

# Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

## CLIOQUINOLUM

EN

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Revision: XX/XX/XXXX

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Product name: Clioquinol  
Clioquinolum  
Clioquinol  
Clioquinol  
Clioquinol

N° CAS: 130-26-7

N° EC: 204-984-4

#### 1.2 Relevant identified uses of the substance/mixture and uses advised against

Identified uses: Active Pharmaceutical Ingredient or Excipient.

#### 1.3 Details of the supplier of the safety data sheet

Company: FAC SECUNDUM ARTEM NV  
Oostmalsebaan 1c (unit 5)  
2960 Sint-Lenaarts  
Belgium

Telephone: (+32) (0)3 457 11 76

Email: info@magis-pharma.be

Web page: www.magis-pharma.be

#### 1.4 Emergency telephone number

Public utility foundation:	Belgisch Antigifcentrum	Centre Antipoisons Belge
Telephone:	(+32) (0)70 245 245	(Service 24/7)
Web page:	www.antigifcentrum.be	www.centreantipoisons.be

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance/mixture

##### Classification according to (EC) n° 1272/2008

Skin Irrit. 2	H315
Eye Irrit. 2	H319
STOT SE 3	H335
Aquatic Acute 1	H400

#### 2.2 Label elements

##### Labelling according to (EC) n° 1272/2008

Hazard pictogram(s):



Signal word(s):

Attention

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### Warning

#### Hazard statements:

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

#### Precautionary statements:

P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing.
P391	Collect spillage.
P501	Dispose of contents/container to an approved disposal plant.

Additional applicable label elements:



### 2.3 Other hazards

In use, may form flammable/explosive dust-air mixture.

The substance does not fulfil the PBT or vPvP criteria in accordance with annex XIII of the REACH regulations EC 1907/2006.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Product name:	Clioquinol
IUPAC name:	5-Chloro-7-iodoquinolin-8-ol
Synonyms:	Iodochlorhydroxyquin Chinoform
N° CAS:	130-26-7
N° EC:	204-984-4
Molecular Formula:	C <sub>9</sub> H <sub>5</sub> ClINO
Content:	98.0 per cent to 102.0 per cent (dried substance)

### 3.2 Mixtures

Not applicable.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

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General notes:	As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing by an unconscious person.
After inhalation:	In the event of massive inhalation of dust, remove the person exposed to fresh air. Keep warm and at rest. If the person is unconscious, place in recovery position. Notify a doctor in all events, to ascertain whether observation and supportive hospital care will be necessary. If breathing is irregular or has stopped, give mouth-to-mouth resuscitation and call a doctor.
After skin contact:	Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner. Watch out for any remaining product between skin and clothing, watches, shoes, etc. If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.
After eye contact:	Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open. If there is any redness, pain or visual impairment, consult an ophthalmologist.
After ingestion:	Do not give the patient anything orally. Seek medical attention immediately, showing the label.

## 4.2 Most important symptoms and effects, both acute and delayed

Not available.

## 4.3 Indication of any immediate medical attention and special treatment needed

Not available.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media: In the event of a fire, use: powder, carbon dioxide (CO<sub>2</sub>), sprayed water or water mist.

Unsuitable extinguishing media: Not available.

### 5.2 Special hazards arising from the substance/mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.  
Do not breathe in smoke.

In the event of a fire, the following may be formed: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO), hydrogen chloride (HCl), I derived.

### 5.3 Advice for firefighters

Surrounding fires: Not available.

Protection against fire: Due to the toxicity of the gas emitted on thermal decomposition of the products, fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

Hazardous combustion products: Not available.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

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## For non-emergency personnel

Consult the safety measures listed in sections 7 and 8. Avoid any contact with the skin and eyes. Avoid inhaling dust. If a large quantity has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.

## For emergency responders

Consult the safety measures listed in sections 7 and 8. First aid workers must be equipped with suitable personal protective equipment (see section 8).

## 6.2 Environmental precautions

Prevent any material from entering drains or waterways.

