



Issuing Date 8/27/2012

Revision Number 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name HARDNESS REAGENT #7

Product Code(s) 4487

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

Emergency Overview

May be harmful if swallowed, inhaled, or absorbed through skin
May cause skin, eye, and respiratory tract irritation

Appearance Clear, colorless**Physical State** Liquid**Odor** Odorless**Potential Health Effects****Principle Routes of Exposure** Eye contact, Skin contact.**Acute Toxicity****Eyes**

May cause irritation.

Skin

May cause irritation. May be harmful in contact with skin.

Inhalation

May cause irritation of respiratory tract. May be harmful if inhaled.

Ingestion

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation.

Chronic Effects

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Tergitol No. 4	139-88-8	<0.01
Diethylene glycol monoethyl ether	111-90-0	<0.01
Magnesium chloride, hexahydrate	7791-18-6	<0.04
Sodium hydroxide	1310-73-2	0.04
EDTA disodium salt, dihydrate	6381-92-6	1
Water	7732-18-5	to 100%

4. FIRST AID MEASURES

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

Eye Contact	Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. If irritation persists or develops, contact a physician.
Skin Contact	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. If irritation develops or persists, consult physician.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	Drink plenty of water. If gastrointestinal distress occurs contact physician. Never give anything by mouth to an unconscious person.
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 flammable.			
Flash Point	Not applicable			
Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or alcohol-resistant foam.			
Explosion Data				
NFPA	Health Hazard 1	Flammability 0	Stability 0	Physical and Chemical Hazards -
HMIS	Health Hazard 1	Flammability 0	Stability 0	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Ensure adequate ventilation. Avoid contact with skin, eyes and inhalation of vapors. Use personal protective equipment. Refer to Section 8.
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 local regulations, if permitted dissolve in water and rinse to drain.
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 containers tightly closed in a dry, cool, and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Tergitol No. 4 139-88-8	None Known	None Known	None Known
Diethylene glycol monoethyl ether 111-90-0	None Known	None Known	None Known
Magnesium chloride, hexahydrate 7791-18-6	None Known	None Known	None Known
Sodium hydroxide 1310-73-2	None Known	TWA: 2 mg/m ³	IDLH: 10 mg/m ³ Ceiling: 2 mg/m ³
EDTA disodium salt, dihydrate 6381-92-6	None Known	None Known	None Known

Water 7732-18-5	None Known	None Known	None Known
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Engineering Measures

Showers
Eyewash stations
Ventilation systems.

Personal Protective Equipment**Eye/Face Protection**

Safety glasses with side-shields.

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

Appearance

Clear, colorless

Odor

Odorless

Physical State

Liquid

pH

4

Flash Point

Not applicable

Autoignition Temperature

Not applicable

Boiling Point/Range

No data available

Flammability Limits in Air

Not applicable

Vapor Pressure

No information available

Vapor Density

No information available

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions of use and storage.

Incompatible Products

Strong oxidizing agents. Copper. Aluminium.

Conditions to Avoid

Temperature extremes.

Hazardous Decomposition Products Carbon oxides (COx). Nitrogen oxides (NOx).**Hazardous Reactions**

Contact with metals may evolve flammable hydrogen gas.

Hazardous Polymerization

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Tergitol No. 4	1250 mg/kg (Rat)	3 mL/kg (Rabbit)	None Known
Diethylene glycol monoethyl ether	1920 mg/kg (Rat)	4200 µL/kg (Rabbit)	None Known
Magnesium chloride, hexahydrate	8100 mg/kg (Rat)	None Known	None Known
Sodium hydroxide	None Known	1350 mg/kg (Rabbit)	None Known
EDTA disodium salt, dihydrate	None Known	None Known	None Known
Water	90 mL/kg (Rat)	None Known	None Known

Chronic Toxicity**Chronic Toxicity**

None known.

Chemical Name	ACGIH	IARC	NTP	OSHA
Tergitol No. 4	None Known	None Known	None Known	None Known

Diethylene glycol monoethyl ether	None Known	None Known	None Known	None Known
Magnesium chloride, hexahydrate	None Known	None Known	None Known	None Known
Sodium hydroxide	None Known	None Known	None Known	None Known
EDTA disodium salt, dihydrate	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
Tergitol No. 4	None Known	None Known	None Known
Diethylene glycol monoethyl ether	None Known	None Known	None Known
Magnesium chloride, hexahydrate	None Known	None Known	None Known
Sodium hydroxide	None Known	None Known	None Known
EDTA disodium salt, dihydrate	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)
Tergitol No. 4	None Known	None Known	None Known	None Known
Diethylene glycol monoethyl ether	None Known	LC50= 10000 mg/L Lepomis macrochirus 96 h LC50= 13400 mg/L Salmo gairdneri 96 h LC50= 13420 mg/L Oncorhynchus mykiss 96 h LC50= 26400 mg/L Pimephales promelas 96 h	None Known	LC50 3940 - 4670 mg/L 48 h EC50 = 4026 mg/L 48 h
Magnesium chloride, hexahydrate	None Known	None Known	None Known	None Known
Sodium hydroxide	None Known	LC50= 45.4 mg/L Oncorhynchus mykiss 96 h	None Known	None Known
EDTA disodium salt, dihydrate	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Persistence and Degradability No information available.**Bioaccumulation/Accumulation** No information available.

