SAFETY DATA SHEET spectrum

Revision date 02-July-2020

1. Identification	
Product identifier	
Product Name	MERCURIC ACETATE TS, USP TEST SOLUTION
Other means of identification	
Product Code(s)	M-444
UN/ID no	UN2789
Synonyms	None
Recommended use of the chemical and restrictions on use	
Recommended use	No information available
Restrictions on use	No information available
Details of the supplier of the safety data sheet	
Supplier Address Spectrum Chemical Mfg. Corp. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000	
Emergency telephone number	
Emergency Telephone	Chemtrec 1-800-424-9300

2. Hazard(s) identification

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Flammable liquids	Category 3

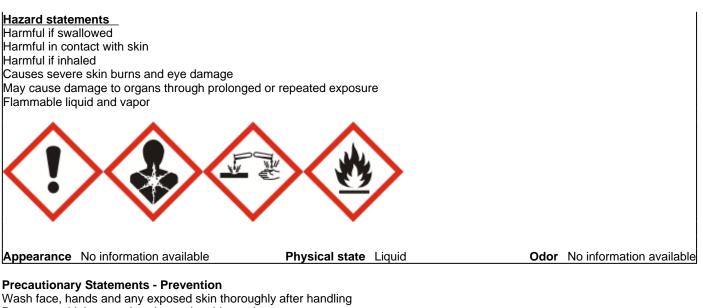
Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Revision Number 1



Do not eat, drink or smoke when using this product Use only outdoors or in a well-ventilated area Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapors/spray Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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

Immediately call a POISON CENTER or doctor IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor Call a POISON CENTER or doctor if you feel unwell IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower Wash contaminated clothing before reuse IF INHALED: Remove person to fresh air and keep comfortable for breathing Immediately call a POISON CENTER or doctor IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell Rinse mouth Do NOT induce vomiting In case of fire: Use CO2, dry chemical, or foam to extinguish

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

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity 94.29 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Other information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

<u>Mixture</u>

Chemical name	CAS No	Weight-%	Trade secret
Acetic acid	64-19-7	94.29	*
Mercuric Acetate	1600-27-7	5.71	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures	
Description of first aid measures	

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.	
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.	
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.	
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.	
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.	
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid breathing vapors or mists.	
Most important symptoms and effe	cts, both acute and delayed	
Symptoms	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.	

5. Fire-fighting measures	
Suitable Extinguishing Media Large Fire	Dry chemical. Carbon dioxide (CO2). water spray. Alcohol resistant foam. CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to

release of irritating gases and vapors.

Explosion data

Sensitivity to mechanical impact none.

Sensitivity to static discharge yes.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Attention! Corrosive material. Avoid breathing vapors or mists.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
Methods and material for containm	ent and cleaning up
Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Protect from moisture. Store away from other materials.

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetic acid	No data available	10 ppm TWA	50 ppm IDLH
64-19-7		25 mg/m³ TWA	

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, suc	ch as personal protective equipment
Eye/face protection	Tight sealing safety goggles. Face protection shield.
Hand protection	Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

9. Physical and chemical properties

Information on basic physical and chemical properties			
Physical state	Liquid		
Appearance	No information available		
Color	Colorless to pale yellow		
Odor	No information available		
Odor threshold	No information available		
Property_	Values_	Remarks • Method	
pH	< 2	None known	
Melting point / freezing point	no data available	None known	
Boiling point / boiling range	118 °C / 244.4 °F	None known	
Flash point	39 °C / 102.2 °F	None known	
Evaporation rate	no data available	None known	
Flammability (solid, gas)	no data available	None known	
Flammability Limit in Air		None known	
Upper flammability or explosive	No data available		
limits			
Lower flammability or explosive	No data available		
limits			
Vapor pressure	No data available	None known	
Vapor density	no data available	None known	
Relative density	1.05	None known	
Water solubility	No data available	None known	
Solubility(ies)	no data available	None known	

Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity	No data available no data available no data available	None known None known None known None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	No information available	
Oxidizing properties	No information available	
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks. Exposure to air or moisture over prolonged periods. Excessive heat.
Incompatible materials	Acids. Bases. Oxidizing agent.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information	

Information on likely routes of exposure

Product Information		
Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.	
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.	
Skin contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. May be absorbed through the skin in harmful amounts. Harmful in contact with skin.	
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.	
Symptoms related to the physical, chemical and toxicological characteristics		
Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing.	
Acute toxicity		

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	594.90 mg/kg
ATEmix (inhalation-gas)	4,500.00 ppm

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

94.29 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Acetic acid	600 mg/kg (Rabbit) [NZ	1060 mg/kg (Rabbit)	11.4 mg/L (Rat)4 h
64-19-7	CCID]		-
Mercuric Acetate 1600-27-7	= 40.9 mg/kg (Rat) = 40900 µg/kg (Rat)	= 570 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure_

Skin corrosion/irritation	Classification based on data available for ingredients. Causes burns.			
Serious eye damage/eye	irritation Classification	Classification based on data available for ingredients. Risk of serious damage to eyes.		
	Causes burn	5.		
Respiratory or skin sensi	itization No information	ation No information available.		
Germ cell mutagenicity	No informatio	No information available.		
Carcinogenicity	city No information available.			
The table below indicates whether each agency has listed any ingredient as a carcinogen.				
Chamical name			NTD	

Chemical name	ACGIH	IARC	NTP	OSHA
Mercuric Acetate	-	Group 3 - Not	-	-
1600-27-7		Classifiable - Monograph		
		58 [1993] Mercury and		
		Mercury compounds		

Legend

Reproductive toxicity	No information available.
STOT - single exposure STOT - repeated exposure Target organ effects	No information available. May cause damage to organs through prolonged or repeated exposure. kidney, respiratory system, Eyes, Skin, central nervous system, Teeth.
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Acetic acid 64-19-7	-	LC50: =75mg/L (96h, Lepomis macrochirus) LC50: =79mg/L (96h, Pimephales promelas)	-	EC50: =47mg/L (24h, Daphnia magna) EC50: =65mg/L (48h, Daphnia magna)

Persistence and degradability Bioaccumulation

No information available. Inherently biodegradable.

Component Information

Chemical name	Partition coefficient
Acetic acid	-0.31

64-19-7	

Other adverse effects

No information available.

13. Disposal considerations		
Waste treatment methods		
Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.	
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture of weld containers.	

14. Transport information

DOT

UN/ID no Proper Shipping Name: Hazard class Subsidiary Class Packing group: Special Provisions Marine Pollutant Description: Emergency Response Guide Number	UN2789 Acetic acid, glacial 8 3 II A3, A7, A10, B2, IB2, T7, TP2 Severe Marine Pollutant UN2789, Acetic acid, glacial, 8 (3), II 132
TDG UN-No: Proper Shipping Name: Hazard class Subsidiary Class Packing Group: Description:	UN2789 Acetic acid, glacial 8 3 II UN2789, Acetic acid, glacial, 8 (3), II
MEX_ UN-No Proper Shipping Name Hazard class Subsidiary Class Packing Group Description	UN2789 Acetic acid, glacial 8 3 II UN2789, Acetic acid, glacial, 8 (3), II
ICAO (air) UN-No: Proper Shipping Name: Hazard class Subsidiary hazard class Packing Group: Description:	UN2789 Acetic acid solution 8 3 II UN2789, Acetic acid solution, 8 (3), II
IATA UN number Proper Shipping Name: Transport hazard class(es) Subsidiary hazard class Packing group Description:	UN2789 Acetic acid solution 8 3 II UN2789, Acetic acid solution, 8 (3), II

UN number Proper shipping name Transport hazard class(es) Subsidiary hazard class Packing group EmS-No Marine pollutant Description	UN2789 Acetic acid, glacial 8 3 II F-E, S-C P UN2789, Acetic acid, glacial, 8 (3), II, (39°C c.c.), Marine pollutant
<u>RID</u> UN number Proper Shipping Name:	UN2789 Acetic acid, glacial
Transport hazard class(es) Packing group Classification code Description: Labels	8 II CF1 UN2789, Acetic acid, glacial, 8 (3), II, ENVIRONMENTALLY HAZARDOUS 8 + 3
ADR UN number Proper Shipping Name: Transport hazard class(es) Subsidiary hazard class Packing group Classification code Tunnel restriction code Description: Labels	2789 Acetic acid, glacial 8 3 II CF1 (D/E) 2789, Acetic acid, glacial, 8 (3), II, (D/E), ENVIRONMENTALLY HAZARDOUS 8 + 3
ADN UN/ID No Proper shipping name Transport hazard class(es) Packing Group Classification code Description Hazard label(s) Limited quantity (LQ) ventilation Equipment Requirements	UN2789 Acetic acid, glacial 8 II CF1 UN2789, Acetic acid, glacial, 8 (+ 3), II, ENVIRONMENTALLY HAZARDOUS 8 + 3 1 L VE01 PP, EP, EX, A

15. Regulatory information

International Inventories

TSCA

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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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
Acetic acid 64-19-7	-	-	-	Present

<u>CERCLA</u>

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	Extremely Hazardous Substances RQs
Acetic acid	5000 lb final RQ	-
64-19-7	2270 kg final RQ	

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 4 Flammability 2 Instability 0 Physical and chemical properties -<u>HMIS</u> Health hazards 4 * Flammability 2 Physical hazards 0 Personal protection X

Key or legend to abbreviations and acronyms used in the safety data sheetLegendSection 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONTWATWA (time-weighted average)CeilingSTELMaximum limit value

Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) EPA (Environmental Protection Agency) Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) Japan GHS Classification Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization **Revision date** 02-July-2020

Revision Note

No information available.

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet