




<a href="#">Mercury Oxide</a>	<a href="#">Pricing &gt;</a>
<a href="#">Mercury Oxide Powder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Mercury Oxide Red</a>	<a href="#">Pricing &gt;</a>
<a href="#">Mercury(II) Oxide Yellow</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	HgO
<b>Pubchem CID</b>	30856
<b>MDL Number</b>	MFCD00011045
<b>EC No.</b>	244-654-7
<b>IUPAC Name</b>	oxomercury
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[Hg]=O
<b>Inchl Identifier</b>	InChI=1S/Hg.O
<b>Inchl Key</b>	UKWHYYKOEPR TIC-UHFFFAOYSA-N
<b>Signal Word</b>	Danger
<b>Hazard Statements</b>	H300 + H310 + H330-H373-H410
<b>Hazard Codes</b>	T+,N
<b>Precautionary Statements</b>	P260-P262-P280-P302 + P352 + P310-P304 + P340 + P310
<b>Flash Point</b>	Not applicable
<b>Risk Codes</b>	26/27/28-33-50/53
<b>Safety Statements</b>	13-28-45-60-61
<b>RTECS Number</b>	OW8750000
<b>Transport Information</b>	UN 1641 6.1 / PGII
<b>WGK Germany</b>	3

GHS Pictograms	<a href="#"><u>GHS09</u></a> <a href="#"><u>Environment</u></a> 
	<a href="#"><u>GHS08 Health</u></a> <a href="#"><u>Hazard</u></a> 
	<a href="#"><u>GHS06 Skull and</u></a> <a href="#"><u>Crossbones</u></a> 

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## SAFETY DATA SHEET

Date Accessed: 09/22/2024

Date Revised: 01/15/2022

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #21908-53-2

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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### SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)  
GHS06 Skull and crossbones  
Acute Tox. 2 H300 Fatal if swallowed.  
Acute Tox. 1 H310 Fatal in contact with skin.  
Acute Tox. 2 H330 Fatal if inhaled.  
GHS08 Health hazard  
STOT RE 2 H373 May cause damage to the central

nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure.

Route of exposure: Oral, Inhalative.

Hazards not otherwise classified No data available

GHS label elements, including precautionary statements

Hazard pictograms



GHS06 GHS08

Signal word Danger

Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.

H373 May cause damage to the central nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure.

Route of exposure: Oral, Inhalative.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor

P320 Specific treatment is urgent (see on this label).

P361 Take off immediately all contaminated clothing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

3

0

1

Health (acute effects) = 3

Flammability = 0

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

21908-53-2 Mercury(II) oxide

Identification number(s):

EC number: 244-654-7

Index number: 080-002-00-6

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### **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Do not induce vomiting; immediately call for medical help.

Information for doctor

Most important symptoms and effects, both acute and delayed:

No data available

Indication of any immediate medical attention and special treatment needed:

No data available

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### **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

Special hazards arising from the substance or mixture  
If this product is involved in a fire, the following can be released:

Toxic metal oxide fume

Advice for firefighters  
Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Environmental precautions: Do not allow material to be released to the environment without official permits.  
Methods and materials for containment and cleanup:  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Prevention of secondary hazards: No special measures required.  
Reference to other sections  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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## **SECTION 7. HANDLING AND STORAGE**

Handling  
Precautions for safe handling  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation at the workplace.  
Open and handle container with care.  
Information about protection against explosions and fires: The product is not flammable  
Conditions for safe storage, including any incompatibilities  
Requirements to be met by storerooms and receptacles: No special requirements.  
Information about storage in one common storage facility:  
Store away from reducing agents.  
Store away from metal powders.  
Store away from halogens.  
Further information about storage conditions:  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Specific end use(s) No data available

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

21908-53-2 Mercury(II) oxide (100.0%)

PEL (USA) Long-term value: 0.1 mg/m<sup>3</sup>  
as Hg; see OSHA standard interpretation memo

REL (USA) Long-term value: 0.05\* mg/m<sup>3</sup>

Ceiling limit value: 0.1 mg/m<sup>3</sup>  
as Hg; \*Vapor; Skin

TLV (USA) Long-term value: 0.025 mg/m<sup>3</sup>  
as Hg; Skin; BEI

EL (Canada) Long-term value: 0.025 mg/m<sup>3</sup>  
as Hg; Skin, R

EV (Canada) Long-term value: 0.025 mg/m<sup>3</sup>  
as Hg, Skin

Ingredients with biological limit values:

21908-53-2 Mercury(II) oxide (100.0%)

BEI (USA) 35 µg/L

Medium: urine

Time: prior to shift

Parameter: Total inorganic mercury (background)

15 µg/L

Medium: blood

Time: end of shift at end of workweek

Parameter: Total inorganic mercury (background)

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use self-contained respiratory protective device in emergency situations.

