



MATERIAL SAFETY DATA SHEET

LIBRA 68.75% SC

IDENTIFICATION OF THE SUPPLIER:

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PRODUCT IDENTIFICATION:

Common Name: Propamocarb Hydrochloride + Fluopicolide

Trade Name: LIBRA 68.75% SC

Uses category: fungicide

Type of formulation: Suspension Concentrate (SC)

Chemical Name:	Propamocarb Hydrochloride propyl 3-(dimethylamino)propylcarbamate	Fluopicolide 2,6-dichloro-N-[[3-chloro-5-(trifluoromethyl)-2-pyridinyl]methyl]benzamide.
Chemical Formula:	C ₉ H ₂₁ ClN ₂ O ₂	C ₁₄ H ₈ Cl ₃ F ₃ N ₂ O
Molecular Weight:	224.7	383.6





PRODUCT COMPOSITION:

Active Ingredient:	% w/v	CAS #
Propamocarb Hydrochloride	62.5%	[25606-41-1]
Fluopicolide	6.25%	[239110-15-7]

Inert ingredient :up to 1 liter

HAZARDS IDENTIFICATION:

1 Classification of the substance or mixture

Classification in accordance with Australian GHS Regulation

Skin sensitisation: Category 1

H317 May cause an allergic skin reaction.

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

2 Label elements

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

Propamocarb hydrochloride

Fluopicolide

Signal word: Warning

Hazard statements

H317 May cause an allergic skin reaction.



Precautionary statements

- P261 Avoid breathing mist and spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with local regulation.

3 Other hazards

No other hazards known.

FIRST-AID MEASURES:

1 Description of first aid measures

General advice Move out of dangerous area. Remove contaminated clothing immediately and dispose of safely. Place and transport victim in stable position (lying sideways).

Inhalation Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.





Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

2 Most important symptoms and effects, both acute and delayed

Symptoms If large amounts are ingested, the following symptoms may occur:

Lethargy, Ataxia, Convulsions
Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).

3 Indication of any immediate medical attention and special treatment needed

Risks This product, although being a carbamate, is NOT a cholinesterase inhibitor.

Treatment Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

Contraindication: atropine.

FIRE-FIGHTING MEASURES: -

1 Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture





In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information

Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

Hazchem Code •3Z

ACCIDENTAL RELEASE:

1 Personal precautions, protective equipment and emergency procedures
Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

2 Environmental precautions

Do not allow to get into surface water, drains and ground water.

3 Methods and materials for containment and cleaning up

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.



PERSONAL PROTECTION/SAFTETY:

Components	CAS-No.	Control parameters
Propamocarb hydrochloride	25606-41-1	1.1 mg/m ³ (TWA)
Fluopicolide	239110-15-7	2.2 mg/m ³ (TWA)

2 Exposure controls

Respiratory protection

Respiratory protection is not required under anticipated circumstances of exposure.

Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation.

Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Wash gloves when contaminated.

Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed.

Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material	Nitrile	rubber
Rate of permeability		> 480 min
Glove thickness		> 0.4 mm
Protective index		Class 6
Directive		Protective gloves complying with EN 374.





Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

General protective measures

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

Engineering Controls Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

HANDLING AND STORAGE:

1 Precautions for safe handling Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion

No special precautions required.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Shower or bathe at the end of working. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities Requirements for storage areas and containers





Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from frost.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

STABILITY AND REACTIVITY:

1 Reactivity Thermal decomposition

Stable under normal conditions.

2 Chemical stability

Stable under recommended storage conditions.

3 Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

4 Conditions to avoid

Extremes of temperature and direct sunlight.

5 Incompatible materials

Store only in the original container.

6 Hazardous decomposition products

No decomposition products expected under normal conditions of use.

PHYSICAL AND CHEMICAL PROPERTIES:

1 Information on basic physical and chemical properties Form

Suspension

Colour beige

Odour ester-like





Flash point Not relevant; aqueous solution

Ignition temperature 420 °C

Density ca. 1.13 g/cm³ at 20 °C

Water solubility dispersible

Partition coefficient: noctanol/ water

Propamocarb hydrochloride: log Pow: -1.2

Fluopicolide: log Pow: 2.9 at pH 7

Viscosity, dynamic 221 mPaxs at 20 °C Velocity gradient 20 /s

Surface tension 31 mN/m at 20 °C Determined as a 1% solution in distilled water.

Oxidizing properties No oxidizing properties

Explosivity Not explosive

TOXICOLOGICAL INFORMATION:

1 Information on toxicological effects

Acute oral toxicity LD50 (Rat) > 2,500 mg/kg

Acute inhalation toxicity LC50 (Rat) > 3.195 mg/l
Exposure time: 4 h Highest attainable concentration.
Determined in the form of a respirable aerosol.

Acute dermal toxicity LD50 (Rat) > 4,000 mg/kg

Skin irritation No skin irritation (Rabbit)

Eye irritation No eye irritation (Rabbit)





Sensitisation Sensitising (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment mutagenicity

Propamocarb hydrochloride was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Fluopicolide was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Propamocarb hydrochloride was not carcinogenic in lifetime feeding studies in rats and mice.

Fluopicolide caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Assessment toxicity to reproduction

Propamocarb hydrochloride did not cause reproductive toxicity in a two-generation study in rats.

Fluopicolide did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Propamocarb hydrochloride caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Propamocarb hydrochloride are related to maternal toxicity.

Fluopicolide did not cause developmental toxicity in rats and rabbits.

Assessment STOT Specific target organ toxicity – repeated exposure

Propamocarb hydrochloride did not cause specific target organ toxicity in experimental animal studies.

Fluopicolide did not cause specific target organ toxicity in experimental animal studies.

Aspiration hazard

Based on available data, the classification criteria are not met.





Information on likely routes of exposure

May be harmful if inhaled.

May cause skin irritation. Skin sensitiser.

May cause eye irritation.

Harmful if swallowed.

ECOLOGICAL INFORMATION: -

1 Toxicity

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 6.6 mg/l

Exposure time: 96 h

Toxicity to aquatic invertebrates

LC50 (Daphnia magna (Water flea)) > 100 mg/l

Exposure time: 48 h

Toxicity to aquatic plants

EC50 (Raphidocelis subcapitata (freshwater green alga)) > 100 mg/l

Growth rate;

Exposure time: 72 h

EC50 (Navicula pelliculosa (Freshwater diatom)) 0.63 mg/l Growth

rate;

Exposure time: 72 h

2 Persistence and degradability Biodegradability

Propamocarb hydrochloride: rapidly biodegradable

Fluopicolide: Not rapidly biodegradable

Koc

Propamocarb hydrochloride: Koc: 719

Fluopicolide: Koc: 321

3 Bioaccumulative potential Bioaccumulation

Propamocarb hydrochloride: Does not bioaccumulate.

Fluopicolide: Bioconcentration factor (BCF) 121 Does not bioaccumulate.





4 Mobility in soil

Propamocarb hydrochloride: Slightly mobile in soils

Fluopicolide: Moderately mobile in soils

5 Other adverse effects Additional ecological information

No other effects to be mentioned.

DISPOSAL CONSIDERATIONS:

If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured.

Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products. Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase.

Metal drums and plastic containers:

Triple or preferably pressure rinse containers before disposal.

Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, break, crush or puncture and bury empty containers in a local authority landfill.

If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

Empty containers and product should not be burnt.

Do not reuse container for any other purpose.