known	None known	None known
Cadmium and compounds (as Cd) 7440-43-9	TWA: 0.002 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup> TWA: 5 µg/m <sup>3</sup>	IDLH: 9 mg/m <sup>3</sup>
Manganese sulfate monohydrate 10034-96-5	TWA: 0.2 mg/m <sup>3</sup>	None known	IDLH: 500 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>
Sodium citrate, dihydrate 6132-04-3	None known	None known	None known
Ammonium chloride 12125-02-9	= 20 mg/m <sup>3</sup> STEL TWA: 10 mg/m <sup>3</sup>	None known	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>

NIOSH IDLH: Immediately Dangerous to Life or Health

<b>Engineering Measures</b>	Showers Eyewash stations Ventilation systems.
<b>Personal protective equipment</b>	
<b>Eye/face Protection</b>	Safety glasses with side-shields. If splashes are likely to occur, wear: Face-shield. Maintain eye wash and quick drench shower facilities in work area.
<b>Skin and body protection</b>	Wear protective gloves/clothing. Neoprene and nitrile rubber are recommended materials.
<b>Respiratory protection</b>	Use mechanical ventilation (fume hood). When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>Hygiene Measures</b>	Use only with adequate ventilation. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes and clothing. Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Gray	<b>Odor</b>	Slight
<b>Physical state</b>	powder	<b>pH</b>	7 (0.1g/10mL water)
<b>Flash point</b>	Not Applicable	<b>Autoignition temperature</b>	no data available
<b>Boiling Point/Range</b>	no data available	<b>freezing point</b>	No information available

<b>solubility</b>	Partly soluble	<b>evaporation rate</b>	Not Applicable
<b>Vapor pressure</b>	no data available		

## 10. STABILITY AND REACTIVITY

<b>stability</b>	Stable under normal conditions of use and storage.
<b>Incompatible Products</b>	Strong acids. Strong oxidizing agents. Strong bases. Finely powdered metals.
<b>Conditions to avoid</b>	Exposure to air or moisture over prolonged periods. Excessive heat. Incompatible products.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions - carbon oxides (COx), nitrogen oxides (NOx), sodium oxides, hydrogen chloride gas. Cadmium oxides. Ammonia.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

<b>Product Information</b>	Harmful if swallowed, inhaled, or absorbed through skin.
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Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known	None known
Sulfanilamide	3900 mg/kg ( Rat )	None known	None known
Cadmium and compounds (as Cd)	2330 mg/kg ( Rat )	None known	None known
Manganese sulfate monohydrate	None known	None known	None known
Sodium citrate, dihydrate	None known	None known	None known
Ammonium chloride	1410 mg/kg ( Rat )	None known	None known

### Chronic toxicity

<b>Chronic toxicity</b>	This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).
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Chemical name	ACGIH	IARC	NTP	OSHA
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known	None known	None known
Sulfanilamide	None known	None known	None known	None known
Cadmium and compounds (as Cd)	A2	Group 1	Known	X
Manganese sulfate monohydrate	None known	None known	None known	None known
Sodium citrate, dihydrate	None known	None known	None known	None known
Ammonium chloride	None known	None known	None known	None known

#### **ACGIH: (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

#### **IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

#### **NTP: (National Toxicity Program)**

Known - Known Carcinogen

**OSHA: (Occupational Safety & Health Administration)**

X - Present

**Endocrine Disruptor Information**

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known	None known
Sulfanilamide	None known	None known	None known
Cadmium and compounds (as Cd)	None known	None known	None known
Manganese sulfate monohydrate	None known	None known	None known
Sodium citrate, dihydrate	None known	None known	None known
Ammonium chloride	None known	None known	None known