## 6.3 Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming): do not generate dust.

## 6.4 Reference to other sections

Not available.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Precautions for safe handling:

Requirements relating to storage premises apply to all facilities where the substance is handled. Always wash hands after handling. Remove and wash contaminated clothing before re-using.

Fire prevention: Handle in well-ventilated areas. Prevent access by unauthorised personnel.

Observe precautions stated on label and also industrial safety regulations. Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions. In all cases, recover emissions at source. Avoid skin and eye contact with this substance. No smoking, eating or drinking in areas where the substance is used.

Personal protection:

For personal protection, see section 8.

Technical protective measures:

Not available.

Handling:

Not available.

### 7.2 Conditions for safe storage, including any incompatibilities

Storage:

Always keep in packaging made of an identical material to the original.

Suitable packaging materials: plastic bag in cardboard drum.

Unsuitable packaging materials: metal.

Conditions for safe storage, including any incompatibilities:

Keep the container tightly closed in a dry, well-ventilated place.

Storage – away from:

Protected from light.

### 7.3 Specific end use(s)

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Active Pharmaceutical Ingredient or Excipient

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Not available.

### 8.2 Exposure controls

#### Appropriate engineering control

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

#### Individual protection measures

Eye/face protection:

Avoid contact with eyes.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

Prescription glasses are not considered as protection.

Provide eyewash stations in facilities where the product is handled constantly.

Skin protection:

Avoid skin contact. Wear suitable protective clothing. These clothes shall be chosen to ensure there is no inflammation or irritation of the skin at the neck and wrist by contact with the powder.

Suitable type of protective clothing: Wear protective clothing against solid chemicals and particles suspended in the air (type 5) in accordance with standard EN13982-1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

Hand protection:

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Recommended properties: Impervious gloves in accordance with standard EN374.

Respiratory protection:

Avoid breathing dust.

If the ventilation is insufficient, wear appropriate breathing apparatus.

When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device.

Type of FFP mask: Wear a disposable half-mask dust filter in accordance with standard EN149.

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Category: FFP1

Independent breathing apparatus for respiratory protection: Necessary in case of vapour/aerosols. Filter AXP or ABEKP.

Thermal hazards: Not determined.

## Environmental exposure control

Not available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance:	Almost white, light yellow, brownish-yellow or yellowish-grey powder.
Odour:	Odourless.
Odour threshold:	Not available.
pH:	6 - 8 (Solution 5%)
Melting/freezing point:	180 °C
Initial boiling point:	Not available.
Boiling range:	Not available.
Flash point:	Not relevant.
Evaporation rate:	Not available.
Flammability (solid/gas):	Not available.
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	Not relevant.
Vapour density:	Not available.
Relative density:	Not available.
Solubility:	Sparingly soluble in methylene chloride, very slightly soluble or slightly soluble in ethanol (96 per cent). Soluble in DMF, Pyridine. Slightly soluble in ether and CS <sub>2</sub> .
Solubility in water:	Practically insoluble in water.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	180 °C
Viscosity:	Not available.
Explosive properties:	Not available.
Oxidising properties:	Not available.

### 9.2 Other information

Density: 0.4 - 0.7 (20°C)

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Not available.

### 10.2 Chemical stability

This substance is stable under the recommended handling and storage conditions in section 7.

### 10.3 Possibility of hazardous reactions

Decomposition by pyrolysis.

### 10.4 Conditions to avoid

Formation of dusts, heat, humidity, mist.

### 10.5 Incompatible materials

Metals.

### 10.6 Hazardous decomposition products

The thermal decomposition may release/form: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO), hydrogen chloride (HCl), I derived.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute toxicity:	Oral LD50 (rat) : > 5 000 mg/kg Skin LD50 (rabbit) : 3 038 mg/kg
Skin corrosion/irritation:	Not available.
Serious eye damage/irritation:	Not available.
Respiratory/skin sensitisation:	Not available.
Germ cell mutagenicity:	Not available.
Carcinogenicity:	Not available.
Reproductive toxicity:	Not available.
Summary of evaluation of the CMR properties:	Not available.
STOT-single exposure:	Not available.
STOT-repeated exposure:	Not available.
Aspiration Hazard:	Not available.
Other:	May cause light irritation of rabbit skin and eyes.

