spectrum®



SAFETY DATA SHEET

Preparation Date: 10/27/2016	Revision Date: 11/14/2016	Revision Number: G1
	1. IDENTIFICATION	
Product identifier		
Product code: Product Name:	M1170 MERCURIC OXIDE, RED, POWDER, REAGE	NT, ACS
Other means of identification Synonyms: CAS #: RTECS # CI#:	Mercury monoxide; Mercury (II) oxide; Mercury 21908-53-2 OW8750000 Not available	v (2+) oxide
Recommended use of the chem		
Recommended use:	For manufacturing or laboratory use only. Cher pigments.	mical intermediate. Paints. In
Uses advised against	No information available	
Supplier:	Spectrum Chemical Mfg. Corp 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000.	
Order Online At: Emergency telephone number Contact Person: Contact Person:	https://www.spectrumchemical.com Chemtrec 1-800-424-9300 Martin LaBenz (West Coast) Ibad Tirmiz (East Coast)	

2. HAZARDS IDENTIFICATION

Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 2
Acute toxicity - Dermal	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Danger

Hazard statements Fatal if swallowed Fatal if inhaled Fatal in contact with skin Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction May damage fertility or the unborn child May cause damage to organs through prolonged or repeated exposure



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

Precautionary Statements - Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Do not eat, drink or smoke when using this product Wear respiratory protection Wear protective gloves/protective clothing/eye protection/face protection Do not get in eyes, on skin, or on clothing Do not breathe dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Wash face, hands and any exposed skin thoroughly after handling Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician IF IN EYES: 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. IF ON SKIN: Wash with plenty of water Take off contaminated clothing and wash it before reuse If skin irritation or rash occurs: Get medical advice/attention IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Rinse mouth.

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Mercuric Oxide Red	21908-53-2	100

	4. FIRST AID MEASURES
First aid measures	
General Advice:	National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
Skin Contact:	Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician or Poison Control Centre immediately. Fatal in contact with skin.
Eye Contact:	Flush eyes with water for 15 minutes. Call a physician or Poison Control Centre immediately. Call a physician immediately.
Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce 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.
Ingestion:	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately. Fatal if swallowed.
Most important symptoms and	d effects, both acute and delayed
Symptoms	Fatal if swallowed, in contact with skin or if inhaled. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Mercury poinsoning also causes sore gums, stomatitis, foul breath, loss of teeth, metallic taste in mouth, increased salivation, personality changes, tremors, fatigue, insomnia, dizziness, headache, muscle weakness, muscle or joint pain, memory loss, peripheral neuropathy. May affect the kidneys(renal failure), liver, blood, and brain.
Indication of any immediate m	edical attention and special treatment needed
Notes to Physician:	Treat symptomatically.
Protection of first-aiders First-Aid Providers: Avoid expos contaminated clothing and equip	sure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of oment as bio-hazardous waste.
	5. FIRE-FIGHTING MEASURES
Extinguishing Media	

Extinguishing Media Suitable Extinguishing Media:

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media:

No information available.

Product code: M1170

Specific hazards arising from the chemical

Hazardous Combustion Products:	If it is involved in a fire the following can be released:. Mercury oxides.		
Specific hazards:	No information available.		
Special Protective Actions for Firefighters			
Specific Methods:	No information available.		
Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear		
6. ACCIDENTA	L RELEASE MEASURES		

Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Avoid breathing dust. Remove all sources of ignition.		
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.		
Methods and material for containment and cleaning up			
Methods for containment	Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.		
Methods for cleaning up	Sweep up and shovel into suitable containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.		

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Avoid dust formation. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials. Protect from light. Sensitive to light. Store in light-resistant containers.

Incompatible Materials:

Strong oxidizing agents Chlorine

Hydrogen peroxide Metals **Reducing agents** Powdered metals Phenols Strong acids Hydrazine hydrate Hydrogen trisulfide Acetyl nitrate Ethanol Combustible materials Alcohols Phosphine Acetylene Sulfur Organic materials

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Mercuric Oxide Red	21908-53-2	None	0.01 mg/m ³ Ceiling (as	0.025mg/m ³ TWA (as	None
			Hg)	Hg)	
			0.05 mg/m ³ TWA		
			(vapor, as Hg)		

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Mercuric Oxide Red	21908-53-2	0.025 mg/m³ TWA (as Hg)	0.025 mg/m³ TWA (as Hg)	0.025 mg/m³ TWA(as Hg)	0.025 mg/m³ TWAEV(as Hg)

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Mercuric Oxide Red	21908-53-2	None	0.05 mg/m ³ TWA (as Hg)

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Product code: M1170

Skin and body protection: Gloves. Chemical resistant apron. Long sleeved clothing.

Respiratory protection: Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid

Odor: Odorless.

Molecular/Formula weight: 216.59

Flash Point Tested according to: Not available

Upper Explosion Limit (%): No information available

Boiling point/range(°C/°F): No information available

Specific gravity: 11.14

Evaporation rate: No information available

Odor threshold (ppm): No information available

Miscibility: No information available Appearance: Powder.

