Safety Data Sheet

OSHA format

Issuing Date Apr-07-2015 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name **Alkaline Potassium Iodide with Azide**

Other means of identification

Product Code(s) **7166**

UN-No 2922

Recommended use of the chemical and restrictions on use

Recommended Use Industrial (not for food or food contact use). Use as a laboratory reagent.

Details of the supplier of the safety data sheet

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

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

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

EMERGENCY OVERVIEW

DANGER

Hazard statements

Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage.

Appearance Clear, colorless **Physical state** liquid **Odor** Odorless

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor/physician if you feel unwell. Wash contaminated clothing before reuse. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF SWALLOWED. Do NOT induce vomiting.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Other Hazards
Harmful to aquatic life with long lasting effects

Unknown Acute Toxicity
15% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Chemical name	CAS No	Weight-%
Sodium azide	26628-22-8	1.05
Potassium iodide*	7681-11-0	15
Potassium hydroxide	1310-58-3	70

4. FIRST AID MEASURES

First Aid Measures

General advice — Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Do not delay care and transport of a seriously injured person.

Eye contact — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Call a physician immediately.

Skin contact — Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Immediate medical attention is required.

Inhalation — IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately.

Ingestion — Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Rinse mouth.

Self-protection of the first aider — Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with eyes, skin and clothing.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical
React vigorously and/or explosively with water.

Hazardous combustion products
Contact with metals may evolve flammable hydrogen gas.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation, especially in confined areas.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Do not flush to sewer. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Dispose of contents/containers in accordance with local regulations.

Methods for cleaning up Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Store away from incompatible materials. Protect from moisture. Keep away from metals and organic halogens. Do not flush into surface water or sanitary sewer system. Keep out of the reach of children.

Incompatible Products Strong acids. Metals. Water reactive material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium azide 26628-22-8	Ceiling: 0.29 mg/m³ NaN3 Ceiling: 0.11 ppm Hydrazoic acid vapor	(vacated) S* (vacated) Ceiling: 0.1 ppm HN3 (vacated) Ceiling: 0.3 mg/m³ NaN3	Ceiling: 0.1 ppm HN3 Ceiling: 0.3 mg/m³ NaN3
Potassium iodide* 7681-11-0	TWA: 0.01 ppm inhalable fraction and vapor	-	Not Established
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m³	(vacated) Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves/protective clothing/eye protection/face protection. Nitrile rubber.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	**Odor**	Odorless

Property	**Values**	**Remarks • Method**
pH	14	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	~1.5 (water = 1)	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.
Hazardous Reactions Reacts violently with water. Contact with metals may evolve flammable hydrogen gas.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Excessive heat. Incompatible Products.
Incompatible materials Strong acids. Metals. Water reactive material.
Hazardous decomposition products Carbon oxides (COx). Potassium Oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Sodium azide 26628-22-8	= 27 mg/kg (Rat)	= 20 mg/kg (Rabbit) = 50 mg/kg (Rat)	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	= 284 mg/kg (Rat)	Not Established	Not Established

Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium azide 26628-22-8	Not Established	Not Established	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established

Chronic toxicity Prolonged exposure may cause chronic effects.

ATEmix (oral) 475.00 mg/kg
ATEmix (dermal) 1,619.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 15 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sodium azide 26628-22-8	Not Established	0.7: 96 h Lepomis macrochirus mg/L LC50 0.8: 96 h Oncorhynchus mykiss mg/L LC50 5.46: 96 h Pimephales promelas mg/L LC50 flow-through	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	80: 96 h Gambusia affinis mg/L LC50 static	Not Established

Persistence and degradability

Based on components product is expected to be poorly eliminated from water and poorly biodegradable.

Bioaccumulation/Accumulation

Some components of this material have some potential to bioaccumulate but not all have been tested. Sodium azide: When released into the soil, this material is not expected to biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the air, this material may be moderately degraded by photolysis.

Chemical name	Log Pow
Sodium azide 26628-22-8	Not Established
Potassium iodide* 7681-11-0	Not Established
Potassium hydroxide 1310-58-3	0.65 0.83

13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of waste product or used containers according to local regulations. Should not be released into the environment.