Chemical Name	Log Pow
Tergitol No. 4	None Known
Diethylene glycol monoethyl ether	= -0.8
Magnesium chloride, hexahydrate	None Known
Sodium hydroxide	None Known
EDTA disodium salt, dihydrate	None Known
Water	None Known

13. DISPOSAL CONSIDERATIONS**Waste Disposal Method** 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
Tergitol No. 4 - 139-88-8	None Known	None Known	None Known	None Known

Diethylene glycol monoethyl ether - 111-90-0	None Known	None Known	None Known	None Known
Magnesium chloride, hexahydrate - 7791-18-6	None Known	None Known	None Known	None Known
Sodium hydroxide - 1310-73-2	None Known	None Known	None Known	None Known
EDTA disodium salt, dihydrate - 6381-92-6	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
Tergitol No. 4 139-88-8 (<0.01)	Present	X	X	2-1679	IECSC	KECL	PICCS	X
Diethylene glycol monoethyl ether 111-90-0 (<0.01)	Present	X	X	2-422; 7-97	X	KE-10467	X	X
Magnesium chloride, hexahydrate 7791-18-6 (<0.04)	TSCA	DSL	EINECS/ELINCS	1-233	X	KECL	X	X
Sodium hydroxide 1310-73-2 (0.04)	Present	X	X	1-410; 2-1972	X	KE-31487	X	X
EDTA disodium salt, dihydrate 6381-92-6 (1)	TSCA	X	EINECS/ELINCS	2-1265	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 %
Tergitol No. 4	139-88-8	<0.01	None Known
Diethylene glycol monoethyl ether	111-90-0	<0.01	1.0
Magnesium chloride, hexahydrate	7791-18-6	<0.04	None Known
Sodium hydroxide	1310-73-2	0.04	None Known
EDTA disodium salt, dihydrate	6381-92-6	1	None Known
Water	7732-18-5	to 100%	None Known

SARA 311/312 Hazard Categories

Acute Health Hazard	No
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
Tergitol No. 4 139-88-8 (<0.01)	None Known	None Known	None Known	None Known
Diethylene glycol monoethyl ether 111-90-0 (<0.01)	None Known	None Known	None Known	None Known
Magnesium chloride, hexahydrate 7791-18-6 (<0.04)	None Known	None Known	None Known	None Known
Sodium hydroxide 1310-73-2 (0.04)	None Known	None Known	None Known	None Known
EDTA disodium salt, dihydrate 6381-92-6 (1)	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
Tergitol No. 4	139-88-8	<0.01	None Known	None Known	None Known	None Known
Diethylene glycol monoethyl ether	111-90-0	<0.01	Present (includes mono- and diethers of ethylene glycol, diethylene glycol, and triethylene glycol, except Ethylene glycol monobutyl ether [EGBE]. See 40 CFR 63.62 for Redefinition of glycol ethers listed as hazardous air pollutants and 40 CFR 63.63 fo	Group I	None Known	None Known
Magnesium chloride, hexahydrate	7791-18-6	<0.04	None Known	None Known	None Known	None Known
Sodium hydroxide	1310-73-2	0.04	None Known	None Known	None Known	None Known
EDTA disodium salt, dihydrate	6381-92-6	1	None Known	None Known	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
Tergitol No. 4	None Known	None Known
Diethylene glycol monoethyl ether	None Known	None Known
Magnesium chloride, hexahydrate	None Known	None Known
Sodium hydroxide	1000 lb	None Known
EDTA disodium salt, dihydrate	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
Tergitol No. 4	139-88-8	None Known
Diethylene glycol monoethyl ether	111-90-0	None Known
Magnesium chloride, hexahydrate	7791-18-6	None Known
Sodium hydroxide	1310-73-2	None Known
EDTA disodium salt, dihydrate	6381-92-6	None Known

Water	7732-18-5	None Known
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U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Tergitol No. 4	None Known	None Known	None Known	None Known	None Known
Diethylene glycol monoethyl ether	None Known	X	X	X	None Known
Magnesium chloride, hexahydrate	None Known	None Known	None Known	None Known	None Known
Sodium hydroxide	X	X	X	None Known	X
EDTA disodium salt, dihydrate	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**

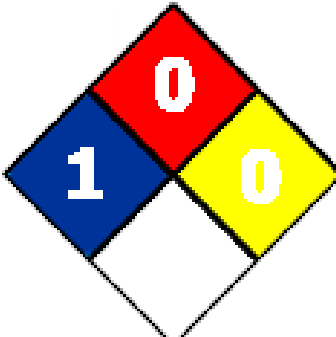

Chemical Name	Carcinogen Status	Exposure Limits
Tergitol No. 4	None Known	None Known
Diethylene glycol monoethyl ether	None Known	None Known
Magnesium chloride, hexahydrate	None Known	None Known
Sodium hydroxide	None Known	None Known
EDTA disodium salt, dihydrate	None Known	None Known
Water	None Known	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

Component	WHMIS Hazard Class
Tergitol No. 4 139-88-8 (<0.01)	1 %
Diethylene glycol monoethyl ether 111-90-0 (<0.01)	1 % B3 D2B
Magnesium chloride, hexahydrate 7791-18-6 (<0.04)	Uncontrolled product according to WHMIS classification criteria
Sodium hydroxide 1310-73-2 (0.04)	1 % E
EDTA disodium salt, dihydrate 6381-92-6 (1)	Uncontrolled product according to WHMIS classification criteria
Water 7732-18-5 (to 100%)	Uncontrolled product according to WHMIS classification criteria

16. OTHER INFORMATION

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

Prepared By Regulatory Affairs Department
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Revision Date -
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