



Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Chloral Hydrate USP CIV

24-1002

Section 1: Identification

Product Name Chloral Hydrate USP CIV
Commercial Name Not available.
Product Use Not available.
Restrictions On Use Not available.

Product Code 24-1002

Company PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: Classification according to Regulation (EC) No 1272/2008 [EC -GHS /CLP] Listed in Annex VI: EC- Index
CFR 1910.1200 -No.: 605 -014 -00-6 Acute Tox. 3: H301 Skin Irrit. 2: H315 Eye Irrit. 2: H319

Signal Word DANGER

Hazard Statement(s) Toxic if swallowed. Causes skin irritation. Causes serious eye irritation.

Pictogram(s) or Symbol(s)



Precautionary Statement(s):

Prevention	P260 Do not breathe dust. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response	P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor /physician. P302+P352 IF ON SKIN: Wash with plenty of soap and 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. P337+P313 If eye irritation persists: Get medical advice/attention.
Storage	Not available.
Disposal	Not available.

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components Chloral Hydrate
% By Weight 100
CAS# 302-17-0
Molecular Weight 165.4 g/mole
Chemical Formula C₂H₃Cl₃O₂
Synonym(s) 2,2,2-Trichloro-1,1-ethanediol; Trichloroacetaldehyde Hydrate

Mixtures Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Chloral Hydrate	302-17-0	100	Not available.	ORAL (LD50):Acute: 480mg/kg [Rat].

Section 4: First-Aid Measures

Inhalation	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
Skin Contact	Wash off with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. If irritation occurs or persists, get medical attention. Wash clothing and shoes before reuse.
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.
Ingestion	make victim drink plenty of water, induce vomiting. Immediately summon doctor. Keep airways free. Laxative: Sodium sulfate (1 tablespoon / 4l water). Activated charcoal. No gastric lavage.
Symptoms/Effects	
Acute	After absorption of toxic quantities: CNS disorders, cardiovascular disorders (nausea, vomiting, drop in blood pressure, tiredness, unconsciousness, respiratory paralysis). Toxic effect on liver, kidneys, heart.
Delayed	After absorption of toxic quantities: CNS disorders, cardiovascular disorders (nausea, vomiting, drop in blood pressure, tiredness, unconsciousness, respiratory paralysis). Toxic effect on liver, kidneys, heart.

Immediate Medical Attention

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

Section 5: Fire-Fighting Measures**Suitable Extinguishing Media**

Water spray, carbon dioxide, dry chemical powder, foam.

Unsuitable Extinguishing Media

N/A

Products of Combustion

In case of fire may be liberated: Carbon monoxide (CO), Hydrogen chloride

Firefighters Special Equipment and Precautions

Do not inhale explosion and combustion gases. Product itself does not burn. In adaptation to materials stored in the immediate neighbourhood. Contaminated fire extinguishing water must collect separately. It must not be discharged into drains.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Avoid generation of dust. Wear personal protection equipment. Wear breathing apparatus if exposed to vapours/dusts. Environmental precautions: Do not allow to enter drains/surface water/ground-water. Methods and materials for containment and cleaning up: Carefully take up dry. Vacuum residues. The material collected according to the section Disposal

Section 7: Handling and Storage

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. Avoid generation of dust. The product is not combustible. Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Store in a dry and a well-ventilated place. Protect from light and humidity. Do not store at temperatures above 30°C.

Section 8: Exposure Controls/Personal Protection

Exposure Limits	Limits for occupational safety: the substance is not listed. Valid are the general dust limits for 8 h.
Engineering Controls	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.



