

CHLORAL HYDRATE

GHS Safety Data Sheet

Version No:2.0

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

CHLORAL HYDRATE

OTHER NAMES

C2-H3-Cl3-O2, CCl₃CH(OH)₂, "trichloroacetaldehyde monohydrate", Lorinal, Tosyl, "1, 1, 1-trichloro-2, 2-ethanediol", "1, 1, 1-trichloro-2, 2-ethanediol", Noctec, "knockout drops", "trichloroethylidene glycol", Aquachloral, Phaldrone,

PROPER SHIPPING NAME

TOXIC, SOLID, ORGANIC, N.O.S.

PRODUCT USE

Used for manufacture of liniments, organic synthesis, laboratory reagent.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,

248, WORLI,

MUMBAI- 400030.INDIA.

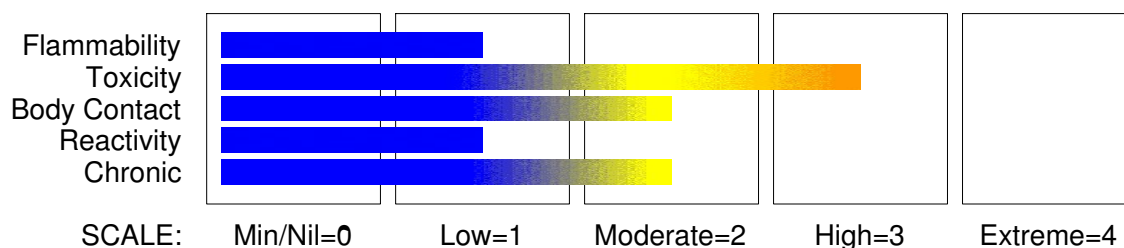
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HAZARD RATINGS



continued...

CHLORAL HYDRATE

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity (Oral) Category 3
Eye Irritation Category 2A
Reproductive Toxicity Category 2
Skin Corrosion/Irritation Category 2
Skin Sensitizer Category 1



EMERGENCY OVERVIEW

HAZARD

DANGER
Determined by using GHS criteria:
H301 H315 H319 H317 H361
Toxic if swallowed
Causes skin irritation
Causes serious eye irritation
May cause allergic skin reaction
Suspected of damaging the unborn child

PRECAUTIONARY STATEMENTS

Prevention

Contaminated clothing should not be allowed out of the workplace.
Wash thoroughly after handling.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Use personal protective equipment as required.
Do not handle until all safety precautions have been read and understood.
Obtain special instructions before use.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Response

If skin irritation occurs, seek medical advice/attention.
Wear eye/face protection.
If eye irritation persists, get medical advice/attention.
If exposed or concerned: Get medical attention advice.
If skin irritation or rash occurs, seek medical advice/attention.
IF ON SKIN: Gently wash with plenty of soap and water.
Wash/Decontaminate removed clothing before reuse.
Remove/Take off immediately all contaminated clothing
Specific treatment: refer to Label or MSDS.

CHLORAL HYDRATE

Section 2 - HAZARDS IDENTIFICATION

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Storage

Store locked up.

Disposal

Dispose of contents and container in accordance with relevant legislation.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
chloral hydrate	302-17-0	>99

Section 4 - FIRST AID MEASURES

SWALLOWED

For advice, contact a Poisons Information Centre or a doctor.
· IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
· For advice, contact a Poisons Information Centre or a doctor.
Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:
· Induce vomiting with fingers down the back of the of the throat, ONLY IF CONSCIOUS.
· Lean patient forward or place on left side (head-down position if possible) to maintain open airway and prevent aspiration.
NOTE: Wear a protective glove when inducing vomiting by mechanical means.
· In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
· If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided.
Further action will be the responsibility of the medical specialist.
· If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

EYE

If this product comes in contact with the eyes:
· Immediately hold eyelids apart and flush the eye continuously with running water.
· Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
· Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
· Transport to hospital or doctor without delay.
· Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:
· Immediately remove all contaminated clothing, including footwear.
· Flush skin and hair with running water (and soap if available).

