



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 25.04.2022

Version number 3.00

Revision: 25.04.2022

* 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Chloral hydrate
- **Article number:** 2180
- **CAS Number:**
302-17-0
- **EC number:**
206-117-5
- **Index number:**
605-014-00-6
- **Registration number** The substance is exempt from REACH-registration.
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the mixture** Ingredient for pharmaceutical drugs
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
CAELO
Caesar & Loretz GmbH
Herderstr. 31
D-40721 Hilden
GERMANY
- **Further information obtainable from:**
E-mail: info@caelo.de
Tel.: +49210349940 (during regular opening hours)
- **Emergency telephone number:**
Poison Information Center Bonn
Venusberg-Campus 1, 53127 Bonn
Tel: +49 (0) 228-192400

* 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Acute Tox. 3 H301 Toxic if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

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Hazard pictograms

GHS06

Signal word Danger**Hazard statements**

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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.

Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterisation: Substances**CAS No. Description**

302-17-0 chloral hydrate

Identification number(s)**EC number:** 206-117-5**Index number:** 605-014-00-6

* 4 First aid measures

Description of first aid measures**After inhalation:**

Bring the person out of the contaminated area to fresh air.

Call a doctor immediately.

Show product-label or this MSDS.

After skin contact:

Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.

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- **After eye contact:**
Rinse opened eye for several minutes under running water.
Seek medical advice, even if no immediate symptoms are observed.
- **After swallowing:**
Drink plenty of water.
Call a doctor immediately.
Keep the air passages clean.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
Dilation of pupils
Vomiting
Asthma attacks
Cardiovascular disorders
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
All regular extinguishing media can be used.
Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Hydrogen chloride (HCl)
Phosgene gas
- **Advice for firefighters**
- **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.
- **Additional information**
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Avoid contact with the substance.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.

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- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store receptacle in a well ventilated area.
Protect from exposure to the light.
- **Storage class:** TRHS 510: 6.1 C Combustible acutely toxic or chronic substances
- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
- **Respiratory protection:** Dust protection mask.
- **Protection of hands:** Protective gloves
- **Material of gloves**
PVC gloves
Rubber gloves
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**
Nitrile rubber/nitrile latex.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Neoprene gloves
- **Eye protection:** Tightly sealed goggles
- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
- **Form:** Crystalline
- **Colour:** White
- **Odour:** Pungent
- **Odour threshold:** Not determined.

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- **pH-value (100 g/l) at 20 °C:** 3.5–5.5
- **Change in condition**
 - Melting point/freezing point:** 55.3 °C
 - Initial boiling point and boiling range:** 100.6 °C
- **Flash point:** 75 °C
- **Flammability (solid, gas):** Product is not flammable.
- **Ignition temperature:** >97 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Not determined.
- **Explosive properties:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapour pressure:** Not applicable.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with water at 20 °C:** 1000 g/l
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Other information** No further relevant information available.

* 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** chloral

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Toxic if swallowed.

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· LD/LC50 values relevant for classification:**CAS: 302-17-0 chloral hydrate**

Oral LD50 479 mg/kg (rat)

LDL0 4 mg/kg (hum)

Dermal LD50 3,030 mg/kg (rat)

· Primary irritant effect:**· Skin corrosion/irritation**

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye irritation.

· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.**· Additional toxicological information:****· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****· Germ cell mutagenicity** Based on available data, the classification criteria are not met.**· Carcinogenicity** Based on available data, the classification criteria are not met.**· Reproductive toxicity** Based on available data, the classification criteria are not met.**· STOT-single exposure** Based on available data, the classification criteria are not met.**· STOT-repeated exposure** Based on available data, the classification criteria are not met.**· Aspiration hazard** Based on available data, the classification criteria are not met.

* 12 Ecological information

· Toxicity**· Aquatic toxicity:****CAS: 302-17-0 chloral hydrate**

LC50 1,720 mg/L /48h (fish: leuciscus idus)

EC50 510 mg/L /24h (Daphnia magna)

IC50 2.8 mg/L /7d (Algae)

· Persistence and degradability No further relevant information available.**· Behaviour in environmental systems:****· Bioaccumulative potential** No further relevant information available.**· Mobility in soil** No further relevant information available.**· Additional ecological information:****· General notes:**

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

· Results of PBT and vPvB assessment**· PBT:** Not applicable.**· vPvB:** Not applicable.**· Other adverse effects** No further relevant information available.

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to local regulations.

* 14 Transport information

- | | |
|---|--|
| · UN-Number | 2811 |
| · ADR, IMDG, IATA | UN2811 |
| · UN proper shipping name | |
| · ADR | 2075 CHLORAL, ANHYDROUS, STABILIZED |
| · IMDG | TOXIC SOLID, ORGANIC, N.O.S. (chloral hydrate) |
| · IATA | Toxic solid, organic, n.o.s. (chloral hydrate) |
| · Transport hazard class(es) | |
| · ADR, IMDG, IATA | |
| · Class | 6.1 Toxic substances. |
| · Label | 6.1 |
| · Packing group | |
| · ADR | III |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Warning: Toxic substances. |
| · Hazard identification number (Kemler code): | 60 |
| · EMS Number: | F-A, S-A |
| · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| · Limited quantities (LQ) | 5 kg |
| · Transport category | 2 |
| · Tunnel restriction code | E |

* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Not listed
- **National regulations:**
- **Storage of hazardous substances in nonstationary vessels (TRGS 510) (Germany)**
TRGS 510: 6.1 C Combustible acutely toxic or chronic substances
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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* 16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.

· **Reasons for alterations** This version replaces all old versions.

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· *** Data compared to the previous version altered.**