

SAFETY DATA SHEET

1. Identification

Product identifier: MERCURIC SULFATE

Other means of identification

Product No.: 1430, 2640, 2642

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Oral)	Category 2
Acute toxicity (Dermal)	Category 3
Acute toxicity (Inhalation - dust and mist)	Category 2
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific Target Organ Toxicity - Single Exposure (Oral)	Category 1
Specific Target Organ Toxicity - Single Exposure	Category 3
Specific Target Organ Toxicity - Repeated Exposure (Inhalation - dust and mist)	Category 1

Environmental Hazards

Acute hazards to the aquatic environment	Category 1
Chronic hazards to the aquatic environment	Category 1

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Fatal if swallowed.
Toxic in contact with skin.
Fatal if inhaled.
Causes skin irritation.
Causes serious eye irritation.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Precautionary Statement

Prevention: Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. [In case of inadequate ventilation] wear respiratory protection. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. Call a POISON CENTER/doctor if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor. 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 exposed or concerned: Call a POISON CENTER/doctor/... Collect spillage.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
MERCURIC SULFATE		7783-35-9	100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion:	Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation:	Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled. Corrosive to skin and eyes.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up:

Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures:

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Environmental Precautions:

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling:

Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not breathe dust or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment. Obtain special instructions before use.

Conditions for safe storage, including any incompatibilities:

Do not store in metal containers. Keep in a cool, well-ventilated place. Store in a dry place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
MERCURIC SULFATE - as Hg	TWA	0.025 mg/m ³	US. ACGIH Threshold Limit Values (2011)
MERCURIC SULFATE - Vapor. - as Hg	Ceil_Time	0.1 ppm	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
MERCURIC SULFATE - as Hg	Ceiling	0.1 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	0.025 mg/m ³	US. ACGIH Threshold Limit Values (03 2013)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
MERCURIC SULFATE (Total inorganic mercury: Sampling time: End of shift at end of work week.)	15 µg/l (Blood)	ACGIH BEL (2011)
MERCURIC SULFATE (Total inorganic mercury: Sampling time: Prior to shift.)	20 µg/g (Creatinine in urine)	ACGIH BEL (03 2014)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection:

Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing and gloves.

Respiratory Protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Provide eyewash station and safety shower.

9. Physical and chemical properties

Appearance

Physical state: Solid

Form: Crystals or powder.

Color: White

Odor: Odorless

Odor threshold: No data available.

pH: No data available.

Melting point/freezing point: No data available.

Initial boiling point and boiling range: No data available.

Flash Point: No data available.

Evaporation rate: No data available.

Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.

Flammability limit - lower (%): No data available.

Explosive limit - upper (%): No data available.

Explosive limit - lower (%): No data available.

Vapor pressure: Estimated < 0.01 kPa (25 °C)

Vapor density: No data available.

Relative density: 6.47 (20 °C)

Solubility(ies)

Solubility in water: The product reacts with water to form a solid insoluble reaction product which is non-degradable, according to information available.

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity: No data available.

Other information

Molecular weight: 296.68 g/mol (H₂O₄S.Hg)

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.

Chemical Stability: Material is stable under normal conditions.

Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, sparks, flames. Light. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizing agents. Acids. Ammonia.
Hazardous Decomposition Products:	Sulfur dioxide gas may be liberated from the product. Mercury

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Fatal if swallowed.
Inhalation:	Fatal if inhaled. May cause irritation to the respiratory system.
Skin Contact:	Toxic in contact with skin. Causes skin irritation.
Eye contact:	Causes serious eye irritation.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	LD 50 (Mouse): 25 mg/kg LD 50 (Rat): 57 mg/kg
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Dermal

Product:	LD 50 (Rat): 625 mg/kg
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Inhalation

Product:	No data available.
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Repeated Dose Toxicity

Product:	No data available.
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Skin Corrosion/Irritation

Product:	Causes skin irritation.
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Serious Eye Damage/Eye Irritation

Product:	Causes serious eye irritation.
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Respiratory or Skin Sensitization

Product:	Not a skin sensitizer.
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Carcinogenicity

Product:	No data available.
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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: Suspected of causing genetic defects.

In vivo

Product: Suspected of causing genetic defects.

Reproductive Toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: Respiratory tract irritation., Kidney, Nervous System - Causes damage to organs.

Specific Target Organ Toxicity - Repeated Exposure

Product: Brain., Nervous System - Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard

Product: Not classified

Other Effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

MERCURIC SULFATE LC 50 (Pink salmon (*Oncorhynchus gorboscha*), 7 d): 0.14 mg/l Mortality
LC 50 (Sockeye salmon (*Oncorhynchus nerka*), 7 d): 0.18 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

MERCURIC SULFATE LC 50 (Snail (*Viviparus bengalensis*), 168 h): 0.06 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: Very toxic to aquatic life with long lasting effects.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN Number:	UN 1645
UN Proper Shipping Name:	Mercury sulfates
Transport Hazard Class(es)	
Class(es):	6.1
Label(s):	6.1
Packing Group:	II
Marine Pollutant:	Yes

IMDG

UN Number:	UN 1645
UN Proper Shipping Name:	MERCURY SULPHATE
Transport Hazard Class(es)	
Class(es):	6.1
Label(s):	6.1
EmS No.:	F-A, S-A
Packing Group:	II
Marine Pollutant:	Yes

IATA

UN Number:	UN 1645
Proper Shipping Name:	Mercury sulphate
Transport Hazard Class(es):	
Class(es):	6.1
Label(s):	6.1
Marine Pollutant:	No
Packing Group:	II

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

MERCURIC SULFATE Reportable quantity: 10 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	RQ
MERCURIC SULFATE	10 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
MERCURIC SULFATE	500 lbs

SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
MERCURIC SULFATE	10 lbs	

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

MERCURIC SULFATE Reportable quantity: 10 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

MERCURIC SULFATE Developmental toxin.

US. New Jersey Worker and Community Right-to-Know Act

MERCURIC SULFATE Listed

US. Massachusetts RTK - Substance List

MERCURIC SULFATE Listed

US. Pennsylvania RTK - Hazardous Substances

MERCURIC SULFATE Listed

US. Rhode Island RTK

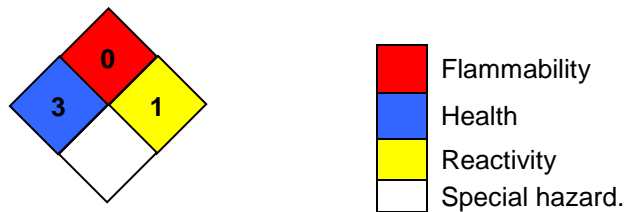
MERCURIC SULFATE Listed

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date:	12-17-2014
Revision Date:	No data available.
Version #:	1.0
Further Information:	No data available.

Disclaimer:

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