

## SAFETY DATA SHEET

Preparation Date: 10/5/2016

Revision date 3/7/2019

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** CL108  
**Product Name:** CLIOQUINOL, USP

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** 130-26-7  
**RTECS #** VC5075000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** For manufacturing, processing, or repacking. Antifungal.  
**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:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous by 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 4
Skin sensitization	Category 1
Reproductive toxicity	Category 2

#### Label elements

##### **Warning**

##### **Hazard statements**

Harmful if swallowed  
 May cause an allergic skin reaction  
 Suspected of damaging fertility or the unborn child

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Contaminated work clothing must not be allowed out of the workplace  
Wear protective gloves  
Wear protective clothing  
Wear eye/face protection

**Precautionary Statements - Response**

Call a *POISON CENTER* or doctor/physician if you feel unwell  
IF ON SKIN: Wash with plenty of water  
If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF SWALLOWED: Rinse mouth.

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Clioquinol	130-26-7	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.

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

**Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an

unconscious person. Obtain medical attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**  
May cause an allergic skin reaction  
May cause iodism  
It may affect the thyroid  
May cause abdominal pain, nausea, vomiting, diarrhea  
May cause muscle weakness  
May affect eyes/vision  
May affect the optic nerve (optic atrophy)  
May result in permanent impairment of vision. even blindness  
May affect the liver  
It may affect the kidneys

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray, mist, or foam.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products** Carbon Monoxide, Carbon Dioxide. Nitrogen oxides (NO<sub>x</sub>). hydrogen chloride gas. Hydrogen iodide.

**Specific hazards** May be combustible at high temperatures.

**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. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing dust. Avoid dust formation. 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. 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. Ensure adequate ventilation. Avoid dust formation. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust. Do not ingest. 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. Protect from light. Sensitive to light. Store in light-resistant containers. Store at room temperature in the original container.

#### **Incompatible Materials:**

Strong oxidizing agents  
Acids  
Acid chlorides  
Acid anhydrides

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Clioquinol	130-26-7	None	None	None	None

##### **Canada**

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Clioquinol	130-26-7	None	None	None	None

## Australia and Mexico

Component	CAS No	Australia	Mexico
Clioquinol	130-26-7	None	None

### 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 or Safety glasses with side-shields.

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

**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 and face before breaks and immediately after handling the product When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid	<b>Appearance:</b> Powder.	<b>Color:</b> Light brown.
<b>Odor:</b> Slight.	<b>Taste</b> No information available.	<b>Formula</b> No information available
<b>Molecular/Formula weight (g/mole):</b> 178.5°C (353.3°F)	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> 165.7°C (330.26°F)
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 350.4°C (662.72°F)	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 2.0
<b>Specific gravity:</b> No information available	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
3.47

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Insoluble in cold water  
Insoluble in hot water  
Practically insoluble in Chloroform  
Practically insoluble in alcohol

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with 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:** Exposure to light. Heat. Avoid dust formation. Incompatible materials.

**Incompatible Materials:** Strong oxidizing agents  
Acids  
Acid chlorides  
Acid anhydrides

**Hazardous decomposition products:** Carbon oxides. Hydrogen chloride gas. Nitrogen oxides (NOx). Hydrogen iodide.

### 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

### Component Information

Clioquinol

CAS No 130-26-7

**LD50/oral/rat =** > 5 g/kg Oral LD50 Rat

**LD50/oral/mouse =** 69 mg/kg

**LD50/dermal/rabbit =** No information available

**LD50/dermal/rat =** No information available

LC50/inhalation/rat = No information available  
LC50/inhalation/mouse = No information available  
Other LD50 or LC50 information = No information available

#### Product Information

LD50/oral/rat =  
Value - Acute Tox = No information available

LD50/oral/mouse =  
Value - Acute Tox Oral = 69 mg/kg

LD50/dermal/rabbit  
Value - Acute Tox = No information available

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

**Skin Contact:** May cause skin irritation. May cause allergic skin reaction.

**Eye Contact:** May cause eye irritation.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** Harmful if swallowed. May cause digestive (gastrointestinal) tract irritation. May cause abdominal pain, nausea, vomiting, diarrhea. May affect liver. May affect urinary system (kidneys). May affect respiration. May cause weakness. May affect the spinal cord (degenerative changes). May affect behavior/central nervous system (convulsions/seizures).