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Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier. Respiratory protection: Is required whenever air contamination (dust, mist, or vapors) is generated by the process. A NIOSH-approved high efficiency toxic dust/mist/fume respirator is recommended. Eye protection: required Hand protection: In full and splash contact: Glove material: PVC, Butyl-/Nitrile rubber Layer thickness: 0.11 mm The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374. This recommendation applies only to the product stated in the safe data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Section 9: Physical and Chemical Properties

Appearance	Crystalline white powder.		
Odor	Pungent		
Odor Threshold	Not available.		
Melting Point	51.7°C	pH	(100 g/L H2O) 3.5 — 5.5
Freezing Point	Not available.	Vapor Pressure	13 hPa
Boiling Point/Range	97°C	Vapor Density	1.908 g/cm3
Decomposition temperature	Not available.	Viscosity	Not available.
Partition Coefficient: n-octanol/water	0.99 (Exper. Ref: HANSCH, 1957)	Evaporation Rate	Not available.
Flash Point	Not available.	Autoignition temperature	Not available.
Flammability	Not flammable.	Flammability or Explosive Limits:	
		Lower	Not available.
		Upper	Not available.
Solubility(ies)	Soluble in water and ethanol.		
Other	N/A		

Section 10: Stability and Reactivity

Reactivity	No special conditions
Chemical Stability	Slow decomposition at temperatures over 40°C, starting from 97°C splitting into chloral and water.
Hazardous Polymerization	Oxidizing agents
Conditions to Avoid	Light and elevated temperature.
Incompatible Materials	Alkali, corrosive to base metals.
Hazardous Decomposition Products	In case of fire see section 5.

Section 11: Toxicological Information
RTECS FM8750000

Acute Toxicity

Acute oral toxicity (LD50): 479 mg/kg [Rat]. Acute dermal toxicity (LD50): 3030 mg/kg [Rat]. Acute oral toxicity (LDL0): 4 mg/kg [Human]. After inhalation of vapors: mucosal irritations, coughing, dyspnoea. Inhalation may lead to formation of oedemas in the respiratory tract. After skin contact: severe irritations. After eye contact: severe irritations. After swallowing: irritations of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract, absorption. After absorption of toxic quantities: CNS disorders, cardiovascular disorders (nausea, vomiting, drop in blood pressure, tiredness, unconsciousness, respiratory paralysis). Toxic effect on liver, kidneys, heart.

Skin Corrosion/Irritation

Not available.

Serious Eye Damage/Irritation

Not available.

Respiratory or Skin Sensitization

Not available.

Germ Cell Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive Toxicity

Not available.

Routes of Entry

Inhalation. Ingestion.

Symptoms Related to Exposure

Not available.

Potential Health Effects

After inhalation of vapours: mucosal irritations, coughing, dyspnoea. Inhalation may lead to the formation of oedemas in the respiratory tract. After skin contact: severe irritations. After eye contact: severe irritations. After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract, absorption. After absorption of toxic quantities: CNS disorders, cardiovascular disorders (nausea, vomiting, drop in blood pressure, tiredness, unconsciousness, respiratory paralysis). Toxic effect on liver, kidneys, heart.

Target Organ(s) Toxic effect on liver, kidneys, heart**Section 12: Ecological Information****Ecotoxicity**

Ecotoxic effects: Reference: INERIS Fish toxicity: *L.idus* 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.)

Persistence and Degradability

Not readily degradable

Bioaccumulative Potential

Low, as logP <3

Mobility in Soil

No data available

Other Adverse Effects

No data available

Section 13: Disposal Considerations**Waste Disposal**

Product waste and residues must be disposed of according to current laws.

Disposal of Container

No data available

Other Considerations

Non - contaminated packages may be recycled Handle contaminated packaging in the same way as the substance itself.

Section 14: Transport Information**DOT Classification**

UN-Number: UN 2811 UN proper shipping name (ADR/DOT/IATADGR/IMDG): TOXIC SOLID, ORGANIC, N.O.S. (Chloral hydrate) Transport hazard class: Class 6.1, (Tunnel cat. E) Packaging group: PG III Environmental hazards: Not applicable

Section 15: Regulatory Information**Regulations**

Safety, health and environmental regulations/legislation specific for the substance or mixture German regulations: Water hazard class: 2 (water hazardous) Storage class: 6.1D EC Index Number: 605-014-00-6 Narcotics regulations: US: DEA Schedule IV 2465

Other

WHMIS CLASS D-1B: Material causing immediate and (Canada) serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).;DSCL (EEC) R22- Harmful if swallowed. R36- Irritating to eyes.;Gloves.;Lab coat.;Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.;Splash goggles.

Section 16: Other Information

N/A



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