Taste No information available.

Flammability: No information available

Autoignition Temperature (°C/°F): No information available

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

Bulk density: No information available

pH: No information available

Vapor density: No information available

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

Solubility: Very slightly soluble in cold water Color: Yellow-orange. to. Red.

Formula: HgO

Flashpoint (°C/°F): No information available.

Lower Explosion Limit (%): No information available

Decomposition temperature(°C/°F): No information available

Density (g/cm3): 11.14

Vapor pressure @ 20°C (kPa): No information available

VOC content (g/L): No information available

Viscosity: No information available

10. STABILITY AND REACTIVITY

<u>Reactivity</u> Reactive with strong oxidizing agents

Chemical stability		
Stability:	Sensitive to light. Stable under recommended storage conditions.	
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur	
Conditions to avoid:	Heat. Exposure to light. Avoid dust formation. Incompatible materials.	
Incompatible Materials:	Strong oxidizing agents Chlorine Hydrogen peroxide	
Product code: M1170	Product name: MERCURIC OXIDE,	6/1

RED. POWDER. REAGENT. ACS

	Metals Reducing agents Powdered metals Phenols Strong acids Hydrazine hydrate Hydrogen trisulfide Acetyl nitrate Ethanol Combustible materials Alcohols Phosphine Acetylene Sulfur Organic materials
Hazardous decomposition products:	Mercury/mercury oxides.
Other Information Corrosivity:	No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Skin. Eyes. Ingestion. Inhalation.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document Component Information

Mercuric Oxide Red				
CAS-No.	21908-53-2			
LD50/oral/rat = = 1	8 mg/kg Oral LD50 Rat			
LD50/oral/mouse =	16 mg/kg			
LD50/dermal/rabbi	t = 315 mg/kg			
LD50/dermal/rat =	No information available			
LC50/inhalation/ra	t = No information available			
LC50/inhalation/m	ouse = No infomation available	e		
Other LD50 or LC5	0information = No informatio	on available		
Describer of the former of the second				

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = 18 mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = 16 mg/kg

LD50/dermal/rabbit VALUE-Acute Tox Dermal = 315 mg/kg

Product code: M1170

LD50/dermal/rat VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat VALUE-Vapor = No information available VALUE-Gas = No information available VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse VALUE-Vapor = No information available VALUE - Gas = No information available VALUE - Dust/Mist = No information available

Symptoms

<u></u>						
Skin Contact:	Fatal if absorbed through skin. Causes skin irritation. May cause allergic skin reaction.					
Eye Contact:	Causes serious eye irritation.					
Inhalation	Fatal if inhaled. May cause irritation of respiratory tract. May cause metallic tast May cause nausea, vomiting. May cause abdominal pain. Fatal if swallowed. High or repeated exposure can cause Mercury poisoning.					
Ingestion	Fatal if swallowed. High or repeated exposure can cause Mercury poisoning. Mercury poisoning causes sore gums, personality changes, tremor/"shakes" (off with shaky handwriting), clumsiness, fatigue, irritability and increased saliva. Other changes may include serious personality changes memory loss, extreme shyness, weakness, stomatitis, gingivitis, loss of teeth, gastrointestinal disturbances, metallic taste, poor appetite/anorexia, this, abdominal discomfort, nausea, vomiting, weight loss, central nervous system effects, "pins and needles (peripheral neuropathy). Exposures can also affect the liver, cause kidney damage, and may cause decreased visual acuity, and affect peripheral vision (th ability to see to the side). Brain damage can occur, especially if exposure continues. There may be similar effects in cases of acute inhalation.	s"				
Aspiration hazard	No information available.					
Delayed and immediate effects	as well as chronic effects from short and long-term exposure					
Chronic Toxicity	Skin: Prolonged or repeated skin contact may cause allergic skin reaction. Prolonged or repeated inhalation may affect the kidneys. Chronic exposure may cause central nervous system effects. Prolonged or repeated exposure may affect the eyes and vision. Inhalation/Ingestion: High or repeated exposure can cause Mercury poisoning. Mercury poisoning causes gastrointestinal upset/disturbance inflammation of the mouth and gums, sore gums, metallic taste in the mouth, personality changes, tremors/shakes, clumsiness, fatigue, headache, dizziness faintness, insomnia, irritability and increased saliva. Other changes may include memory loss, trouble concentrating, extreme shyness, joint or muscle pain, muscle weakness, stomatitis, gingivitis, loose teeth or loss of teeth, loss of appetite and weight. Exposure can also affect the liver, cause kidney damage, a may decrease visual activity. Brain damage can occur if exposure continues. Ey contact: brown staining in the eye without visual impairmentSkin: Repeated skin contact can make the skin gray. Dermatitis can also occur.	ect es, or and re				
Sensitization:	May cause sensitization by skin contact.					
Mutagenic Effects:	No information available					

Carcinogenic effects:

Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Mercuric Oxide Red		Monograph 58 [1993] Mercury and Mercury compounds	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity	May damage fertility or the unborn child
Reproductive Effects:	Experiments have shown reproductive toxicity effects on laboratory animals May impair fertility
Developmental Effects: Teratogenic Effects:	May cause harm to the unborn child No information available

Specific Target Organ Toxicity

STOT - single exposure	No information available.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Target Organs:	Kidneys. Nervous system. Central nervous system. Eyes/vision.

