

CHLORALI HYDRAS

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

1.1 PRODUCT IDENTIFIER

Product name: EN: Chloral Hydrate
LAT: Chlorali Hydras
NL: Chloralhydraat
FR: Chloral hydrate
DE: Chloralhydrat
N° CAS: 302-17-0
N° EC: 206-117-5

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE/MIXTURE AND USES ADVISED AGAINST

Identified uses: Active Pharmaceutical Ingredient.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Magis-Pharma NV
Neerlandweg 24
2610 Wilrijk
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

Acute toxicity (category 3)	H301
Skin irritation (category 2)	H315
Eye irritation (category 2)	H319

2.2 LABEL ELEMENTS

Labelling according to (EC) n° 1272/2008

Hazard pictogram(s):



Signal word(s): Acute Toxic
Hazard statements:
H301 Toxic if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
Precautionary statements:

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P264	Wash hands [and ...] thoroughly after handling.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
P302+P352	IF ON SKIN: wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P321	Specific treatment (see on this label).
P330	Rinse mouth.
P332+P317	If skin irritation occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Additional applicable label elements:	Not applicable.

2.3 OTHER HAZARDS

Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Product name:	Chloral Hydrate
IUPAC name:	2,2,2-trichloroethane-1,1-diol
Synonyms:	1,1-Ethenediol 2,2,2-trichloro- Trichloroacetaldehyde monohydrate Chloral monohydrate Phaldrone Chloralhydrate Cohidrate
N° CAS:	302-17-0
N° EC:	206-117-5
Molecular Formula:	C ₂ H ₃ Cl ₃ O ₂
Content:	98.5 per cent to 101.0 per cent.

3.2 MIXTURES

Not applicable.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General notes:	Pay attention to self-protection!
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After inhalation:	Remove to fresh air immediately. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
After skin contact:	Wash off with plenty of water and soap for at least 15 minutes. Remove contaminated clothing and shoes. If irritation occurs or persists, get medical attention. Wash clothing and shoes before reuse.
After eye contact:	After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
After ingestion:	Wash mouth out with water. Call a physician immediately.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Chloral hydrate is a sedative. The lethal dose for humans is about 10 g, but can vary between 4 - 30 g.
Symptoms of acute poisoning are (human experience):
Scratching in the throat, respiratory slowdown, vomiting, low blood pressure, heart rhythm disturbances, weak, intermittent pulse, pupil dilation.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

When symptoms suggesting toxicity, immediate medical treatment necessary. If possible, show this data sheet.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable extinguishing media:	Water spray, carbon dioxide, dry chemical powder, foam.
Unsuitable extinguishing media:	Not available.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE/MIXTURE

Heating above 400 °C produces hydrogen chloride gas and phosgene. Precipitate vapours with water spray.

5.3 ADVICE FOR FIREFIGHTERS

Chloral hydrate is not flammable, measures described apply to ambient fires if the substance is involved.
Collect contaminated extinguishing water and dispose of after investigation in consultation with the authorities.

Surrounding fires:	Not available.
Protection against fire:	Wear self-contained breathing apparatus and chemical protective suit.
Hazardous combustion products:	Not available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

FOR NON-EMERGENCY PERSONNEL

Avoid generation of dust. Wear personal protection equipment. Wear breathing apparatus if exposed to vapours/dusts.

FOR EMERGENCY RESPONDERS

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Avoid generation of dust. Wear personal protection equipment. Wear breathing apparatus if exposed to vapours/dusts.

6.2 ENVIRONMENTAL PRECAUTIONS

Do not allow to enter drains/surface water/ground-water.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Carefully take up dry. Vacuum residues. The material collected according to the section Disposal.

6.4 REFERENCE TO OTHER SECTIONS

For personal protective equipment see section 8

For disposal see section 13

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Precautions for safe handling:	All work processes must always be designed so that the following is as low as possible: Inhalation, Skin contact, Eye contact.
Personal protection:	Not available.
Technical protective measures:	Not available.
Handling:	Not available.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage:	Not available.
Conditions for safe storage, including any incompatibilities:	Keep container tightly closed and in a well-ventilated place. Protect from light and humidity. Storage temperature not over 30°C.
Storage – away from:	Not available.

7.3 SPECIFIC END USE(S)

Active Pharmaceutical Ingredient.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Not available.

8.2 EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROL

Immediately change contaminated clothing. Wash thoroughly after handling. General room ventilation is adequate unless the process generates dust or fumes. Work clothing should be removed in a change room on site and laundered professionally. Employees should shower and change into street clothes before leaving the facility. Prevent the accumulation of dust in the work area by thorough periodic cleaning of the area.