### 11.2 Additional information on potential adverse human health effects and symptoms

Eye contact:	Not available.
Skin contact:	Not available.
Inhalation:	Not available.
Ingestion:	Not available.
Aspiration:	Not available.

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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

LC50 (Trout/96h): 0.28 mg/l

### 12.2 Persistence and degradability

Disposal: 68% (aerobics, DCO)

Initial concentration lightly biodegradable: 20 mg DCO/l

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

Not available.

### 12.5 Results of PBT and vPvB assessment

The substance does not fulfil the PBT or vPvP criteria in accordance with annex XIII of the REACH regulations EC 1907/2006.

### 12.6 Other adverse effects

Highly toxic to aquatic life. The product must not be allowed to run into drains or waterways.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Do not pour into drains or waterways.

Waste: Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals. Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company. Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging: Empty container completely. Keep label(s) on container. Give to a certified disposal contractor.

## SECTION 14: TRANSPORT INFORMATION

### Transport information according to ADR/RID/IMDG/ICAO/IATA

#### 14.1 UN Number

ADR/ RID(Land),IMDG(Sea), 3077  
IATA/ICAO (Air) :

#### 14.2 UN proper shipping name

ADR/ RID(Land),IMDG(Sea), ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
IATA/ICAO (Air) :

#### 14.3 Transport hazard class(es)

ADR/ RID(Land),IMDG(Sea), 9  
IATA/ICAO (Air) :

#### 14.4 Packing group



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ADR/ RID(Land),IMDG(Sea), III  
IATA/ICAO (Air) :

## 14.5 Environmental hazards

ADR/ RID(Land),IMDG(Sea), Environmentally hazardous substance.  
IATA/ICAO (Air) :

## 14.6 Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M7	III	9	90	5g	274 335 375 601	E1	3	-

Not subject to this regulation if Q <= 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2° Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	9	-	III	5 kg	F-A, S-F	274 335 966 967 969	E1	Category A SW23	-

Not subject to this regulation if Q <= 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2° Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	III	956	400 kg	956	400 kg	A97 A158 A179 A197	E1
	9	-	III	Y956	30 kg G	-	-	A97 A158 A179 A197	E1

Not subject to this regulation if Q <= 5 l / 5 kg (IATA 4.4.4 - DS A197)

## 14.7 Transport in bulk according to annex II of Marpol and the IBC Code

Not available.

## 14.8 Additional transport information

Not available.

## SECTION 15: REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance/mixture

Hazard symbol:



Irritant

Harmful to the environment

Risk phrases:

R36/37/38 Irritating to eyes, respiratory system and skin.

R50 Very toxic to aquatic organisms.

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## Safety phrases:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S27 Take off immediately all contaminated clothing.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

## 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

## SECTION 16: OTHER INFORMATION

### 16.1 Changes since the previous version

Not applicable.

### 16.2 Abbreviations and acronyms used

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
EC (number):	European Community (number)
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Code for Dangerous Goods
IUPAC:	International Union of Pure and Applied Chemistry
PBT:	Persistent, Bioaccumulative and Toxic substance
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT:	Specific Target Organ Toxicity
UN (number):	United Nations (number)
vPvB:	very Persistent and very Bioaccumulative

### 16.3 Key literature references/sources for data

European Chemicals Agency.

<https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/>

### 16.4 Method of classification in case of mixture

Not applicable.

### 16.5 Relevant Hazard statements and/or precautionary statements

For information on hazard and/or precautionary statements refer to section 2 up to and including section 15.

### 16.6 Training advisement

Not available.

### 16.7 Notice for user(s)

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The information provided in this MSDS has been established in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council, on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769/EEC and Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

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## 16.8 Department issuing MSDS

Quality Department

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