Contaminated packaging Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sodium azide	Not Established	-	Not Established	Not Established

26628-22-8				
Potassium iodide* 7681-11-0	Not Established	-	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium azide 26628-22-8	Not Established	P105	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Sodium azide 26628-22-8	Ignitable Reactive
Potassium iodide* 7681-11-0	-
Potassium hydroxide 1310-58-3	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

Proper shipping name	CORROSIVE LIQUIDS, TOXIC, NOS (Potassium hydroxide/Sodium azide solution)
UN-No	2922
Hazard Class	8
Subsidiary class	6.1
Packing group	II
Reportable Quantity (RQ)	1000

IATA

Proper shipping name	CORROSIVE LIQUIDS, TOXIC, NOS (Potassium hydroxide/Sodium azide solution)
UN-No	2922
Hazard Class	8
Subsidiary class	6.1
Packing group	II

IMDG/IMO

Proper shipping name	CORROSIVE LIQUIDS, TOXIC, NOS (Potassium hydroxide/Sodium azide solution)
UN-No	2922
Hazard Class	8
Subsidiary class	6.1
Packing group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies

AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US 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	SARA 313 - Threshold Values %
Sodium azide 26628-22-8	1.0
Potassium iodide* 7681-11-0	Not Established
Potassium hydroxide 1310-58-3	Not Established

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium azide 26628-22-8	Not Established	Not Established	Not Established	Not Established
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	1000 lb	Not Established	Not Established	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sodium azide 26628-22-8	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Potassium iodide* 7681-11-0	-	Not Established	-
Potassium hydroxide 1310-58-3	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

Chemical name	California Proposition 65
Sodium azide	Not Established

26628-22-8	
Potassium iodide* 7681-11-0	Not Established
Potassium hydroxide 1310-58-3	Not Established

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium azide 26628-22-8	X	X	X
Potassium iodide* 7681-11-0	Not Established	Not Established	Not Established
Potassium hydroxide 1310-58-3	X	X	X

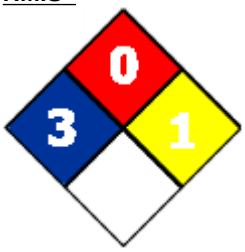
CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Potassium hydroxide 1310-58-3	Banned, 16 CFR 1500.17 Add POISON to label, 16 CFR 1500.129

16. OTHER INFORMATION

NFPA **Health hazard** 3 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** W

HMIS **Health hazard** 3 **Flammability** 0 **Stability** 2



Health Hazard	3
Fire Hazard	0
Reactivity	2

Prepared by Regulatory Affairs Department
Issuing Date Apr-07-2015

Disclaimer

The information provided on this SDS 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 Safety Data Sheet

Safety Data Sheet

OSHA format

Issuing Date Jun-01-2015 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name **MANGANOUS SULFATE SOLUTION**

Other means of identification

Product Code(s) **4167**

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals. Industrial (not for food or food contact use). Chemical additive. Swimming pool chemicals.

Details of the supplier of the safety data sheet

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

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

Specific target organ toxicity (repeated exposure)	Category 2

EMERGENCY OVERVIEW

WARNING

Hazard statements

May cause damage to organs through prolonged or repeated exposure.

Appearance Clear pink **Physical state** liquid **Odor** None

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF SWALLOWED. Drink 1 or 2 glasses of water. Call a physician immediately.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Other Hazards
May be harmful if swallowed Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS*

Chemical name	CAS No	Weight-%
Manganese sulfate monohydrate	10034-96-5	36

4. FIRST AID MEASURES

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. Call a physician immediately.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Consult a physician if necessary.

Inhalation Remove to fresh air. Call a physician immediately.

Ingestion DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Call a physician immediately.

Self-protection of the first aider Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Water spray, dry chemical, carbon dioxide (CO_2), or foam.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Use personal protective equipment. Contain and collect spillage with non-combustible

absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials. Keep out of the reach of children.

Incompatible Products Strong bases. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese sulfate monohydrate 10034-96-5	TWA: 0.02 mg/m³ Mn TWA: 0.1 mg/m³ Mn	(vacated) Ceiling: 5 mg/m³ Ceiling: 5 mg/m³ Mn	IDLH: 500 mg/m³ Mn TWA: 1 mg/m³ Mn STEL: 3 mg/m³ Mn

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Gloves & Lab Coat.

