Propafenone Hydrochloride

Material Safety Data Sheet

Hazard Alert Code Key: [EXTREME] [HIGH] [MODERATE] [LOW]

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Propafenone Hydrochloride

STATEMENT OF HAZARDOUS NATURE

NFPA

SUPPLIER
Company: Santa Cruz Biotechnology, Inc.
Address:
2145 Delaware Ave
Santa Cruz, CA 95060
Telephone: 800.457.3801 or 831.457.3800
Emergency Tel: CHEMWATCH: From within the US and Canada: 877-715-9305
Emergency Tel: From outside the US and Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

PRODUCT USE
A class Ic anti-arrhythmic agent with some negative inotropic and beta-adrenoreceptor blocking activity. Given by mouth

SYNONYMS

Section 2 - HAZARDS IDENTIFICATION

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW
RISK
Harmful if swallowed.
May cause heritable genetic damage.
Very toxic to aquatic organisms.

Potential Health Effects
Acute Health Effects
SWALLOWED
- Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
- Anti-arrhythmic agents have cardiac depressant properties and may, particularly in excessive dosages, induce cardiac arrhythmias (including ventricular tachycardia), heart failure and hypotension.

EYE
- Although the material is not thought to be an irritant, direct contact with the eye may cause transient discomfort characterized by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.

SKIN
- Skin contact is not thought to produce harmful health effects (as classified using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED
- The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of dusts, or fume, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
- Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.
- 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
- Based on experiments and other information, there is ample evidence to presume that exposure to this material can cause genetic defects that can be inherited.
- Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.
- Studies in animals at up to 40 times the maximum human dose have not shown that propafenone causes birth defects, however some studies at up to 6 times the human dose found a dose-related increase in maternal and neonatal mortality, decreased maternal and pup body weight gain and reduced neonatal physiological development.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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<thead>
<tr>
<th>HAZARD RATINGS</th>
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<tbody>
<tr>
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<tr>
<td>propafenone hydrochloride</td>
<td>34183-22-7</td>
<td>&gt;98</td>
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</table>

### Section 4 - FIRST AID MEASURES

**SWALLOWED**
- **IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.**
- Where Medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:
  - For advice, contact a Poisons Information Center or a doctor.
  - Urgent hospital treatment is likely to be needed.
  - If conscious, give water to drink.
  - **INDUCE vomiting with fingers down the back 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:
  - Wash out immediately with fresh running water.
  - **Ensure complete irritation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.**
  - **If pain persists or recurs seek medical attention.**
• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
■ If skin or hair contact occurs:
• Flush skin and hair with running water (and soap if available).
• 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
■ for poisons (where specific treatment regime is absent):

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BASIC TREATMENT
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• Establish a patent airway with suction where necessary.
• Watch for signs of respiratory insufficiency and assist ventilation as necessary.
• Administer oxygen by non-rebreather mask at 10 to 15 l/min.
• Monitor and treat, where necessary, for pulmonary edema.
• Monitor and treat, where necessary, for shock.
• Anticipate seizures.
• DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

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ADVANCED TREATMENT
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• Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
• Positive-pressure ventilation using a bag-valve mask might be of use.
• Monitor and treat, where necessary, for arrhythmias.
• Start an IV D5W TKO. If signs of hypovolemia are present use lactated Ringers solution. Fluid overload might create complications.
• Drug therapy should be considered for pulmonary edema.
• Hypotension with signs of hypovolemia requires the cautious administration of fluids. Fluid overload might create complications.
• Treat seizures with diazepam.
• Proparacaine hydrochloride should be used to assist eye irritation.