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Section 4 - FIRST AID MEASURES

- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

NOTES TO PHYSICIAN

Treat symptomatically.

Chloral hydrate is rapidly absorbed from the stomach and starts to act within 30 minutes. It is widely distributed throughout the body.

It

is metabolised to trichloroethanol and trichloroacetic acid in the erythrocytes, liver and other tissues and excreted partly in the urine as trichloroethanol, urochloralic acid and as trichloroacetic acid.

Demulcents such as liquid paraffin may be given to relieve gastric and oesophageal irritation. Lignocaine has been reported to control cardiac arrhythmias.

All patients who have ingested amounts greater than the therapeutic dose (25 mg/kg or 500-1000 mg) should receive gut decontamination (ipecac/lavage, charcoal, cathartics) within 2 hours of ingestion.

Forced diuresis or dialysis may be beneficial in severe poisoning.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Solid which exhibits difficult combustion or is difficult to ignite.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
- Dry dust can also be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
- Build-up of electrostatic charge may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require

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Section 5 - FIRE FIGHTING MEASURES

additional protection measures such as explosion venting.

- All movable parts coming in contact with this material should have a speed of less than 1-metre/sec.

May emit poisonous fumes.

May emit corrosive fumes.

Combustion products include: carbon dioxide (CO₂), chlorine and hydrogen chloride.

FIRE INCOMPATIBILITY

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

Personal Protective Equipment

Breathing apparatus.

Gas tight chemical resistant suit.

Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place in clean drum then flush area with water.

MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

chloral hydrate 50 mg/m³

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CHLORAL HYDRATE

Section 6 - ACCIDENTAL RELEASE MEASURES

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

chloral hydrate 50 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:

chloral hydrate 30 mg/m³

The threshold concentration below which most people will experience no appreciable risk of health effects:

chloral hydrate 10 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X X + X X +

+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

SUITABLE CONTAINER

- Metal can or drum

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CHLORAL HYDRATE

Section 7 - HANDLING AND STORAGE

- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents.
Store away from alcohols, cyanides, iodine and strong alkalis.
Polymerisation may occur slowly at room temperature.
Avoid contact with air, light, water.
Reaction with sulfuric acid may produce rapid polymerisation.

STORAGE REQUIREMENTS

- Protect from light.
- Store in original containers.
 - Keep containers securely sealed.
 - Store in a cool, dry, well-ventilated area.
 - Store away from incompatible materials and foodstuff containers.
 - Protect containers against physical damage and check regularly for leaks.
 - Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- chloral hydrate: CAS:302- 17- 0 CAS:109128- 19- 0

MATERIAL DATA

Airborne particulate or vapour must be kept to levels as low as is practicably achievable given access to modern engineering controls and monitoring hardware. Biologically active compounds may produce idiosyncratic effects which are entirely unpredictable on the basis of literature searches and prior clinical experience (both recent and past).

PERSONAL PROTECTION



EYE

No special equipment needed when handling small quantities of substance.

For bulk handling wear:

Chemical goggles or

Face shield.

HANDS/FEET

Rubber gloves

PVC gloves

CHLORAL HYDRATE

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective shoe covers
Head covering.

OTHER

No special equipment when handling small quantities of substance otherwise:

Coveralls

For Emergencies:

Vinyl suit

Safety shower

RESPIRATOR

High Efficiency Dust Respirator (P2, P3)

For non-routine emergencies wear full face mask self-contained breathing apparatus.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your
Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Enclosed local exhaust ventilation is required at points of dust, fume or vapour generation.

HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.

Barrier protection or laminar flow cabinets should be considered for laboratory scale handling.