Respiratory protection Use only with adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid
Appearance Clear pink **Odor** None

Property	Values	Remarks • Method
pH	3	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	

Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat.
Incompatible materials	Strong bases. Metals.
Hazardous decomposition products	Sulfur oxides (SOx). Manganese oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Manganese sulfate monohydrate 10034-96-5	= 782 mg/kg (Rat)	Not Established	Not Established

Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established

Chronic toxicity Chronic manganese poisoning primarily involves the central nervous system. Chronic manganese poisoning can result from excessive inhalation and ingestion. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Kidney effects. Chronic inhalation exposure can cause lung damage.

ATEmix (oral) 2,172.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 64 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established

Persistence and degradability

No information available.

Bioaccumulation/Accumulation
No information available.

Chemical name	Log Pow
Manganese sulfate monohydrate 10034-96-5	Not Established

13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of waste product or used containers according to local regulations.

Contaminated packaging Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Manganese sulfate monohydrate 10034-96-5	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Manganese sulfate monohydrate 10034-96-5	-

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Complies
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US 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	SARA 313 - Threshold Values %
Manganese sulfate monohydrate 10034-96-5	1.0

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

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Manganese sulfate monohydrate 10034-96-5	Not Established	Not Established	Not Established	Not Established

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Manganese sulfate monohydrate 10034-96-5	-	Not Established	-

US State Regulations

California Proposition 65

Chemical name	California Proposition 65
Manganese sulfate monohydrate 10034-96-5	Not Established

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Manganese sulfate monohydrate 10034-96-5	X	Not Established	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

16. OTHER INFORMATION

NFPA **Health hazard** 1 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** N/A

Health hazard 2 **Flammability** 0 **Stability** 0

Health Hazard	2
Fire Hazard	0
Reactivity	0

Prepared by	Regulatory Affairs Department
Issuing Date	Jun-01-2015
Reason for revision	MSDS was reviewed per Canada request - Canada requires MSDS to be dated within 3 years of the request

Disclaimer

The information provided on this SDS 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 Safety Data Sheet

MATERIAL SAFETY DATA SHEET

Issuing Date 12/15/2010 **Revision date** 12/23/2013 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product name **MANGANOUS SULFATE SOLUTION**

Product Code(s) 4167

Synonyms none

Recommended Use Laboratory chemicals. Industrial (not for food or food contact use). Chemical additive. Swimming pool chemicals.

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

Harmful if swallowed
May irritate eyes and skin

Appearance Clear, pink **Physical state** liquid **Odor** None

OSHA Regulatory Status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential health effects

Principle Routes of Exposure Skin Contact, Ingestion.

Acute toxicity

Eyes Irritating to eyes.

Skin Irritating to skin.

Inhalation May cause irritation of respiratory tract.

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

Chronic effects Chronic manganese poisoning primarily involves the central nervous system. Chronic manganese poisoning can result from excessive inhalation and ingestion. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Kidney effects. Chronic inhalation exposure can cause lung damage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
Manganese sulfate monohydrate	10034-96-5	36
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 thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult 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. Consult a physician.

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 unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Consult a physician.

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.

NFPA	**Health hazard** 1	**flammability** 0	**Stability** 0	**Physical and Chemical Hazards** -
HMIS	**Health hazard** 0	**flammability** 0	**Stability** 0	

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Refer to Section 8. Avoid contact with skin, eyes, and clothing.

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Use personal protective equipment. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. 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
Manganese sulfate monohydrate 10034-96-5	TWA: 0.02 mg/m³ TWA: 0.1 mg/m³	Ceiling: 5 mg/m³	IDLH: 500 mg/m³ TWA: 1 mg/m³ STEL: 3 mg/m³
Water 7732-18-5	None known	None known	None known

Personal protective equipment

Eye/face Protection Safety glasses with side-shields.

Skin and body protection Gloves & Lab Coat.