BRONSTEIN, A.C. and CURRANCE, P.L.
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994.
Treat symptomatically.
Treatment should be symptomatic and supportive and may include the following:
1: Use defibrillation and infusion of dopamine and isoproterenol to control rhythm and blood pressure.
2: Administer intravenous diazepam for convulsions
3: Apply mechanical respiratory assistance and external cardiac massage.
USP DI 2004

Section 5 - FIRE FIGHTING MEASURES

| Vapour Pressure (mmHG):                      | Not Available                     |
| Upper Explosive Limit (%):                  | Not Available                     |
| Specific Gravity (water=1):                 | Not Available                     |
| Lower Explosive Limit (%):                 | Not Available                     |

EXTINGUISHING MEDIA
■ Water spray or fog.
■ Foam.
■ Dry chemical powder.
■ BCF (where regulations permit).
■ Carbon dioxide.

FIRE FIGHTING
■ Alert Emergency Responders 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.
■ Use water delivered as a fine spray to control fire and cool adjacent 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.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
- Combustible solid which burns but propagates flame with difficulty.
- 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 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 additional protection measures such as explosion venting.

Combustion products include: carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride, phosgene, nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.

**FIRE INCOMPATIBILITY**
- Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

**PERSONAL PROTECTION**
- **Glasses:** Chemical goggles.
- **Gloves:**
- **Respirator:** Particulate

**Section 6 - ACCIDENTAL RELEASE MEASURES**

**MINOR SPILLS:**
- Environmental hazard - contain spillage.
- Clean up waste regularly and abnormal spills immediately.
- Avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).
- Dampen with water to prevent dusting before sweeping.
- Place in suitable containers for disposal.

**MAJOR SPILLS:**
- Environmental hazard - contain spillage.
- Moderate hazard.
- **CAUTION:** Advise personnel in area.
- Alert Emergency Responders and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.
- Recover product wherever possible.
- **IF DRY:** Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. **IF WET:** Vacuum/shovel up and place in labelled containers for disposal.
- **ALWAYS:** Wash area down with large amounts of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

**PROTECTIVE ACTIONS FOR SPILL**

**PROTECTIVE ACTION ZONE**

From IERG (Canada/Australia)
- Isolation Distance
- Downwind Protection Distance 10 meters

**FOOTNOTES**

1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This zone assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees on either side of the predominant wind direction, resulting in a crosswind protective action distance equal to the downwind protective action distance.

2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the spill and working away from the site in the downwind direction. Within the protective action zone a level of vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated and unable to take protective action and/or incuring serious or irreversible health effects.

3 INITIAL ISOLATION ZONE is determined as an area, including upwind of the incident, within which a high probability of localised wind reversal may expose nearly all persons without appropriate protection to life-threatening concentrations of the material.

4 SMALL SPILLS involve a leaking package of 200 litres (55 US gallons) or less, such as a drum (jerrican or box with inner containers). Larger packages leaking less than 200 litres and compressed gas leaking from a small cylinder are also considered "small spills". LARGE SPILLS involve many small leaking packages or a leaking package of greater than 200 litres, such as a cargo tank, portable tank or a "one-tonne" compressed gas cylinder.


6 IERG information is derived from CANUTEC - Transport Canada.
ACUTE EXPOSURE GUIDELINE LEVELS (AEGL) (in ppm)

AEGL 1: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

AEGL 2: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

AEGL 3: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- 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.
- Launder contaminated clothing before re-use.
- 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.

Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.

- Do NOT cut, drill, grind or weld such containers
- In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

- Glass container.
- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

- Observe manufacturer’s storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS

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<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>+</td>
<td>X</td>
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</tr>
</tbody>
</table>

X: Must not be stored together
O: May be stored together with specific preventions
+: May be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records
- propafenone hydrochloride: CAS:34183-22-7

MATERIAL DATA

PROPAFENONE HYDROCHLORIDE:
- It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.
- At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply. Airborne particulate or vapor 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

Consult your EHS staff for recommendations

EYE

- When handling very small quantities of the material eye protection may not be required.
- For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:
  - Chemical goggles
  - Face shield. Full face shield may be required for supplementary but never for primary protection of eyes
  - Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.
  - Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]

HANDS/FEET

- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
  - frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity
- Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).
  - When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
  - When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
- Contaminated gloves should be replaced.
- Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
  - Rubber gloves (nitrile or low-protein, powder-free latex). Employees allergic to latex gloves should use nitrile gloves in preference.
  - Double gloving should be considered.
  - PVC gloves.
  - Protective shoe covers.
  - Head covering.

Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.
  - polychloroprene
  - nitrile rubber
  - butyl rubber
  - fluorocautouchouc
  - polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.

OTHER

- For quantities up to 500 grams a laboratory coat may be suitable.
- For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs.
- For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.
- For manufacturing operations, air-supplied full body suits may be required for the provision of advanced respiratory protection.
- Eye wash unit.
- Ensure there is ready access to an emergency shower.
- For Emergencies: Vinyl suit

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory . These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- Use approved positive flow mask if significant quantities of dust becomes airborne.
- Try to avoid creating dust conditions.

RESPIRATOR
Mixes with water.

### PHYSICAL PROPERTIES

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<th>Property</th>
<th>Value</th>
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<td>Melting Range (^°F)</td>
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<td>Viscosity</td>
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**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### ENGINEERING CONTROLS

- **For potent pharmacological agents:**
  - **Powders**
    - To prevent contamination and overexposure, no open handling of powder should be allowed.
    - Powder handling operations are to be done in a powders weighing hood, a glove box, or other equivalent ventilated containment system.
    - In situations where these ventilated containment hoods have not been installed, a non-ventilated enclosed containment hood should be used.
    - Pending changes resulting from additional air monitoring data, up to 300 mg can be handled outside of an enclosure provided that no grinding, crushing or other dust-generating process occurs.
  - **Air-purifying respirator should be worn by all personnel in the immediate area in cases where non-ventilated containment is used, where significant amounts of material (e.g., more than 2 grams) are used, or where the material may become airborne (as through grinding, etc.).**
  - **Powder should be put into solution or a closed or covered container after handling.**
  - **If using a ventilated enclosure that has not been validated, wear a half-mask respirator equipped with HEPA cartridges until the enclosure is validated for use.**

### Solutions Handling:

- **Solutions can be handled outside a containment system or without local exhaust ventilation during procedures with no potential for aerosolisation.** If the procedures have a potential for aerosolisation, an air-purifying respirator is to be worn by all personnel in the immediate area.
- **Solutions used for procedures where aerosolisation may occur (e.g., vortexing, pumping) are to be handled within a containment system or with local exhaust ventilation.**
- **In situations where this is not feasible (may include animal dosing), an air-purifying respirator is to be worn by all personnel in the immediate area. If using a ventilated enclosure that has not been validated, wear a half-mask respirator equipped with HEPA cartridges until the enclosure is validated for use.**
- **Ensure gloves are protective against solvents in use.**

### PHYSICAL PROPERTIES

- **State**
- **Divided Solid**
- **Molecular Weight**
- **377.95**
- **Melting Range (°F)**
- **341.6 - 347**
- **Viscosity**
- **Not Applicable**

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* - Negative pressure demand ** - Continuous flow

Explanation of Respirator Codes:

- **Class I low to medium absorption capacity filters.**
- **Class 2 medium absorption capacity filters.**
- **Class 3 high absorption capacity filters.**
- **PAPR Powered Air Purifying Respirator (positive pressure) cartridge.**
- **Type A for use against certain organic gases and vapors.**
- **Type AX for use against low boiling point organic compounds (less than 65°C).**
- **Type B for use against certain inorganic gases and other acid gases and vapors.**
- **Type E for use against sulfur dioxide and other acid gases and vapors.**
- **Type K for use against ammonia and organic ammonia derivatives.**
  - **Class P1 intended for use against mechanically generated particulates of sizes most commonly encountered in industry, e.g. asbestos, silica.**
  - **Class P2 intended for use against both mechanically and thermally generated particulates, e.g. metal fume.**
  - **Class P3 intended for use against all particulates containing highly toxic materials, e.g. beryllium.**
  - **The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.**
  - **Use appropriate NIOSH-certified respirator based on informed professional judgement.**
  - **In conditions where no reasonable estimate of exposure can be made, assume the exposure is in a concentration IDLH and use NIOSH-certified full face pressure demand SCBA with a minimum service life of 30 minutes, or a combination full facepiece pressure demand SAR with auxiliary self-contained air supply. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.**

