

# SAFETY DATA SHEET

Creation Date 11-Jul-2014

Revision Date 24-Dec-2021

Revision Number 4

## 1. Identification

**Product Name** Mercuric Oxide, Red (Certified ACS)  
**Cat No. :** C5240, C5250  
**CAS No** 21908-53-2  
**Synonyms** Mercuric oxide  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

**Company**

Lab Alley LLC  
22111 Highway 71 West, Suite 601  
Spicewood, Texas 78669  
Tel.: 512-668-9918

**Emergency Telephone Number** Infotrac: 800-535-5053

## 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 1
Acute Inhalation Toxicity - Dusts and Mists	Category 2
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Urinary Tract.	

**Label Elements****Signal Word**

Danger

**Hazard Statements**

May cause damage to organs through prolonged or repeated exposure  
Fatal if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Do not get in eyes, on skin, or on clothing  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area  
 Wear respiratory protection

**Response**

Get medical attention/advice if you feel unwell

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a POISON CENTER or doctor/physician

**Skin**

Immediately call a POISON CENTER or doctor/physician  
 IF ON SKIN: Gently wash with plenty of soap and water  
 Remove/Take off immediately all contaminated clothing  
 Wash contaminated clothing before reuse

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Rinse mouth

**Storage**

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

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects  
 WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

### 3. Composition/Information on Ingredients

Component	CAS No	Weight %
Mercuric oxide	21908-53-2	100

### 4. First-aid measures

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
 Immediate medical attention is required.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. 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. Immediate medical attention is required. If not breathing, give artificial respiration.

<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Very toxic. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Do not allow run-off from fire-fighting to enter drains or water courses.

### Hazardous Combustion Products

Oxygen.

### 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.

### NFPA

Health	Flammability	Instability	Physical hazards
4	0	1	N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.
<b>Methods for Containment and Clean Up</b>	Wear self-contained breathing apparatus and protective suit. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

## 7. Handling and storage

<b>Handling</b>	Use only under a chemical fume hood. Wear personal protective equipment/face protection. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.
<b>Storage.</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Chlorine. Peroxides. Metals. Reducing Agent. Finely powdered metals.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Mercuric oxide	TWA: 0.025 mg/m <sup>3</sup> Skin	(Vacated) Ceiling: 0.1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup> Ceiling: 0.1 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment****Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Physical State	Powder Solid
Appearance	Yellow-orange
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	500 °C / 932 °F
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Hg O
Molecular Weight	216.59

## 10. Stability and reactivity

**Reactive Hazard**

None known, based on information available

<b>Stability</b>	Stable under recommended storage conditions. Light sensitive.
<b>Conditions to Avoid</b>	Avoid dust formation. Exposure to light. Incompatible products.
<b>Incompatible Materials</b>	Chlorine, Peroxides, Metals, Reducing Agent, Finely powdered metals
<b>Hazardous Decomposition Products</b>	Oxygen
<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Mercuric oxide	LD50 = 18 mg/kg ( Rat )	Not listed	Not listed

**Toxicologically Synergistic Products** No information available

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

**Irritation** No information available

**Sensitization** No information available

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

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Mercuric oxide	21908-53-2	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** Urinary Tract

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN1641  
 Proper Shipping Name MERCURY OXIDE  
 Hazard Class 6.1  
 Packing Group II

#### TDG

UN-No UN1641  
 Proper Shipping Name MERCURY OXIDE  
 Hazard Class 6.1  
 Packing Group II

#### IATA

UN-No UN1641  
 Proper Shipping Name MERCURY OXIDE  
 Hazard Class 6.1  
 Packing Group II

#### IMDG/IMO

UN-No UN1641  
 Proper Shipping Name MERCURY OXIDE  
 Hazard Class 6.1  
 Packing Group II

### 15. Regulatory information

#### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Mercuric oxide	21908-53-2	X	ACTIVE	12C

#### Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Mercuric oxide	21908-53-2	X	-	244-654-7	X	X	X	X	X	KE-23130

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### U.S. Federal Regulations

##### SARA 313

Component	CAS No	Weight %	SARA 313 - Threshold Values %
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Mercuric oxide	21908-53-2	100	1.0
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**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Mercuric oxide	-	-	X	-

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Mercuric oxide	X		-

**OSHA** - Occupational Safety and Health Administration Not applicable

**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)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Mercuric oxide	-	500 lb

**California Proposition 65** This product contains the following Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Mercuric oxide	21908-53-2	Developmental	-	Developmental

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Mercuric oxide	X	X	X	X	-

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant Y

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Authorisation/Restrictions according to EU REACH**

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Mercuric oxide	-	Use restricted. See item 18. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic	Ozone Depletion	Restriction of
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			Pollutant	Potential	Hazardous Substances (RoHS)
Mercuric oxide	21908-53-2	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Mercuric oxide	21908-53-2	Not applicable	Not applicable	X	Annex I - Y29

## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Lab Alley LLC Email: customerservice@laballey.com
<b>Creation Date</b>	11-Jul-2014
<b>Revision Date</b>	24-Dec-2021
<b>Print Date</b>	24-Dec-2021
<b>Revision Summary</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

### 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 SDS**