When handling quantities up to 500 kilogram, work in either a standard laboratory with general dilution ventilation (e.g. 6-12 air changes per hour) is preferred. Quantities up to 1 kilogram may require a designated laboratory using fume hood, biological safety cabinet, or approved vented enclosures. Quantities exceeding 1 kilogram should be handled in a designated laboratory or containment laboratory using appropriate barrier/containment technology.

Manufacturing and pilot plant operations require barrier/ containment and direct coupling technologies.

Barrier/ containment technology and direct coupling (totally enclosed processes that create a barrier between the equipment and the room) typically use double or split butterfly valves and hybrid unidirectional airflow/ local exhaust ventilation solutions (e.g. powder containment booths). Glove bags, isolator glove box systems are optional. HEPA filtration of exhaust from dry product handling areas is required.

Fume-hoods and other open-face containment devices are acceptable when face velocities of at least 1 m/s (200 feet/minute) are achieved. Partitions, barriers, and other partial containment technologies are required to prevent migration of the material to uncontrolled areas. For non-routine emergencies maximum local and general exhaust are necessary. Air contaminants generated in the workplace possess varying "escape"

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant: solvent, vapours, etc. evaporating from tank (in still air)	Air Speed: 0.25- 0.5 m/s (50- 100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers (released at low velocity into zone of active generation)	0.5- 1 m/s (100- 200 f/min.)
direct spray, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1- 2.5 m/s (200- 500 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood- local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2.5 m/s (200-500 f/min.) for extraction of gases discharged 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated: Dependent on levels of contamination, PAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated.

The following protective devices are recommended where exposures exceed the recommended exposure control guidelines by factors of:

- 10; high efficiency particulate (HEPA) filters or cartridges
- 10-25; loose-fitting (Tyvek or helmet type) HEPA powered-air purifying respirator.
- 25-50; a full face-piece negative pressure respirator with HEPA filters
- 50-100; tight-fitting, full face-piece HEPA PAPR
- 100-1000; a hood-shroud HEPA PAPR or full face-piece supplied air respirator operated in pressure demand or other positive pressure mode.

CHLORAL HYDRATE

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Transparent, colourless crystals with an aromatic, penetrating, slightly acrid odour and slightly bitter, sharp taste; mixes with water, alcohol, chloroform, ether, olive oil and turpentine oil. Slowly volatilises on exposure to air.

PHYSICAL PROPERTIES

Solid.

Mixes with water.

Molecular Weight: 165.40

Melting Range (°C): 52- 57

Solubility in water (g/L): Miscible

pH (1% solution): Not available

Volatile Component (%vol): Not available

Relative Vapour Density (air=1): Not available

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Divided solid

Boiling Range (°C): 98

Specific Gravity (water=1): 1.9

pH (as supplied): Not applicable

Vapour Pressure (kPa): Not available

Evaporation Rate: Not available

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.

Central nervous system (CNS) depression may include nonspecific discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.

In an occupational setting, incidental exposure to the material may produce identical effects to those produced in therapy. Individual workers are expected to exhibit the same range of responses as those receiving the drug under supervision. Because individuals with a history of psychiatric disorders of addiction to, or abuse of, drugs and alcohol are at increased risk of habituation and dependence, they should be under surveillance

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CHLORAL HYDRATE

Section 11 - TOXICOLOGICAL INFORMATION

when receiving any hypnotic drug. The most common side-effects of sleep medicines include drowsiness, dizziness, lightheadedness and difficult coordination. Alcohol may increase the side-effects of these drugs. Sleep medicines may also cause a special type of memory loss or "amnesia". When this occurs an individual may not remember events occurring several hours after taking the drug. When taking sleep drugs every night for several weeks, tolerance may develop and may lead to the individual increasing the dose to elicit earlier effects. When used at high doses for several weeks, dependence or "addiction" may also occur. Withdrawal symptoms may include unpleasant feelings in mild cases, whilst in more severe cases there may be abdominal and muscle cramps, vomiting, sweating, shakiness, and rarely, seizures. Rebound insomnia may also occur after withdrawal of the drug; an individual may have more trouble sleeping the first few nights after the drug is stopped than before starting treatment. Less common amongst individuals using hypnotic drugs are behavioural changes: these include loss of personal identity, confusion, strange behaviour, agitation, hallucinations, worsening of depression and suicidal thoughts. Sleep drugs may also cause sedation of the unborn baby when used during the last weeks of pregnancy.

