

**PRODUCT INFO
& DATASHEET**

DIAZIDIP 60% EC

(Diazinon 60 EC)

*Acaricide and Insecticide for Veterinary Use
(dipping & spraying)*

INTRODUCTION

DIAZINON 60 EC is an organophosphorus, pyrimidine, non-systemic insecticide acaricide with contact, stomach and respiratory action. Cholinesterase inhibitor.

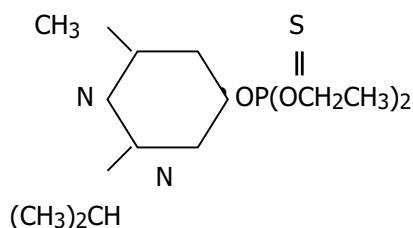
DIAZINON 60 EC is an emulsifiable concentrate for the prevention and treatment of ectoparasitic infestations in cattle, sheep, horses, pigs and other domestic animals. They are effective at very low doses for control of ticks, fleas, lice and flies. The product can also be used in the Public Health Sector for the control of household and storage pests.

NOMENCLATURE

Diazinon is the BSI, ISO, ESA approved name for: 0,0-diethyl 0-2-isopropyl-6-methylpyrimidin-4-yl phosphorothioate (IUPAC)

CHEMICAL AND PHYSICAL DATA OF THE TECHNICAL GRADE

Formula:



$C_{12}H_{21}N_2O_3PS$

Molecular weight: 304.3

The pure active ingredient has the following properties:

Appearance	:	Colourless liquid
Boiling point	:	83 - 84 °C at 2 x 10 ⁻⁴ mm Hg
Vapour pressure	:	1-4 x 10 ⁻⁴ mm Hg at 20°C
Solubility in water	:	68 mg/l
Readily soluble in most organic solvents.		

Diazinon decomposes above 120°C and is susceptible to oxidation, it is stable under alkaline conditions but slowly hydrolysed by water and dilute acids.

FORMULATION CHARACTERISTICS

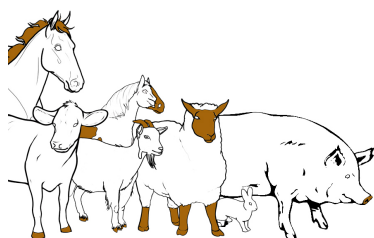
Diazidip 60% EC is manufactured to the following specification:

Appearance	:	Clear liquid
Active content	:	60% w/v
Acidity as H ₂ SO ₄	:	max. 0.25%
Density, typical	:	1.005 - 1.015
Stabiliser	:	1% E.S.B.O.

TOXICOLOGY

Acute Oral LD ₅₀	:	rat	: 300 - 466 mg/kg
Acute Dermal LD ₅₀	:	male rat	: 900 mg/kg
Acute Dermal LD ₅₀	:	female rat	: 455 mg/kg

In 2 year feeding studies the 'no effect' level was estimated as 0.01 mg/kg daily for rats and 0.05 mg/kg for monkeys. 0.02 mg/kg b.w. in man. Diazinon is highly toxic to birds and honey bees, it is also toxic to fish.



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DIRECTIONS FOR USE

DIAZIDIP 60% EC controls Scab, Fly Strike, Lice, Ticks and Keds in sheep and cattle.

*** Cattle / Camel / Goats / Horses**

Where heavy infestation of lice occurs re-treatment after 3 weeks is recommended. For complete control of mange mites, 2 - 3 applications may be necessary at 10 day intervals. For the complete control of ticks, re-treatment after 21 days may be necessary.

- **Spraying** : Dilute at the rate of 1 ml Diazidip 60% EC per 1 litre of water and apply as required.
- **Dipping** : Initial charge is at rate of 1 litre per 1,000 litres of water. When quality of wash in bath has decreased by more than 10%, replenish the bath with wash charged at the rate of 1 litre per 400 litres of water.

*** Sheep**

Maximum effect is achieved from the product when treatment is effected 12 - 16 days post shearing. Generally where infestation is not heavy one treatment will suffice; but in cases of heavy infestation of scab mites, re-treatment after 7 - 10 days is recommended. Where heavy infestation of lice has occurred re-treatment after 2- 3 weeks is recommended.

- **Spraying** : Dilute at the rate of 1 ml Diazidip 60% EC per 1 litre of water and apply as required.
- **Dipping** : Initial charge is at rate of 1 litre per 2,400 litres of water. When quantity of wash in bath has decreased by more than 10%, replenish the bath with wash charged at the rate of 1 litre per 800 litres of water.

*** Notes for dipping**

Do not mix with any other dip. Replenish the bath as directed when level falls. If this recommendation is not observed, animals passing through the bath at a low level (or a dirty bath) will not be as effectively treated or protected as those animals treated earlier. Stir the bath thoroughly before commencing dipping and dip on the same day the bath is prepared. Animals must be immersed for at least one minute and must be completely immersed at least once. Care should be taken that animals do not swallow the wash. Do not treat during heavy rains.

PRECAUTIONS

*** Protection of environment**

Harmful to poultry and birds - keep away from product and prepared bath. Dangerous to fish - do not contaminate ponds, waterways and ditches. Wash out container and dispose off safely, do not re-use for storage of liquids for human consumption. Store in original container, tightly closed in a safe place.