Recommended filter device for short term use:

Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk

assessment should be performed to determine if  
airpurifying  
respirators are appropriate. Only use equipment  
tested and approved under appropriate government  
standards.

Protection of hands:

Impervious gloves

Inspect gloves prior to use.

The selection of suitable gloves not only depends on  
the material, but also on quality. Quality will vary from  
manufacturer to manufacturer.

Material of gloves Nitrile rubber, NBR

Penetration time of glove material (in minutes) 480

Glove thickness 0.11 mm

Eye protection: Safety glasses

Body protection: Protective work clothing.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance:

Form: Powder

Color: Dark orange

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 500 °C (932 °F) (dec)

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flammability (solid, gas) No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: No data available.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: N/A

Density at 20 °C (68 °F): 11.14 g/cm<sup>3</sup> (92.963 lbs/gal)

Relative density No data available.

Vapor density N/A

Evaporation rate N/A

Solubility in / Miscibility with

Water at 25 °C (77 °F): 0.053 g/l

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

Viscosity:

Dynamic: N/A

Kinematic: N/A

Other information No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity No data available

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions No dangerous reactions known

Conditions to avoid No data available

Incompatible materials:

Reducing agents

Metal powders

Halogens

Hazardous decomposition products: Toxic metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

Fatal if inhaled.

Fatal in contact with skin.

Fatal if swallowed.

Danger through skin absorption.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

Oral LD50 18 mg/kg (rat)

Dermal LD50 315 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

EPA-D: Not classifiable as to human carcinogenicity:

inadequate human and animal evidence of carcinogenicity or no data are available.

IARC-3: Not classifiable as to carcinogenicity to humans.

ACGIH A4: Not classifiable as a human carcinogen:

Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - repeated exposure:



May cause damage to the central nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure:

Oral, Inhalative.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: No effects known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity: No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

Ecotoxicological effects:

Remark: Very toxic for aquatic organisms

Additional ecological information:

Do not allow material to be released to the environment without official permits.

Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

Very toxic for aquatic organisms

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

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## SECTION 14. TRANSPORT INFORMATION

UN-Number  
DOT, IMDG, IATA UN1641  
UN proper shipping name  
DOT Mercury oxide  
IMDG, IATA MERCURY OXIDE  
Transport hazard class(es)  
DOT  
Class 6.1 Toxic substances.  
Label 6.1  
Class 6.1 (T5) Toxic substances  
Label 6.1  
IMDG, IATA  
Class 6.1 Toxic substances.  
Label 6.1  
Packing group  
DOT, IMDG, IATA II  
Environmental hazards: Environmentally hazardous  
substance, solid  
Marine pollutant (IMDG): Yes (PP)  
Special precautions for user Warning: Toxic  
substances  
EMS Number: F-A,S-A  
Segregation groups Heavy metals and their salts  
(including their organometallic compounds), mercury  
and mercury compounds  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): Yes (PP)  
Remarks: Special marking with the symbol (fish and  
tree).  
UN "Model Regulation": UN1641, Mercury oxide, 6.1,  
II

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## SECTION 15. REGULATORY INFORMATION

Safety, health and environmental  
regulations/legislation specific for the substance or  
mixture  
GHS label elements, including precautionary  
statements  
Hazard pictograms  
GHS06 GHS08  
Signal word Danger  
Hazard statements  
H300+H310+H330 Fatal if swallowed, in contact with  
skin or if inhaled.  
H373 May cause damage to the central nervous  
system, the kidneys, the reproductive system and the

brain through prolonged or repeated exposure.  
Route of exposure: Oral, Inhalative.  
Precautionary statements  
P260 Do not breathe  
dust/fume/gas/mist/vapors/spray.  
P301+P310 IF SWALLOWED: Immediately call a  
POISON CENTER/ doctor  
P320 Specific treatment is urgent (see on this label).  
P361 Take off immediately all contaminated clothing.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance  
with local/regional/national/international regulations.  
National regulations  
All components of this product are listed in the U.S.  
Environmental Protection Agency Toxic Substances  
Control Act Chemical substance Inventory.  
All components of this product are listed on the  
Canadian Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
21908-53-2 Mercury(II) oxide  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
21908-53-2 Mercury(II) oxide  
Prop 65 - Developmental toxicity, female Substance is  
not listed.  
Prop 65 - Developmental toxicity, male Substance is  
not listed.  
Information about limitation of use: For use only by  
technically qualified individuals.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the  
market and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use) Substance is not listed.  
Chemical safety assessment: A Chemical Safety  
Assessment has not been carried out.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No.  
1907/2006 (REACH). The above information is  
believed to be correct but does not purport to be all  
inclusive and shall be used only as a guide. The  
information in this document is based on the present

state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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