

**MATERIAL SAFETY DATA SHEET** July 1, 1988

**SECTION I NAME**

Product	MERCURIC OXIDE, RED	Chemical Synonyms	Mercuric Oxide, Red	Formula	HgO	Units) Size	30, 100, 500 grams	C.A.S. No.	21908-53-2
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**CHENTREC**  
800-424-9300  
OH 716-226-6177  
NIGHT 716-334-4222

**HAZARD RATING**

NEPA	0	HEALTH	4
LEAST	1	SLIGHT	2
MODERATE	3	HIGH	4
EXTREME	4		

**SECTION II HAZARDOUS INGREDIENTS OF MIXTURES**

Principal Hazardous Component(s)	Mercuric Oxide, Red	%	100%	TLV Units	See Section V
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**DANGER!** POISON HARMFUL IF INHALED

MAY BE FATAL IF SWALLOWED-STRONG OXIDIZER.

**SECTION III PHYSICAL DATA**

Melting Point (°F)	Decomposes at 500°C	Specific Gravity (H <sub>2</sub> O=1)	11.00-11.29
Boiling Point (°F)	Decomposes	Percent Volatile by Volume (%)	Non-volatile (NA)
Vapor Pressure (mm Hg)	Negligible as solid	Evaporation Rate	Non-volatile (NA)
Vapor Density (Air = 1)	Data not listed		
Solubility in Water	Slightly soluble in water at 20°C.		
Appearance and Odor	Heavy, bright, orange-red crystalline powder; no odor.		

**SECTION IV FIRE AND EXPLOSION HAZARD DATA**

Flash Point (Method Used)	Non-flammable (NA)	Flammable Limits in Air % by Volume	Lower Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.		

**SPECIAL FIREFIGHTING PROCEDURES**

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus and full protective clothing.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

Oxidizer. Increases the flammability of any combustible substance.  
Highly toxic. Fire risk in contact with organic materials. Dangerous; when heated to decomposition, it emits highly toxic fumes of mercury and flammable oxygen gas; can react with reducing agents.

**D.O.T.** POISON 8, SOLID

**FreY** SCIENTIFIC  
905 HICKORY LANE, MANSFIELD OHIO 44905  
MSDS No. Effective Date

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

**SECTION V HEALTH HAZARD DATA**

Threshold Limited Value  
None listed for Mercuric oxide. (ACGIH 1983-84).  
TLV as mercury [CAS. No. 7439-97-6] Mercury vapor 0.05 mg/m<sup>3</sup> (AIR); in organic compounds 0.1 mg/m<sup>3</sup>.  
**Effects of Overexposure**  
Prolonged or repeated exposure to the dust causes upper respiratory tract irritation, long injury, vomiting, chest and abdominal pain, fatigue, gingivitis, difficulty swallowing, irritability, tremors and kidney damage.  
**SKIN AND EYES:** Causes irritation.  
**Toxic by skin absorption.**

**Emergency and First Aid Procedures**  
**INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink induce vomiting. Repeat until vomit fluid is clear. Call physician immediately.  
**INHALATION:** Remove to fresh air. Get medical attention.  
**SKIN:** Flush with water, then wash with soap and water.  
**EYES:** Flush thoroughly with water. Flush under upper and lower eyelids. Get medical attention.

**SECTION VI REACTIVITY DATA**

Stability	Unstable	Conditions to Avoid	Stable in air but turns dark on exposure to light and decomposes into mercury and oxygen.
Incompatibility (Materials to avoid)	X	Protect from light, temperatures above 500° C. Reducing agents.	

**Hazardous Decomposition Products**  
Heating above 500° C will produce highly toxic fumes of mercury and flammable oxygen gas.

**Hazardous Polymerization**  
May Occur Will Not Occur X  
Conditions to Avoid Not applicable.

**SECTION VII SPILL OR LEAK PROCEDURES**

Steps to be taken in case material is released or spilled  
Wearing suitable protective clothing, sweep up and place in a suitable container for disposal.

**Waste Disposal Method**  
Dispose of in an approved chemical landfill or contract with a licensed waste disposal service.

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

**SECTION VIII SPECIAL PROTECTION INFORMATION**

Respiration Protection	None should be needed in normal laboratory handling, work in ventilation hood or wear a NIOSH-approved dust mask or respirator.
Ventilation	Local Exhaust: Acceptable Mechanical (General): Preferred Special: NO
Protective Gloves	Rubber or plastic Other: Goggles, smock, apron, eye wash station, ventilation hood, proper gloves.
Eye Protection	Chemical safety glasses

**SECTION IX SPECIAL PRECAUTIONS**

**Precautions to be Taken in Handling and Storing**  
Store in a cool, dry place away from strong reducing agents and fire hazards. Protect from light. Wash thoroughly after handling. Keep container tightly closed when not in use.  
**Other Precautions**  
Read label on container before using.  
Do not breathe dust.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.  
Rev. No. No. 1 Date 11/2/87 Approved *Wanda N. Cassell* Chemical Safety Coordinator

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