INDIVIDUAL PROTECTION MEASURES

Eye/face protection:	Frame goggles with side shields.
Skin protection:	Avoid contact with skin. Wash hands and/or face before breaks and at the end of work. Preventive skin protection recommended. Do not eat or drink in the workplace.
Hand protection:	Glove material: PVC, butyl/nitrile rubber. Layer thickness: min. 0.11 mm
Respiratory protection:	Respiratory protection must be worn if technical extraction or ventilation measures are not possible or are inadequate. Respiratory protection must also be worn if

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accidental release of substance has occurred. Suitable respiratory protection: Particle filter (P2/P3)

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:	White, crystalline powder
Odour:	Pungent odour
Odour threshold:	Not available.
pH:	3.5 – 5.5
Melting/freezing point:	53°C
Initial boiling point:	97°C
Boiling range:	Not available.
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid/gas):	Not available.
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	13 hPa
Vapour density:	Not available.
Relative density (20 °C):	1.908 g/cm ³
Solubility:	Soluble in ethanol at 20 °C
Solubility in water (20 °C):	6600 g/l
Partition coefficient (n-octanol/water):	0.99 (exper.HANSCH, C et al. (1995))
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Explosive properties:	Not available.
Oxidising properties:	Not available.

9.2 OTHER INFORMATION

Bulk density: appr. 1100 kg/m³

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No special conditions

10.2 CHEMICAL STABILITY

Slow decomposition at temperatures above 40°C, above 97°C decomposition of chloral and water.

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10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Oxidizing agents

10.4 CONDITIONS TO AVOID

Light and elevated temperature

10.5 INCOMPATIBLE MATERIALS

Alkali, carbonates (formation of chloroform) Cyanides, iodine

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

In case of fire see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity:	LD ₅₀ (oral, rat) 479 mg/kg LD ₅₀ (dermal, rat) 3030 mg/kg LDL ₀ (oral, human) 4 mg/kg Reference: RTECS # FM8750000
Skin corrosion/irritation:	This substance has been classified as a category 2 skin irritant. Further data are not available.
Serious eye damage/irritation:	This substance has been classified as a category 2 eye irritant. Further data are 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:	Toxic effect on liver, kidneys, heart. Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

11.2 ADDITIONAL INFORMATION ON POTENTIAL ADVERSE HUMAN HEALTH EFFECTS AND SYMPTOMS

Eye contact:	Severe irritations.
Skin contact:	Severe irritations.
Inhalation:	After inhalation of vapours: mucosal irritations, coughing, dyspnoea. Inhalation may lead to the formation of oedemas in the respiratory tract.
Ingestion:	After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract, absorption.
Aspiration:	After absorption of toxic quantities: CNS disorders, cardiovascular disorders (nausea, vomiting, drop in blood pressure, tiredness, unconsciousness, respiratory paralysis).

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SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Ecotoxic effects: Reference: INERIS
Fish toxicity: *Lidus* LC₅₀ 1720 mg/l /48 h (Lit.)
Daphnia toxicity: *Daphnia magna* EC₅₀ 510 mg/L /24 h (Lit.)
Algal toxicity: *Sc.quadricauda* IC₅ 2.8 mg/L /7 d (Lit.)
Bacterial toxicity: *Ps.putida* EC₅ 1.6 mg/L /16 h (Lit.)
Protozoa: *E.sulcatum* EC₀ 79 mg/L /72 h (Lit.)

12.2 PERSISTENCE AND DEGRADABILITY

Not easily biodegradable

12.3 BIOACCUMULATIVE POTENTIAL

Low, as logP <3

12.4 MOBILITY IN SOIL

Not available.

12.5 RESULTS OF PBT AND VPvB ASSESSMENT

Contains no PBT or vPvB ingredient

12.6 OTHER ADVERSE EFFECTS

On the basis of the data available concerning eliminability/degradation and bioaccumulation potential, longer-term harm to the environment is probable.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Product:
Product waste and residues must be disposed of according to current laws.
Packaging:
Non-contaminated packages may be recycled. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORT INFORMATION

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

14.1 UN NUMBER

ADR/ RID(Land),IMDG(Sea), UN 2811
IATA/ICAO (Air) :

14.2 UN PROPER SHIPPING NAME

ADR/ RID(Land),IMDG(Sea), TOXIC SOLID, ORGANIC, N.O.S. (Chloral hydrate)
IATA/ICAO (Air) :

14.3 TRANSPORT HAZARD CLASS(ES)

ADR/ RID(Land),IMDG(Sea), class 6.1, tunnel restriction E
IATA/ICAO (Air) :

14.4 PACKING GROUP

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

14.5 ENVIRONMENTAL HAZARDS

ADR/ RID(Land),IMDG(Sea), Not classified.
IATA/ICAO (Air) :

14.6 SPECIAL PRECAUTIONS FOR USER

Not available.

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:



Toxic

Risk phrases:

R 25 Toxic if swallowed.
R 36/38 Irritating to eyes and skin.

Safety phrases:

S 25 Avoid contact with eyes.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

15.2 CHEMICAL SAFETY ASSESSMENT

Not available.

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

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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)

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

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