*** Protection of operators**

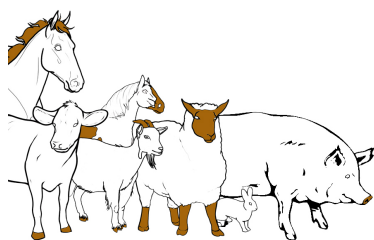
Do not handle this dip if under medical advice not to work with organophosphorus compounds. Wear face shield and rubber gloves when opening a container, or diluting, mixing or transferring this dip from one container to another or to the bath. Wash any splashes of concentrate from skin and eyes immediately. Wear rubber boots and waterproof apron when handling the diluted liquid and dipped sheep. Remove heavily contaminated clothes immediately. Wash hands and exposed skin after dipping and before meals.

*** Contra-indications / Precautions**

As this is an organophosphorus sheep dip, an interval of at least 14 days should elapse between dipping and dosing with any drench containing an organophosphorus compound. Animals should never be dipped on a full stomach or when they are heated, tired, thirsty or suffering from wounds or open sores. Rams and fat sheep should be assisted through the bath. Young animals must be treated separately and with utmost care. Treated animals must not be slaughtered for human consumption within 2 weeks of treatment. Milk for human consumption must be withheld for 4 days after treatment.

FIRST AID PROCEDURES

Symptoms of Diazinon poisoning include 'flu-like' symptoms of headaches, dizziness, weakness, nausea and vomiting; plus blurred vision, pin-point pupils, muscle twitching, tremors, convulsions, abdominal cramps, incontinence, diarrhoea, mental confusion, tightness in chest, excessive coughing and wheezing, excessive cold sweating, tearing salivation, decreased heart rate and respiratory depression.



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- * If on skin : wash immediately with soap and clean water.
- * If in the eyes : rinse with clean distilled water for at least 15 minutes.
- * If inhaled : remove from contaminated areas.

* If ingested : DO NOT induce vomiting. Vomiting may cause aspiration pneumonitis. Gastric lavage should be only administered by a trained person. Seek urgent medical attention. If breathing has stopped, apply artificial respiration. IF YOU FEEL UNWELL, seek medical advice (show the label where possible).

NOTES TO PHYSICIANS

Treatment of organophosphorus poisoning ranges from simple removal from exposure in very mild cases, to the provision of very rigorous supportive antidotal measures in severe cases.

Minimising the absorption of the product should take place, see "First Aid" section for details. In the case of ingestion, vomiting should be induced. It should be noted that Chlorpyrifos may be dissolved in one or more solvents (e.g. a petroleum distillate) and that inducing vomiting involves a risk of aspiration pneumonitis. Perform rapid gastric lavage using 5% sodium bicarbonate or activated charcoal taking care to prevent aspiration of fluids into the lungs (i.e. only after a tracheal tube has been placed).

Artificial respiration (via a tracheal tube) should be started at the first sign of respiratory failure and maintained for as long as necessary. Cautious administration of fluids is advised, as well as general supportive and symptomatic pharmacological treatment and absolute rest.

Atropine should be administered, beginning with 2 mg I.V. and given at 15 to 30 minuted intervals. The dose and the frequency of the atropine treatment varies from case to case, but should maintain the patient fully atropinised (dilated pupils, dry mouth, skin flushing, etc.). Continuous infusion of atropine may be necessary in extreme cases and total daily doses up to several hundred mg may be necessary during the first few days of treatment.

The response of the eye pupil may be unreliable in cases of organophosphate poisoning. A flush skin and drying of secretions are the best guide to the effectiveness of atropinisation. Although repeated dosing may well be necessary, excessive doses at any one time may cause toxic side effects. Pulse-rate should not exceed 120 beats/min. A mild degree of atropinisation should be maintained for at least 48 hours. Caution is needed when atropine is contraindicated in the cyanotic patient because of the possibility of inducing ventricular fibrillation.

Atropine is antagonistic to the muscarinic effects; which include anorexia, nausea, vomiting, abdominal cramps, sweating, salivation, constricted pupils, pulmonary oedema and cyanosis. Atropine has no effect on the nicotinic manifestations; which include muscle fasciculation and weakness.

Cholinesterase reactivators (e.g. Pralidoxime) specifically restore AChE activity inhibited by organophosphates. The treatment should begin as soon as possible because oximes are not effective on "aged" phosphorylated cells. However, if absorption, distribution and metabolism are thought to be delayed for any reasons, oximes can be administered for several days after intoxication. Effective treatment with oximes reduces the required dose of atropine. Pralidoxime is the most widely available oxime.

A dose of 1 - 2 g Pralidoxime can be given either I.M. or I.V. and repeated 2 - 3 times per day or, in extreme cases, more often. If possible, blood samples should be taken for AChE determinations before and during treatment. Skin should be carefully cleansed before sampling. Results of the assays should influence the decision whether to continue oxime therapy after the first 2 days.

When used together, the two antidotes, atropine and Pralidoxime chloride, are more effective than either one alone.

For children the doses are 0.04 - 0.08 mg of atropine/ kg bodyweight and 250 mg of Pralidoxime chloride per child.

Morphine, barbiturates, phenothiazine derivatives, tranquillisers and all kinds of central stimulants are contraindicated.

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