Respiratory protection Use only with adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear pink	**Odor**	None
Physical state	liquid	**pH**	3
Flash point	Not Applicable	**Autoignition temperature**	Not Applicable
Boiling Point/Range	No information available	**Freezing Point**	No information available
Melting point/range	No information available		
solubility	Soluble	**Vapor pressure**	<17 mmHg @ 20°C
Vapor density	no data available		

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions of use and storage.

Incompatible Products Strong bases. Metals.

Conditions to avoid Excessive heat.

Hazardous decomposition products Sulfur oxides (SOx). Manganese oxides.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Manganese sulfate monohydrate	2150 mg/kg (Rat)	None known	None known
Water	90 mL/kg (Rat)	None known	None known

Chronic toxicity

Chronic toxicity Chronic manganese poisoning primarily involves the central nervous system. Chronic manganese poisoning can result from excessive inhalation and ingestion. Early symptoms include sluggishness, sleepiness, and weakness in the legs. Kidney effects. Chronic inhalation exposure can cause lung damage.

Chemical name	ACGIH	IARC	NTP	OSHA
Manganese sulfate monohydrate	None known	None known	None known	None known
Water	None known	None known	None known	None known

Chemical name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine disrupting potential
Manganese 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)
Manganese sulfate monohydrate	None known	None known	None known	None known
Water	None known	None known	None known	None known

Chemical name	Log Pow
Manganese sulfate monohydrate	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
Manganese sulfate monohydrate - 10034-96-5	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
Manganese sulfate monohydrate 10034-96-5 (36)	TSCA	DSL	EINECS/ELINCS	Present	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 %
Manganese sulfate monohydrate	10034-96-5	36	1.0
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
Manganese sulfate monohydrate 10034-96-5 (36)	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
Manganese sulfate monohydrate	10034-96-5	36	Present (includes any unique chemical substance that contains Manganese as part of its infrastructure)	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	CERCLA/SARA RQ
Manganese 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
Manganese sulfate monohydrate	10034-96-5	None known
Water	7732-18-5	None known

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Manganese sulfate monohydrate	None known	X	X	X	None known
Water	None known	None known	None known	None known	None known

International Regulations

Mexico - Grade

Chemical name	Carcinogen Status	Exposure Limits

Manganese sulfate monohydrate	None known	Mexico: TWA 0.2 mg/m³
Water	None known	None known

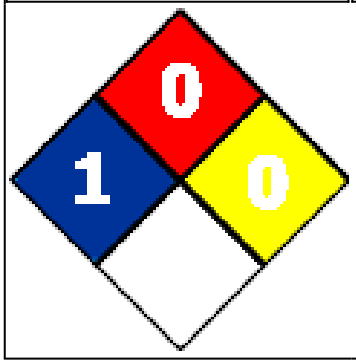
CANADA

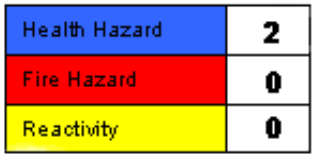
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

Component	WHMIS Hazard Class
Manganese sulfate monohydrate 10034-96-5 (36)	1 % D2B
Water 7732-18-5 (to 100%)	Uncontrolled product according to WHMIS classification criteria

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol





Prepared by Regulatory Affairs Department
Issuing Date 12/15/2010
Revision date 23-Dec-2013
Revision note MSDS was reviewed per Canada request - Canada requires MSDS to be dated within 3 years of the request.

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End of MSDS

Safety Data Sheet

OSHA format

Issuing Date Apr-06-2015 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name **Sulfuric Acid 1:1**

Other means of identification

Product Code(s) **6141**

UN-No 1830

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals. Use as a laboratory reagent. Industrial (not for food or food contact use).

Details of the supplier of the safety data sheet

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748

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

Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1

EMERGENCY OVERVIEW

DANGER POISON

Hazard statements

Causes severe skin burns and eye damage.

Appearance Clear, colorless **Physical state** liquid **Odor** Odorless

Precautionary Statements - Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Keep out of the reach of children.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED. Rinse mouth. Do NOT induce vomiting.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Other Hazards
May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS*

Chemical name	CAS No	Weight-%
Sulfuric acid	7664-93-9	64

4. FIRST AID MEASURES

First Aid Measures

General advice Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Call a physician immediately.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove and isolate contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. Clean mouth with water. Call a physician immediately. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Dry chemical. Carbon dioxide (CO_2). DO NOT USE WATER.