**Aspiration hazard** No information available.

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

**Chronic Toxicity** Prolonged exposure to iodides may result in "Iodism" which is characterized by skin rash, runny nose, headache, increased salivation, metallic taste, nausea, vomiting, epigastric pain, diarrhea, bronchitis, laryngitis, stomatitis, fever, conjunctivitis, and irritation of the mucous membranes and anemia. In severe cases, the skin may show pimples, boils, redness, black and blue spots, hives and blisters. It may also affect the thyroid gland (goiter, hypothyroidism). Chronic ingestion of iodides (in animals) during pregnancy has resulted in severe goiter and cretinoid appearance of the newborn. Prolonged or repeated ingestion may affect respiration (pulmonary edema). Prolonged or repeated ingestion may affect respiration (dyspnea - shortness of breath and difficulty breathing). Prolonged or repeated ingestion may affect the spinal cord (demyelination, degenerative changes). Prolonged or repeated exposure may affect the eyes and vision. May

cause visual disturbances ranging from visual field changes, visual impairment, optic atrophy to blindness. Prolonged or repeated ingestion may cause peripheral neuritis/neuropathy. Chronic exposure may affect the liver and kidneys. Prolonged or repeated ingestion may affect the blood (normocytic anemia).

**Sensitization:** May cause sensitization by skin contact.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Clioquinol	130-26-7	Not listed	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** Suspected of damaging fertility or the unborn child

**Reproductive Effects:** May cause adverse reproductive effects  
May impair fertility

**Developmental Effects:** Possible risk of harm to the unborn child  
May cause adverse developmental effects

**Teratogenic Effects:** May cause birth defects (teratogenic effects)

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organs:** Central nervous system. Eyes. Liver. Urinary Tract. Blood. Respiratory system. Musculoskeletal system (joints, tendons).

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available

**Other adverse effects** 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

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Clioquinol	130-26-7	None	None	None	None

<b>14. TRANSPORT INFORMATION</b>
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**DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class** No information available  
**Subsidiary Class** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number** No information available  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

**TDG (Canada)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No Information available  
**Description:** No information available

**ADR**

**UN Number** Not regulated  
**Proper Shipping Name:** No information available  
**Transport hazard class(es)** No information available  
**Packing group** No information available  
**Subsidiary Risk:** No information available

**IMDG**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No information available

**RID**

**UN Number** Not Regulated  
**Proper Shipping Name:** No information available  
**Transport hazard class(es)** No information available  
**Subsidiary Risk:** No information available  
**Packing group** No information available

**ICAO (air)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**IATA**

**UN Number** Not Regulated  
**Proper Shipping Name:** No information available  
**Transport hazard class(es)** No information available  
**Subsidiary Risk:** No information available  
**Packing group** No information available  
**Precautionary Statements - Response** IF exposed or concerned  
**Special Provisions** No information available

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
<i>Clioquinol</i>	130-26-7	Present	Not present	Not present	Not present	Not listed	Present	Present 204-984-4

**U.S. Regulations****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:**

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

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Clioquinol</i>	130-26-7	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Component	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
<i>Clioquinol</i>	130-26-7	None	None	None	None	None

**U.S. TSCA**

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>Clioquinol</i>	130-26-7	Not Applicable	Not Applicable

**Canada**

## WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

## DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Clioquinol	130-26-7	Not Listed	Present

Component	CAS No	CEPA Schedule I - Toxic Substances
Clioquinol	130-26-7	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Clioquinol	130-26-7	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Clioquinol	130-26-7	

### EU - CLP (1272/2008)

#### **R-phrase(s)**

R22 - Harmful if swallowed

R43 - May cause sensitization by skin contact

R36/38 - Irritating to eyes and skin

#### **S -phrase(s)**

S24 - Avoid contact with skin

S37 - Wear suitable gloves

S46 - If swallowed, seek medical advice immediately and show this container or label

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Clioquinol	130-26-7		No information	

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

#### **Indication of danger:**

Xn - Harmful

Xi - Irritant

## 16. OTHER INFORMATION

**Preparation Date:** 10/5/2016  
**Revision date** 3/7/2019  
**Prepared by:** Sonia Owen

**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**