

PRODUCT INFO
& DATASHEET

SICOPERM 5 EC

(Permethrin 5 ec)

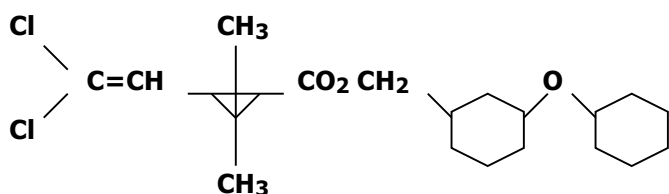
Insecticide for control of animal ectoparasites

NOMENCLATURE

Permethrin is the BSI / ISO approved name for:

3-phenoxybenzyl (1RS, 3RS; 1RS, 3SR)-3-(2,2-dichloro = vinyl)-2,2-dimethyl-cyclopropanecarboxylate (IUPAC)

FORMULA



Molecular weight: 391.3G

$C_{21}H_{20}Cl_2O_3$

CAS number: 52645-53-1

PHYSICAL AND CHEMICAL PROPERTIES OF THE ACTIVE INGREDIENT

Appearance	:	Colourless solid (technical is a yellow-brown viscous liquid)
Melting point	:	34 - 39°C
Boiling point	:	200°C/0.1 mmHg
Density	:	1.19 - 1.27 (at 20°C)
Octanol/water K_{ow}	:	$\log P_{ow} = 6.5$
Solubility in water	:	0.2 mg/l (30°C)
Solubility in organic solvents	:	Xylene, Hexane > 1000, Methanol, 258 (g/kg at 25°C)
Stability	:	Stable to U.V. light and temperatures up to 200°C

PHYSICAL AND CHEMICAL PROPERTIES OF FORMULATION

Appearance	:	Pale brown liquid
Active contents	:	5% w/v Permethrin
Inert contents	:	A blend of aliphatic calcium salt of dodecyl benzene plus nonyl phenol 6%, Aliphatic & aromatic solvent to 100%
Boiling range	:	168 - 220°C
Flash point	:	44°C
Cis/Trans Ratio	:	25/75

TOXICOLOGY OF ACTIVE INGREDIENT

Acute Oral LD50	:	Rat	:	430 - 4,000 mg/kg
Acute Oral LD50	:	Mouse	:	540 - 4,000 mg/kg
Acute Dermal LD50	:	Rat	:	> 2,500 mg/kg
Acute Dermal LD50	:	Rabbit	:	> 2,000 mg/kg
Acute inhalation LC50 3-h:	:	Rat	:	> 685 mg/m ³

Mild eye and skin irritant (rabbits), moderate skin sensitiser (guinea pigs).

NOEL (2-year) feeding trials, rats receiving 100 mg/kg diet showed no ill-effects.

Acceptable Daily Intake = 0.05 mg/kg bodyweight.

ECO-TOXICOLOGY OF ACTIVE INGREDIENT

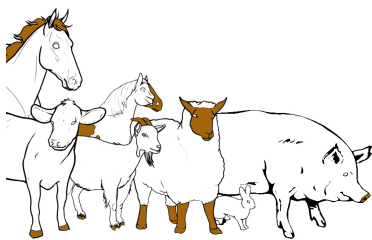
The toxicity of Permethrin for birds is low

Acute Oral LD50:	Japanese quail:	> 13,500 mg/kg
Acute Oral LD50:	Chicken:	> 3,000 mg/kg

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Permethrin is highly toxic to many fish and aquatic invertebrate species

Fish Toxicity LC50 (96-h): Rainbow Trout: 2.5 \emptyset g/l

Aquatic Toxicity LC50 (48-h): Daphnia sp.: 0.6 \emptyset g/l

Permethrin is toxic to bees

Bee Toxicity LD50(24-h): 0.098 \emptyset g/bee (oral)

0.029 \emptyset g/bee (oral)

RECOMMENDATIONS FOR USE

Sicoperm 5 EC is a stomach and contact insecticide effective against flies, lice, mites, ticks and other ectoparasites of cattle, goats, pigs, poultry and sheep. Sicoperm 5 EC is stable, giving effective control for up to 28 days. Its toxicity to man and other mammals is intrinsically low. Nevertheless certain precautions are still necessary when using this product.

Dilute Sicoperm 5 EC with at least 100 times the volume of clean water and mix well to produce a stable, milky emulsion. Always add concentrate to the water.

Mix only with clean water. Prepare a fresh mixture when required. Do not store diluted insecticide. Suitable for application with all types of surface spraying equipment.

Cattle

Mix Sicoperm 5 EC with water and apply with a knapsack sprayer or by dipping.

To control cattle ticks (e.g. *Boophilus microplus*) including all stages of single and multihost ticks, mix 600 ml Sicoperm 5 EC with 100 litres water. Dip animal or spray to wet thoroughly, especially areas where ticks attach. Spraying should require 3 - 5 litres per animal. When dipping, submerge animal for 30 seconds minimum to ensure skin saturation. Submerge head completely at least once.

