Safety Data Sheet
Mercury(II) oxide red

Section 1: Chemical Product and Company Identification

Product Name: Mercury(II) oxide red

Catalog Codes: 532

CAS#: 21908-53-2

RTECS: OW8750000

Synonym: Mercuric(II) oxide red

Chemical Name: Mercury(II) oxide red

Chemical Formula: HgO

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Mercury(II) oxide red	21908-53-2	100

Toxicological Data on Ingredients: LD50 Oral - Rat - 18 mg/kg.

Section 3: Hazards Identification

Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 2), H300
Acute toxicity, Inhalation (Category 2), H330
Acute toxicity, Dermal (Category 1), H310
Specific target organ toxicity - repeated exposure (Category 2), H373
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410
For the full text of the H-Statements mentioned in this Section, see Section 16.

Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal Word	Danger
Hazard statement(s)	
H300 + H310 + H330	Fatal if swallowed, in contact with skin or if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P262	Do not get in eyes, on skin, or on clothing.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P302 + P352 + P310	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P314	Get medical advice/ attention if you feel unwell.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)
Pictogram

Signal Word	Danger
Hazard statement(s)	
H300 + H310 + H330	Fatal if swallowed, in contact with skin or if inhaled.
Precautionary statement(s)	
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/ protective clothing.
P302 + P352 + P310	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
Supplemental Hazard Statements	none

Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4: First Aid Measures

Description of first-aid measures
General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

Indication of any immediate medical attention and special treatment needed
No data available

Section 5: Fire and Explosion Data

Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
Mercury/mercury oxides.
Not combustible.
Ambient fire may liberate hazardous vapours.

Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections
For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 3.

Conditions for safe storage, including any incompatibilities
Storage conditions
Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.
Light sensitive.

Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

Section 8: Exposure Controls/Personal Protection

Control parameters
Ingredients with workplace control parameters
Exposure controls

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Body Protection
protective clothing

Respiratory protection
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type P3
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory

protective devices are carried out according to the instructions of the producer.
These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

a) Physical state	powder
b) Color	No data available
c) Odor	No data available
d) Melting point/freezing point	Melting point/range: 500 °C - dec.
e) Initial boiling point and boiling range	No data available
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	Not applicable
i) Autoignition temperature	No data available
j) Decomposition temperature	No data available
k) pH	6-7 (20°C)
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	No data available
n) Partition coefficient: n-octanol/water	No data available
o) Vapor pressure	No data available

p) Density	11,1 g/cm3 at 20 °C
Relative density	No data available
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

Other safety information

Bulk density	3000 kg/m3

Section 10: Stability and Reactivity Data

Reactivity
No data available

Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions
Risk of explosion with:
nitrates
Chlorine
boron compounds
hypophosphites
various alloys
Potassium
magnesium
sodium
phosphorus
Reducing agents
sulfur
iodine
with
Methanol
butadiene
with
ethanol
iodine
Hydrocarbons
with

Chlorine
hydrogen peroxide
with
Nitric acid
Risk of ignition or formation of inflammable gases or vapours with:
Alcohols
nitrates
halogens
semimetallic halides
hydrazine and derivatives
Light metals
nonmetals
nonmetallic hydrogen compounds
hydrogen peroxide
Nitric acid
Reducing agents
Ozone
Violent reactions possible with:
Alkali metals
Ozone
Sulfur trioxide
Mercaptans

Conditions to avoid
no information available

Incompatible materials
No data available
Hazardous decomposition products
In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 18 mg/kg
Remarks: (RTECS)
Oral: absorption
Acute toxicity estimate Oral - 18 mg/kg
(Calculation method)
Acute toxicity estimate Inhalation - 4 h - 0,051 mg/l - dust/mist

(Expert judgment)
Inhalation: absorption
Acute toxicity estimate Dermal - 5 mg/kg
(Expert judgment)
Dermal: (Regulation (EC) No 1272/2008, Annex VI)

Skin corrosion/irritation

No data available
Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
Sensitisation possible in predisposed persons.

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
Laboratory experiments have shown teratogenic effects.
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure. – Kidney

Aspiration hazard
No data available

Additional Information

Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: OW8750000
Liver injury may occur., Kidney injury may occur., Nausea, Vomiting, Diarrhea, Tremors, Salivation

Mercury compounds have a cytotoxic and protoplasmatoxic effect. Intoxication symptoms: acute: contact with eye causes severe lesions. Swallowing and inhalation of dusts damages mucous membranes of gastrointestinal and respiratory tract (metallic taste, nausea, vomiting, abdominal pain, bloody diarrhoea, intestinal burns, glottal oedema, aspiration pneumonia); drop in blood pressure, cardiac dysrhythmia, circulatory collapse, and renal failure; chronic: inflammation of the mouth with loss of teeth and mercurial line. The principal signs manifest themselves in the CNS (impaired speech, vision, hearing, and sensitivity, loss of memory, irritability, hallucinations, delirium inter alia).

This substance should be handled with particular care.

Section 12: Ecological Information

Toxicity

Toxicity to	fish mortality LC50 - Cyprinus carpio (Carp) - 0,16 mg/l - 96 h Remarks: The value is given in analogy to the following substances: Mercury dichloride
Toxicity to daphnia and other aquatic invertebrates	NOEC - Daphnia magna (Water flea) - 0,001 mg/l - 21 d Remarks: The value is given in analogy to the following substances: Mercury dichloride

Persistence and degradability
The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties
Product:
Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other adverse effects
No data available

Section 13: Disposal Considerations

Waste treatment methods

Product
Waste material must be disposed of in accordance with the national and local regulations.
Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself

Section 14: Transport Information

UN number
ADR/RID: 1641 IMDG: 1641 IATA: 1641

UN proper shipping name
ADR/RID: MERCURY OXIDE
IMDG: MERCURY OXIDE
IATA: Mercury oxide

Transport hazard class(es)
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

Packaging group
ADR/RID: II IMDG: II IATA: II

Environmental hazards
ADR/RID: yes IMDG Marine pollutant: yes IATA: no

Special precautions for user
No data available

Section 15: Other Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : mercury monoxide

National legislation
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous : ACUTE TOXIC

Section 16: Other Information

References: Not available

Other Special Considerations: Not available

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