12. ECOLOGICAL INFORMATION

Ecotoxicity	
Ecotoxicity effects:	No data available.
Persistence and degradability:	No information available
Bioaccumulative potential:	No information available.
Mobility:	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Mercuric Oxide Red	21908-53-2	None	None	None	None

DOT	
UN-No:	UN1641
Proper Shipping Name:	Mercury oxide
Hazard Class:	6.1
Subsidiary Class	No information available
Packing group:	
Emergency Response Guide	151
Number Marine Pollutant	Severe Marine Pollutant
DOT RQ (lbs):	No information available
Special Provisions	IB8, IP2, IP4, T3, TP33
Symbol(s):	No information available
Description:	UN1641, Mercury oxide, 6.1, II
TDG (Canada)	1111644
UN-No: Proper Shipping Name:	UN1641 Mercury oxide
Hazard Class:	6.1
Subsidiary Risk:	No information available
Packing Group:	II
Marine Pollutant	No Information available
Description:	UN1641, Mercury oxide, 6.1, II
ADR	
UN-No:	UN1641
Proper Shipping Name:	Mercury oxide
Hazard Class:	6.1
Packing Group:	II
Subsidiary Risk:	No information available
Description:	UN1641, Mercury oxide, 6.1, II
IMO / IMDG	
UN-No:	UN1641
Proper Shipping Name:	Mercury oxide
Hazard Class:	6.1
Subsidiary Risk:	No information available
Packing Group: Marine Pollutant	II Marine Pollutant
EMS:	F-A
Description	UN1641, Mercury oxide, 6.1, II
-	
RID UN-No:	UN1641
Proper Shipping Name:	Mercury oxide
Hazard Class:	6.1
Subsidiary Risk:	No information available
Packing Group:	II
Description:	UN1641, Mercury oxide, 6.1, II
ICAO	
UN-No:	UN1641
Proper Shipping Name:	Mercury oxide
Hazard Class:	6.1
Subsidiary Risk:	No information available
Packing Group:	 N1611 Moreury ovide 6.1
Description:	UN1641, Mercury oxide, 6.1, II
Product code: M1170	Product name: MERCURIC OXIDE,
	RED, POWDER, REAGENT, ACS

ΙΑΤΑ	
UN-No:	UN1641
Proper Shipping Name:	Mercury oxide
Hazard Class:	6.1
Subsidiary Risk:	No information available
Packing Group:	II
ERG Code:	6L
Special Provisions	No information available
Description:	UN1641, Mercury oxide, 6.1, II

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Mercuric Oxide Red	21908-53-2	Present	Present KE-23130	Present	Present (1)-436	Present	Present	Present 244-654-7

U.S. Regulations

Mercuric Oxide Red

Massachusetts RTK: Present New Jersey RTK Hazardous Substance List: 2537 New Jersey (EHS) List: 2537 500 lb TPQ New Jersey - Discharge Prevention - List of Hazardous Substances: Present Pennsylvania RTK: Environmental hazard Pennsylvania RTK - Environmental Hazard List Present New York Release Reporting - List of Hazardous Substances: 1 lb RQ California Directors List of Hazardous Substances: Present (as Mercury compounds)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Reproductive	Female Reproductive Toxicity:
Mercuric Oxide Red	21908-53-2		developmental toxicity (listed as Mercury compounds)	Not Listed	Not Listed

CERCLA/SARA

Components C	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Mercuric Oxide Red 2	21908-53-2		500 lb lower TPQ 10000 lb upper TPQ 500 lb EPCRA RQ	None	Mercury compounds	1%

U.S. TSCA

Components		TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Mercuric Oxide Red	21908-53-2	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

D1A Very toxic materials

Components

Mercuric Oxide Red

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
	0.1 %

WHIMHAZ

D1A

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Mercuric Oxide Red	21908-53-2	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Mercuric Oxide Red	21908-53-2	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject
		to Mandatory Reporting
Mercuric Oxide Red	21908-53-2	Not listed

EU Classification

R-phrase(s)

R33 - Danger of cumulative effects.

R50 - Very toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed.

S -phrase(s)

S13 - Keep away from food, drink and animal feedingstuffs.

S28 - After contact with skin, wash immediately with plenty of water

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 - This material and its container must be disposed of as hazardous waste.

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Mercuric Oxide Red	21908-53-2		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T+ - Very toxic.

N - Dangerous for the environment.



Product code: M1170

16. OTHER INFORMATION

Preparation Date:	10/27/2016
Revision Date:	11/14/2016
Prepared by:	Roumann Pangilinan
Disclaimer:	All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet