Mayer's Reagent, Mercuric-Iodide TS

Safety Data Sheet

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SECTION 1: Identification

1.1. Identification

Product form : Mixtures

Product name : Mayer's Reagent, Mercuric-Iodide TS

Product code : LC16580

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.

Recommended use : Laboratory chemicals

Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral) Category 3	H301	Toxic if swallowed
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Germ cell mutagenicity Category 2	H341	Suspected of causing genetic defects
Reproductive toxicity Category 2	H361	Suspected of damaging fertility or the unborn child
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs (central nervous system, peripheral nervous system, kidneys) through prolonged or repeated exposure (oral)
Hazardous to the aquatic environment - Acute Hazard Category 1	H400	Very toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 1	H410	Very toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS06 GHS07 GHS08 GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H301 - Toxic if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H341 - Suspected of causing genetic defects
H361 - Suspected of damaging fertility or the unborn child
H372 - Causes damage to organs (central nervous system, peripheral nervous system, kidneys) through prolonged or repeated exposure (oral)

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe mist, vapors, spray
P264 - Wash exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective gloves, eye protection
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - IF exposed or concerned: Get medical advice/attention
P330 - If swallowed, rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash it before reuse
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	93.64	Not classified
Potassium Iodide	(CAS-No.) 7681-11-0	5	Aquatic Acute 2, H401
Mercuric Chloride	(CAS-No.) 7487-94-7	1.36	Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Carc. 2, H351 Repr. 2, H361 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs (nervous system, kidneys) through prolonged or repeated exposure.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood. Do not breathe mist, vapors, spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, incompatible materials. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids. Strong oxidizers.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Mercuric Chloride (7487-94-7)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (Mercury, Inorganic forms, as Hg; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m³)	0.1 mg/m³
IDLH	US IDLH (mg/m³)	10 mg/m³
NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³
NIOSH	NIOSH REL (ceiling) (mg/m³)	0.1 mg/m³

Potassium Iodide (7681-11-0)		
ACGIH	ACGIH TWA (ppm)	0.01 ppm Inhalable fraction

Water (7732-18-5)
Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses.



Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Respiratory protection not required in normal conditions

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Colourless to light yellow
Odor	:	None.
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available

Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Discolours on exposure to light.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Iodine vapor. mercury.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Skin and eye contact
Acute toxicity	:	Oral: Toxic if swallowed.

Mayer's Reagent, Mercuric-Iodide TS	
ATE US (oral)	73.53 mg/kg
ATE US (dermal)	3014.71 mg/kg

Mercuric Chloride (7487-94-7)	
LD50 oral rat	1 mg/kg (Rat)
LD50 dermal rat	41 mg/kg (Rat)
ATE US (oral)	1 mg/kg body weight
ATE US (dermal)	41 mg/kg body weight

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Suspected of causing genetic defects.
Carcinogenicity	:	Not classified

Mercuric Chloride (7487-94-7)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity	:	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single exposure	:	Not classified
Specific target organ toxicity – repeated exposure	:	Causes damage to organs (central nervous system, peripheral nervous system, kidneys) through prolonged or repeated exposure (oral).

Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met. Toxic if swallowed.
Symptoms/effects after skin contact	:	Causes skin irritation.
Symptoms/effects after eye contact	:	Causes serious eye irritation.
Symptoms/effects after ingestion	:	Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

Mayer's Reagent, Mercuric-Iodide TS	
LC50 fish 1	2.21 mg/l
EC50 Daphnia 1	0.38 mg/l

Mercuric Chloride (7487-94-7)	
LC50 fish 1	0.03 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.003 mg/l (EC50; 48 h)
Threshold limit algae 2	0.07 mg/l (EC0)

Potassium Iodide (7681-11-0)	
LC50 fish 1	3200 mg/l 120 h
EC50 Daphnia 1	2.7 mg/l 24 h

12.2. Persistence and degradability

Mayer's Reagent, Mercuric-Iodide TS	
Persistence and degradability	Not readily biodegradable in water.

Mercuric Chloride (7487-94-7)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Potassium Iodide (7681-11-0)	
Persistence and degradability	Not established.

Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Mayer's Reagent, Mercuric-Iodide TS	
Bioaccumulative potential	Bioaccumable.

Mercuric Chloride (7487-94-7)	
BCF fish 1	10000 (BCF)
BCF fish 2	500 - 4620 (BCF)
BCF other aquatic organisms 1	10000 (BCF)
Log Pow	0.1 - 0.22 (Calculated)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

Potassium Iodide (7681-11-0)	
Bioaccumulative potential	Not established.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming	:	No known effects from this product.
GWPmix comment	:	No known effects from this product.
Other information	:	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.
Ecology - waste materials	:	Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	:	UN2024 Mercury compounds, liquid, n.o.s., 6.1, III
UN-No.(DOT)	:	UN2024
Proper Shipping Name (DOT)	:	Mercury compounds, liquid, n.o.s.
Transport hazard class(es) (DOT)	:	6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132
Packing group (DOT)	:	III - Minor Danger
Hazard labels (DOT)	:	6.1 - Poison inhalation hazard



Dangerous for the environment	:	Yes
Marine pollutant	:	Yes



DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Symbols	:	G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	:	IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
DOT Packaging Exceptions (49 CFR 173.xxx)	:	153
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	220 L
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’
Other information	:	No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Mayer's Reagent, Mercuric-Iodide TS	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Mercuric Chloride	CAS-No. 7487-94-7	1.36%

Mercuric Chloride (7487-94-7)	
Listed on the United States SARA Section 302	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	500 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Potassium Iodide (7681-11-0)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

Mercuric Chloride (7487-94-7)
Listed on the Canadian DSL (Domestic Substances List)

Potassium Iodide (7681-11-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Mercuric Chloride (7487-94-7)
Listed on the Canadian IDL (Ingredient Disclosure List)

Potassium Iodide (7681-11-0)
Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

Mercuric Chloride (7487-94-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

SECTION 16: Other information

Revision date : 11/08/2017

Other information : None.

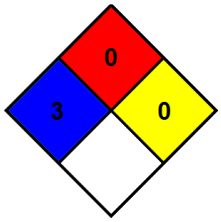
Full text of H-phrases: see section 16:

H300	Fatal if swallowed
H301	Toxic if swallowed
H310	Fatal in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B

B - Safety glasses, Gloves

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