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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known	None known	None known
Sulfanilamide	None known	None known	None known	None known
Cadmium and compounds (as Cd)	None known	LC50= 0.0013 mg/L Oncorhynchus mykiss 96 h	None known	EC50 = 9.9 µg/L 96 h
Manganese sulfate monohydrate	None known	None known	None known	None known
Sodium citrate, dihydrate	EC50 1800 - 3200 mg/L 96 h	LC50= 18000 mg/L Poecilia reticulata 96 h	None known	None known
Ammonium chloride	None known	LC50= 209 mg/L Cyprinus carpio 96 h	None known	EC50 = 202 mg/L 24 h
Chemical name	Log Pow			
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known			
Sulfanilamide	None known			
Cadmium and compounds (as Cd)	None known			
Manganese sulfate monohydrate	None known			
Sodium citrate, dihydrate	None known			
Ammonium chloride	None known			

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method**

Dispose of in accordance with local regulations. Should not be released into the environment.

**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
N-(1-Naphthyl)ethylenediamine dihydrochloride - 1465-25-4	None known	None known	None known	None known
Sulfanilamide - 63-74-1	None known	None known	None known	None known
Cadmium and compounds (as Cd) - 7440-43-9	None known	None known	None known	None known
Manganese sulfate monohydrate - 10034-96-5	None known	None known	None known	None known

Sodium citrate, dihydrate - 6132-04-3	None known	None known	None known	None known
Ammonium chloride - 12125-02-9	None known	None known	None known	None known

## 14. TRANSPORT INFORMATION

**DOT**

**Proper shipping name** CADMIUM COMPOUNDS  
**Hazard Class** 6.1  
**UN-No** 2570  
**Packing group** III

**IATA**

**UN-No** 2570  
**Proper shipping name** CADMIUM COMPOUND  
**Hazard Class** 6.1  
**Packing group** III

**IMDG/IMO**

**Proper shipping name** CADMIUM COMOUNDS  
**Hazard Class** 6.1  
**UN-No** 2570  
**Packing group** III

## 15. REGULATORY INFORMATION

**International Inventories**

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
N-(1-Naphthyl)ethylenediamine dihydrochloride 1465-25-4 ( <1 )	Present	X	X	ENCS	X	KECL	X	X
Sulfanilamide 63-74-1 ( <2 )	Present	X	X	3-1913; 3-1973; 3-2179	X	KE-01188	X	X
Cadmium and compounds (as Cd) 7440-43-9 ( 2.68 )	Present	X	X	ENCS	X	KE-04397	X	X
Manganese sulfate monohydrate 10034-96-5 ( 10 )	TSCA	DSL	EINECS/ELINCS	ENCS	X	KECL	X	X
Sodium citrate, dihydrate 6132-04-3 ( 30-40 )	TSCA	DSL	EINECS/ELINCS	ENCS	X	KECL	X	X
Ammonium chloride 12125-02-9 ( 45-55 )	Present	X	X	1-218	X	KE-01645	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 %
N-(1-Naphthyl)ethylenediamine dihydrochloride	1465-25-4	<1	None known
Sulfanilamide	63-74-1	<2	None known

Cadmium and compounds (as Cd)	7440-43-9	2.68	0.1
Manganese sulfate monohydrate	10034-96-5	10	1.0
Sodium citrate, dihydrate	6132-04-3	30-40	None known
Ammonium chloride	12125-02-9	45-55	1.0

**SARA 311/312 Hazard Categories**

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

**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).

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
N-(1-Naphthyl)ethylenediamine dihydrochloride 1465-25-4 ( <1 )	None known	None known	None known	None known
Sulfanilamide 63-74-1 ( <2 )	None known	None known	None known	None known
Cadmium and compounds (as Cd) 7440-43-9 ( 2.68 )	None known	X	X	None known
Manganese sulfate monohydrate 10034-96-5 ( 10 )	None known	None known	None known	None known
Sodium citrate, dihydrate 6132-04-3 ( 30-40 )	None known	None known	None known	None known
Ammonium chloride 12125-02-9 ( 45-55 )	5000 lb	None known	None known	X

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

Chemical name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
N-(1-Naphthyl)ethylenediamine dihydrochloride	1465-25-4	<1	None known	None known	None known	None known
Sulfanilamide	63-74-1	<2	None known	None known	None known	None known
Cadmium and compounds (as Cd)	7440-43-9	2.68	Present (includes any unique chemical substance that contains Cadmium as part of its infrastructure)	None known	None known	None known
Manganese sulfate monohydrate	10034-96-5	10	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)	None known	None known	None known
Sodium citrate, dihydrate	6132-04-3	30-40	None known	None known	None known	None known
Ammonium chloride	12125-02-9	45-55	None known	None known	None known	None known

**CERCLA**

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known
Sulfanilamide	None known	None known
Cadmium and compounds (as Cd)	10 lb	None known
Manganese sulfate monohydrate	None known	None known
Sodium citrate, dihydrate	None known	None known
Ammonium chloride	5000 lb	None known

**U.S. State Regulations**

**California Proposition 65**

WARNING! This product contains a chemical known to the State of California to cause cancer WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm

Chemical name	CAS-No	California Prop. 65
N-(1-Naphthyl)ethylenediamine dihydrochloride	1465-25-4	None known
Sulfanilamide	63-74-1	None known
Cadmium and compounds (as Cd)	7440-43-9	Carcinogen Developmental Male Reproductive
Manganese sulfate monohydrate	10034-96-5	None known
Sodium citrate, dihydrate	6132-04-3	None known
Ammonium chloride	12125-02-9	None known

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known	None known	None known	None known
Sulfanilamide	None known	None known	None known	None known	None known
Cadmium and compounds (as Cd)	X	X	X	X	X
Manganese sulfate monohydrate	None known	X	X	X	None known
Sodium citrate, dihydrate	None known	None known	None known	None known	None known
Ammonium chloride	X	X	X	None known	X

**International Regulations**

**Mexico - Grade**

Chemical name	Carcinogen Status	Exposure Limits
N-(1-Naphthyl)ethylenediamine dihydrochloride	None known	None known
Sulfanilamide	None known	None known
Cadmium and compounds (as Cd)	A2	Mexico: TWA= 0.002 mg/m <sup>3</sup>
Manganese sulfate monohydrate	None known	Mexico: TWA= 0.2 mg/m <sup>3</sup>
Sodium citrate, dihydrate	None known	None known
Ammonium chloride	None known	Mexico: TWA= 10 mg/m <sup>3</sup>

**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

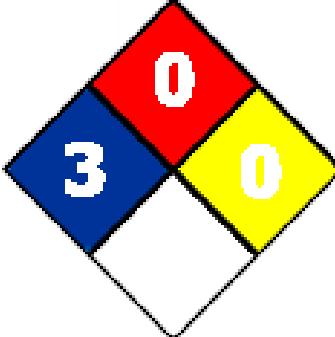


Component	WHMIS Hazard Class
N-(1-Naphthyl)ethylenediamine dihydrochloride 1465-25-4 ( <1 )	Not Determined
Sulfanilamide 63-74-1 ( <2 )	Not Determined
Cadmium and compounds (as Cd) 7440-43-9 ( 2.68 )	0.1 % D1A D2A
Manganese sulfate monohydrate 10034-96-5 ( 10 )	1 % D2B
Sodium citrate, dihydrate 6132-04-3 ( 30-40 )	Uncontrolled product according to WHMIS classification criteria
Ammonium chloride 12125-02-9 ( 45-55 )	1 % D2B



Chemical name	NPRI
Cadmium and compounds (as Cd)	X



16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table border="1"> <tr> <td>Health Hazard</td> <td>3</td> </tr> <tr> <td>Fire Hazard</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> </table>	Health Hazard	3	Fire Hazard	0	Reactivity	0		
Health Hazard	3								
Fire Hazard	0								
Reactivity	0								

Prepared by Regulatory Affairs Department  
 Issuing Date 2/9/2012  
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 Revision note (M)SDS sections updated. 16.  
 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**