To control mange (mites) of cattle mix 300 ml Sicoperm 5 EC with 100 litres water. Dip animal or spray to wet thoroughly as above.

To control flies on cattle mix 2 litres Sicoperm 5 EC with 100 litres water. Apply by knapsack sprayer 250 ml mixture to each side of adult cattle and 75 ml of mixture to each side of calves. Spray to cover all parts of the animal paying attention to face, back and hind quarters. Commence application at onset of fly season and repeat every 28 days for control of biting flies and at 14 day intervals for face fly control. Vary the timing to suit local conditions.

Sicoperm 5 EC is safe to use on lactating dairy animals without the necessity of discarding milk from treated animals.

Goats & pigs

To control ticks, mange or nuisance flies mix 300 ml Sicoperm 5 EC with 100 litres water and apply by knapsack sprayer to thoroughly wet the animal. General recommendations and precautions as cattle.

Poultry

To control lice and mites on poultry mix 500 ml Sicoperm 5 EC with 100 litres water and apply directly to birds and to all surfaces of houses. Repeat every 28 days as necessary. Do not apply to newly hatched chicks.

Sheep

To control mites and lice on sheep mix 300 ml Sicoperm 5 EC with 100 litres water and apply by dipping or by knapsack sprayer. For mites a single dip should be sufficient but for heavy infestations increase strength of mixture to 200 ml per 100 litres. For lice control spray application is sufficient.

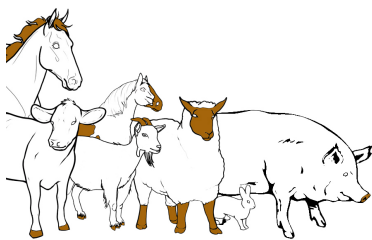
Animal houses

To control nuisance flies in buildings used for animal housing mix 1 litre Sicoperm 5 EC with 200 litres water and apply by knapsack sprayer at rate of 1 litre per 10 square metres. Spray all accessible surfaces including walls, ceiling, ventilators and pens. Suitable for use in poultry houses, farrowing houses, dairy parlours and all farm buildings. Take care not to contaminate milk, dairy products or equipment, foodstuffs, seeds, animal feed or drinking water.

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SAFETY IN USE

- This product is classed as potentially harmful if swallowed; and also irritating if in contact with eyes and skin.
- Wear suitable protective clothing (coveralls), synthetic rubber / PVC gloves when using plus eye protection when diluting.
- Avoid excessive contamination of coveralls and launder regularly.
- Wash splashes from skin and eyes immediately.
- Wash hands and exposed skin before meals and after use.
- Do not breathe fog or spray mist. Otherwise wear respiratory protective equipment and eye protection.
- Flammable. Avoid naked flames and hot surfaces.
- When using, do not eat, drink or smoke.
- Unprotected persons and animals should be kept away from treated areas. Cover water storage tanks before application.
- Do not contaminate foodstuffs, eating utensils or food contact surfaces.
- Cover water storage tanks before application.
- Do not apply directly onto animals.
- Extremely dangerous to fish and other aquatic life. Remove or cover fish tanks and bowls before application.
- Avoid all contact with plant life.

STORAGE, SPILLAGE & DISPOSAL

Keep in original container, tightly closed in a safe place. Keep out of reach of children. Keep away from food, drink and animals feeding stuffs.

If a spillage occurs, absorb with a suitable absorbent material such as damp sawdust, sand or earth. Sweep up and place in a sealed container until safe disposal is possible.

Wash out containers thoroughly, emptying washings into the spray tank. The containers can then be disposed of by incineration at high temperatures or by crushing and burying in an approved site. Dispose of container according to local regulations. Do not re-use the container for any other purpose.

FIRST AID PROCEDURES

In cases of over-exposure, a wide range of symptoms can be observed, including signs of excitation, muscular spasms, twitching and muscular fibrillation, headache, weakness, giddiness, nausea, vomiting, stomach pains, blurred vision, slurred speech and in cases of severe over-exposure, respiratory and circulatory failure may occur.

If on skin; wash the affected areas immediately with soap and clean water.

If in eyes; flush with sterile distilled water or saline solution for at least 15 minutes.

If inhaled; move the patient to clean fresh air and monitor for symptoms of adverse reactions to the product.

If ingested; DO NOT induce vomiting: seek urgent medical advice and show this container or label. Vomiting may cause aspiration pneumonitis. Gastric lavage may aid the aspiration of the product, but should only be administered by medical staff.

IF YOU FEEL UNWELL, seek urgent medical attention, showing the product label.

NOTES TO PHYSICIANS

There is no specific antidote to Permethrin and treatment is symptomatic.

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