- **Explanation of Respirator Codes:**
  - * - Negative pressure demand
  - ** - Continuous flow

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<th>Protection Factor</th>
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<th>Full-Face Respirator</th>
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<td>100+ x PEL</td>
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* For Class II Biological Safety Cabinets. Types B2 or B3 should be considered. Where only Class I, open fronted Cabinets are available, glove panels may be added, Laminar flow cabinets do not provide sufficient protection when handling these materials unless especially designed to do so.
APPEARANCE
Colourless crystals or white crystalline powder with slightly bitter taste; mixes with hot water. Slightly soluble in cold water. Soluble in basic lower aliphatic alcohols, CCl4. Flammability Color Physical State Odor Miscibility with water - White Solid Miscible

SECTION 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerization will not occur.

STORAGE INCOMPATIBILITY
- Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

SECTION 11 - TOXICOLOGICAL INFORMATION

propafenone hydrochloride

TOXICITY AND IRRITATION
- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

<table>
<thead>
<tr>
<th>TOXICITY</th>
<th>IRRITATION</th>
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<tr>
<td>Oral (Woman) LD50: 12 mg/kg/1D - I</td>
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<tr>
<td>Oral (Child) LD50: 133 mg/kg</td>
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<td>Oral (Man) LDLo: 4.266 mg/kg/15H- I</td>
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<td>Oral (Cat) LD50: 60 mg/kg</td>
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</table>

Sensory change, EKG changes, paraesthesia, wakefulness, hallucinations, convulsions, increased pulse rate, nausea, vomiting, effects on newborn recorded.

SECTION 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:
PROPafenONE HYDROchlORIDE:
- Very toxic to aquatic organisms.
- Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
- Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
- DO NOT discharge into sewer or waterways.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions
All waste must be handled in accordance with local, state and federal regulations.
- Puncture containers to prevent re-use and bury at an authorized landfill.
Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws
operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.
Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: Burial in a licensed land-fill or Incineration in a licensed apparatus (after admixture with suitable combustible material)
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

DOT:
Symbols: G Hazard class or Division: 9
Identification Numbers: UN3077 PG: III
Label Codes: 9 Special provisions: 8, 146, 335, B54, IB8, IP3, N20, T1, TP33
Packaging: Exceptions: 155 Packaging: Non-bulk: 213
Packaging: Exceptions: 155 Quantity limitations: Passenger aircraft/rail: No limit
Quantity Limitations: Cargo aircraft only: No limit Vessel stowage: Location: A
Vessel stowage: Other: None

Hazardous materials descriptions and proper shipping names:
Environmentally hazardous substance, solid, n.o.s
Air Transport IATA:
ICAO/IATA Class: 9 ICAO/IATA Subrisk: า
UN/ID Number: 3077 Packing Group: III
Special provisions: A97
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. *(CONTAINS PROPAFENONE HYDROCHLORIDE)
Maritime Transport IMDG:
IMDG Class: 9 IMDG Subrisk: None
UN Number: 3077 Packing Group: III
EMS Number: F-A,S-F Special provisions: 274 909 944
Limited Quantities: 5 kg
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(contains propafenone hydrochloride)

Section 15 - REGULATORY INFORMATION

No data for propafenone hydrochloride (CAS: , 34183-22-7)

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE
- Inhalation may produce health damage*.
  * (limited evidence).

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CHEMCALL.

Classification of the mixture and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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