Safety Data Sheet

Issuing Date May-12-2015 **Revision Number** 0

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

Product identifier

Product name **CYANIDE REAGENT #3**

Other means of identification

Product Code(s) **7390**

UN-No 1170

Recommended use of the chemical and restrictions on use

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

Details of the supplier of the safety data sheet

Manufacturer Address
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

Serious eye damage/eye irritation	Category 2A
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 1A
Specific target organ toxicity (single exposure)	Category 2
Specific target organ toxicity (repeated exposure)	Category 1
Flammable Liquids	Category 2

EMERGENCY OVERVIEW

DANGER

Hazard statements

Causes serious eye irritation. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. .
Highly flammable liquid and vapor.

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

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. Wash face, hands and any exposed skin thoroughly after handling. Wear eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up. 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-%
Phenolphthalein	77-09-8	<0.1
Methyl alcohol	67-56-1	3
Ethyl alcohol	64-17-5	57

4. FIRST AID MEASURES

First Aid Measures

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If symptoms persist, call a physician.

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

Ingestion Call a physician immediately. Rinse mouth. Drink plenty of water. Induce vomiting, but only if victim is fully conscious.

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

5. FIRE-FIGHTING MEASURES

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

Specific hazards arising from the chemical
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.

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. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

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 Soak up with inert absorbent material. 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 heat and sources of ignition. Do not store near combustible materials. Keep out of the reach of children.

Incompatible Products Strong inorganic acids and oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Phenolphthalein 77-09-8	-	-	Not Established
Methyl alcohol 67-56-1	250 ppm STEL TWA: 200 ppm	TWA: 200 ppm TWA: 260 mg/m^3	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m^3 STEL: 250 ppm STEL: 325 mg/m^3
Ethyl alcohol 64-17-5	1000 ppm STEL	TWA: 1000 ppm TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3

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	Impervious clothing. Protective gloves. Nitrile rubber.
Respiratory protection	Use only with adequate ventilation.
Hygiene Measures	Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

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

Property	**Values**	**Remarks • Method**
pH		No information available
Melting point / freezing point	No information available	
Boiling point / boiling range	ca 78 °C for SDA (3A) Ethyl Alcohol	
Flash point	22 °C / 72 °F	Closed cup (Calculated based on percent denatured alcohol)
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	48	mmHg @ 20°C for SDA (3A) Ethyl Alcohol
Vapor density	1.6	@ 20°C (Air=1) for SDA (3A) Ethyl Alcohol
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	Heat, flames and sparks. Incompatible Products.
Incompatible materials	Strong inorganic acids and oxidizing agents.
Hazardous decomposition products	Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established
Methyl alcohol 67-56-1	= 6200 mg/kg (Rat)	= 15800 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	Not Established	= 124.7 mg/L (Rat) 4 h

Information on toxicological effects

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Phenolphthalein 77-09-8	-	Group 2B	Reasonably Anticipated	X
Methyl alcohol 67-56-1	-	Not Established	Not Established	-
Ethyl alcohol 64-17-5	A3	Group 1	Known	X

Chronic toxicity Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage.

ATEmix (oral) 2626
ATEmix (dermal) 10000 mg/kg
ATEmix (inhalation-dust/mist) 16.7 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 0.1 % 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)
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	Not Established
Ethyl alcohol 64-17-5	Not Established	12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static	9268 - 14221: 48 h Daphnia magna mg/L LC50 10800: 24 h Daphnia magna mg/L EC50 2: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical name	Log Pow
Phenolphthalein 77-09-8	Not Established
Methyl alcohol 67-56-1	-0.77
Ethyl alcohol 64-17-5	-0.32

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
Phenolphthalein 77-09-8	Not Established	-	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Included in waste stream: F039	Not Established	Ignitable waste
Ethyl alcohol 64-17-5	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Phenolphthalein 77-09-8	-
Methyl alcohol 67-56-1	-
Ethyl alcohol 64-17-5	-

14. TRANSPORT INFORMATION

DOT

Proper shipping name ETHANOL SOLUTION (Ethyl Alcohol Solution)
UN-No 1170
Hazard Class 3
Packing group II

IATA Not Determined
Proper shipping name ETHANOL SOLUTION (Ethyl Alcohol Solution)
UN-No 1170
Hazard Class 3
Packing group II

IMDG/IMO Not Determined
Proper shipping name ETHANOL SOLUTION (Ethyl Alcohol Solution)
UN-No 1170
Hazard Class 3
Packing group II

15. REGULATORY INFORMATION

International Inventories

TSCA Does not comply
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 %
Phenolphthalein 77-09-8	Not Established
Methyl alcohol 67-56-1	1.0
Ethyl alcohol 64-17-5	Not Established