EYE

Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

SKIN

Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

INHALED

The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS

On the basis, primarily, of animal experiments, concern has been expressed by at least one classification body that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.

There exists limited evidence that shows that skin contact with the material is capable

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CHLORAL HYDRATE

Section 11 - TOXICOLOGICAL INFORMATION

either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Chronic ingestion of high doses is associated with gastritis, skin rashes, peripheral vasodilation, hypotension and myocardial depression. Renal damage may occur. High-dose long-term use results in tolerance and physical dependence. Repeated topical application has been associated with sensitisation. Repeated administration has been associated with disorientation, incoherence, somnambulism, paranoid behaviour, and blood dyscrasias including leukopenia and eosinophilia. Other effects of long term exposure include gastric irritation, unpleasant taste, flatulence, diarrhoea, allergic skin conditions with hives, erythema, eczematoid dermatitis, urticaria, and scarlatiniform exanthems. Animals exposed to chloral exhibit reductions of kidney function and serum transaminase activity, changes in central nervous system function, decreases in detoxification and enzyme-synthesising activities of the liver, and alterations to the morphological character of peripheral blood. Slowed growth rate, changes in arterial blood pressure and leukocytosis have been reported.

Dermally exposed rats show skin tumours (4 of 20). Administration to mice produced statistically significant increases in the incidence of carcinogenic tumours of the liver.

A wide variety of metabolites may be responsible for the induction of liver tumours; these include trichloroacetic acid and dichloroacetic acid. Children borne of mothers taking sedative/ hypnotic drugs may be at risk for withdrawal symptoms from the drug during the postnatal period. In addition, neonatal flaccidity has been reported in infants born of mothers who receive sedative/hypnotic drugs during pregnancy.

TOXICITY AND IRRITATION

TOXICITY

Oral (rat) LD50: 479 mg/kg

Oral (woman) TDLo: 465 mg/kg

Oral (human) TDLo: 300 mg/kg

Dermal (rat) LD50: 3030 mg/kg

Equivocal tumorigenic agent by RTECS criteria

The substance is classified by IARC as Group 3:

NOT classifiable as to its carcinogenicity to humans.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

IRRITATION

Nil Reported

Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant: Not Determined

No data for chloral hydrate.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

CHLORAL HYDRATE

Section 14 - TRANSPORTATION INFORMATION



Labels Required: TOXIC
HAZCHEM: 2X

UNDG:

Dangerous Goods Class:	6.1	Subrisk:	None
UN Number:	2811	Packing Group:	III
Shipping Name: TOXIC, SOLID, ORGANIC, N.O.S.			

Air Transport IATA:

ICAO/IATA Class:	6.1	ICAO/IATA Subrisk:	None
UN/ID Number:	2811	Packing Group:	III
ERG Code:	6L		
Shipping name: TOXIC, SOLID, ORGANIC, N.O.S.			

Maritime Transport IMDG:

IMDG Class:	6.1	IMDG Subrisk:	None
UN Number:	2811	Packing Group:	III
EMS Number:	F- A, S- A	Marine Pollutant:	Not Determined
Shipping name: TOXIC, SOLIDS, ORGANIC, N.O.S.			

Section 15 - REGULATORY INFORMATION

REGULATIONS

chloral hydrate (CAS: 302-17-0) is found on the following regulatory lists;
International Agency for Research on Cancer (IARC) Carcinogens
WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

No data available for chloral hydrate as CAS: 109128-19-0.

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
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CHLORAL HYDRATE

chloral hydrate

302- 17- 0, 109128- 19- 0

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 30-Mar-2018