Specific hazards arising from the chemical
React vigorously and/or explosively with water.

Hazardous combustion products
Contact with metals may evolve flammable hydrogen gas.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protection recommended in Section 8. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Neutralize spill with alkaline material (sodium bicarbonate), being careful to prevent splattering, then containerize slurry and hold for later disposal. If local regulations permit, dilute slurry with water and rinse to drain with excess water. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from incompatible materials such as cyanides or sulfides. Store away from strong bases or metals. Do not store near combustible materials. Keep out of the reach of children.

Incompatible Products Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m³ thoracic fraction	TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³	IDLH: 15 mg/m³ TWA: 1 mg/m³

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Gloves & Lab Coat. Wear protective gloves/clothing. Impervious clothing. Rubber gloves. Nitrile rubber.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear, colorless	**Odor**	Odorless

Property	**Values**	**Remarks • Method**
pH	<1	
Melting point / freezing point	No information available	
Boiling point / boiling range	<100 °C / 214 °F	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	~1.57	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Hazardous Reactions	Reacts violently with water. Contact with metals may evolve flammable hydrogen gas.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible Products. Protect from light.
Incompatible materials	Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides. Formaldehyde.
Hazardous decomposition products	Hydrogen gas. Sulfur oxides (SOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	Not Established	= 510 mg/m³ (Rat) 2 h

Information on toxicological effects

Carcinogenicity IARC has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to occupational exposures to these mists. (Steel pickling / the manufacture of isopropyl alcohol by strong-acid process that uses sulfuric acid).

Chemical name	ACGIH	IARC	NTP	OSHA

Sulfuric acid 7664-93-9	Not Established	Group 1	Known	Not Established

Chronic toxicity Chronic exposure to corrosive mists or vapors may cause erosion of the teeth. Chronic exposure to mists containing sulfuric acid is a cancer hazard.

ATEmix (oral) 3,344.00 mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Sulfuric acid 7664-93-9	Not Established	500: 96 h Brachydanio rerio mg/L LC50 static	29: 24 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation/Accumulation
When released into the soil, this material may leach into ground water. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet or dry deposition.

Chemical name	Log Pow
Sulfuric acid 7664-93-9	Not Established

13. DISPOSAL CONSIDERATIONS

Disposal Methods Dispose of contents/containers in accordance with local regulations. When in compliance with local regulations, neutralize reagent to pH 7 with dilute base (NaOH/soda ash/slaked lime), then rinse to drain with excess water.

Contaminated packaging Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Sulfuric acid 7664-93-9	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sulfuric acid 7664-93-9	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Sulfuric acid 7664-93-9	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT

Proper shipping name SULFURIC ACID (> 51%ACID)
UN-No 1830
Hazard Class 8
Packing group II
Reportable Quantity (RQ) 1000

IATA

Proper shipping name SULFURIC ACID (> 51%ACID)
UN-No 1830

Hazard Class	8
Packing group	II

IMDG/IMO

Proper shipping name	SULFURIC ACID (> 51%ACID)
UN-No	1830
Hazard Class	8
Packing group	II

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US 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	SARA 313 - Threshold Values %
Sulfuric acid 7664-93-9	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9	1000 lb	Not Established	Not Established	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

California Proposition 65 has classified "strong inorganic acid mists containing sulfuric acid" as a chemical known to the State of California to cause cancer. This classification applies only to occupational exposures to these mists generated during manufacturing processes which sulfuric acid is used or produced.

Chemical name	California Proposition 65
Sulfuric acid 7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid 7664-93-9	X	X	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Sulfuric acid 7664-93-9	Add POISON to label, 16 CFR 1500.129

16. OTHER INFORMATION

NFPA **Health hazard** 3 **Flammability** 0 **Instability** 0 **Physical and Chemical Hazards** W

HMIS **Health hazard** 3 **Flammability** 0 **Stability** 2

Prepared by Regulatory Affairs Department
Issuing Date Apr-06-2015

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End of Safety Data Sheet