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
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
Phenolphthalein 77-09-8	Not Established	Not Established	Not Established	Not Established
Methyl alcohol 67-56-1	Not Established	Not Established	Not Established	Not Established
Ethyl alcohol 64-17-5	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
Phenolphthalein 77-09-8	-	Not Established	-
Methyl alcohol 67-56-1	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RQ
Ethyl alcohol 64-17-5	-	Not Established	-

US State Regulations

California Proposition 65
WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other

reproductive harm

Chemical name	California Proposition 65
Phenolphthalein 77-09-8	Carcinogen
Methyl alcohol 67-56-1	Developmental
Ethyl alcohol 64-17-5	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Phenolphthalein 77-09-8	X	Not Established	Not Established
Methyl alcohol 67-56-1	X	X	X
Ethyl alcohol 64-17-5	X	X	X

16. OTHER INFORMATION

NFPA **Health hazard** 1 **Flammability** 3 **Instability** 0 **Physical and Chemical Hazards** N/A

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

Prepared by Regulatory Affairs Department
Issuing Date May-12-2015
Revision Date May-12-2015
Reason for revision New US GHS format

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 Material Safety Data Sheet

Safety Data Sheet

Issuing Date Mar-02-2015 **Revision Date** Jul-20-2015 **Revision Number** 0

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

Product identifier

Product name **Sulfide Reagent A**

Other means of identification

Product Code(s) **4458**

UN-No 1830

Recommended use of the chemical and restrictions on use

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

Details of the supplier of the safety data sheet

Manufacturer Address
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** Slight

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.

Precautionary Statements - Response
Immediately call a POISON CENTER or physician.

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	67

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 Immediately flush eyes with gentle stream of water for at least 15 minutes, occasionally lifting upper and lower eyelids. Call a physician immediately.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Excess acid on skin can be neutralized with a 2% solution of sodium bicarbonate in water. Call a physician immediately.

Inhalation Remove 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. 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 protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give 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

Suitable extinguishing media
Dry chemical, CO_2, or alcohol-resistant foam. Water reactive - Do not use water.

Specific hazards arising from the chemical
Contact with most metals causes the formation of explosive and flammable hydrogen gas. React vigorously with water.

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 Ensure adequate ventilation. Avoid contact with skin, eyes, and inhalation of vapors. Use personal protective equipment. See section 8.

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

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. 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. 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3

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). If splashes are likely to occur:. Face protection shield.

Skin and body protection Wear protective gloves/clothing. Gloves & Lab Coat. Chemical resistant protective sleeves. Repeated or prolonged contact:. Impervious clothing. Face protection shield. Apron.

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**	Slight

Property	**Values**	**Remarks • Method**
pH	<1	No information available
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
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	~1.40	
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 normal conditions of use and storage.
Hazardous Reactions	Reacts violently with water. Contact with metals may evolve flammable hydrogen gas. Substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Contact with oxidizable substances may cause extremely violent combustion.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat. Incompatible products. Direct sunlight.
Incompatible materials	Water. Strong bases. Metals. Combustible materials. Cyanides. Sulfides.
Hazardous decomposition products	Hydrogen gas. Sulfur oxides (SOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	Not Established	= 510 mg/m^3 (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 mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X

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 Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Chronic toxicity Prolonged contact causes serious tissue damage.

ATEmix (oral) 3194

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 33 % 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)
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 according to federal, state, and local regulations. If permitted, neutralize reagent with sodium bicarbonate/sodium carbonate, add slurry to large volume of water to dilute, 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	-

14. TRANSPORT INFORMATION

DOT

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

Reportable Quantity (RQ) 1000

IATA

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

IMDG/IMO

Proper shipping name	SULFURIC ACID WITH > 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	Does not comply
PICCS	Does not comply
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 "inorganic mists containing sulfuric acid" and not to sulfuric acid or sulfuric acid solutions

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

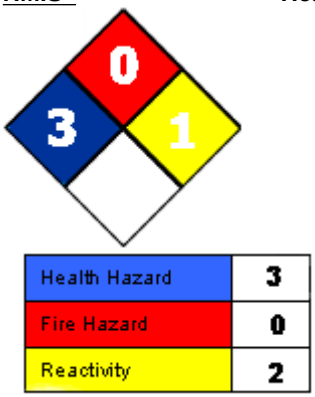
CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Sulfuric acid 7664-93-9	Add POISON to label, 16 CFR 1500.129 (>=10%, free or chemically unneutralized)

16. OTHER INFORMATION

NFPA **Health hazard** 3 **Flammability** 0 **Instability** 1 **Physical and Chemical Hazards** W

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



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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 Material Safety Data Sheet