

# DOTMEC-DS

## Ivermectin-20 mg Injection for Veterinary Use

### Description

Ivermectin is a broad-spectrum antiparasitic agent belonging to the ivermectin family. It is effective against a wide range of internal and external parasites in animals, including nematodes, arthropods, and certain ectoparasites. Ivermectin acts by binding selectively to glutamate-gated chloride ion channels in nerve and muscle cells of invertebrates, leading to paralysis and death of the parasites.

The product is formulated as a sterile injectable solution, available in amber glass vials of 10 ml and 100 ml, designed to ensure stability and protection from light.

### Composition

- Active Ingredient: Ivermectin 20 mg per ml (equivalent to 2%)
- Excipients:
  - Propylene glycol (solvent)
  - Benzyl alcohol (preservative)
  - Water for Injection (vehicle)
- pH adjusted for stability and compatibility with injection use

### Specification

- Appearance: Clear, colourless to slightly yellow sterile solution
- Assay: Not less than 90% and not more than 110% of labelled ivermectin content
- Sterility: Must be sterile as per pharmacopeial standards (USP/BP)
- pH: 4.5 – 7.5
- Free from visible particulate matter
- Pyrogen-free as per regulatory guidelines

## **Indications**

Ivermectin 20 mg injection is indicated for the treatment and control of:

- Gastrointestinal roundworms (nematodes)
- Lungworms (*Dictyocaulus* spp.)
- Warbles (*Hypoderma* spp.)
- Mange mites (*Sarcoptes*, *Demodex*)
- Lice infestations in cattle, sheep, goats, and swine

## **Dosage and Administration**

- Recommended dose: 0.2 mg ivermectin per kg body weight (equivalent to 1 ml per 100 kg) administered as a subcutaneous injection.
- Administration route: Subcutaneous (under the skin) injection only. Avoid intravenous or intramuscular routes.
- Dosage frequency: Single dose usually sufficient; consult veterinary advice for repeated treatment in heavy infestations.

## **Product Form**

Sterile injectable solution supplied in amber glass vials in two sizes:

- 10 ml vial (for small animals or precision dosing)
- 100 ml vial (for larger herds or extended use)

## **Usage and Advantages**

- Broad-spectrum efficacy against internal and external parasites
- Long-lasting effect with single dose administration
- Easy-to-use injection form with accurate dosing
- Minimal risk of resistance when used as directed
- Safe in a wide range of domestic animals

## **Adverse Effects**

- Mild transient swelling or pain at the injection site may occur
- Rarely, neurological signs in sensitive breeds (e.g., certain dog breeds with MDR1 gene mutation)
- Overdose can cause tremors, ataxia, or coma—seek veterinary intervention immediately

## **Withdrawal Period**

- Meat and offal: Minimum 28 days before slaughter for human consumption
- Milk: Do not use in lactating animals producing milk for human consumption
- Follow local regulatory guidelines strictly

## **Precautions**

- For veterinary use only; not for human use
- Keep out of reach of children
- Use sterile needles and syringes for each injection to prevent contamination
- Avoid use in animals with known hypersensitivity to ivermectin or excipients
- Store away from direct sunlight and excessive heat

## **Storage**

- Store at 15°C to 30°C (59°F to 86°F) in a dry place
- Protect from light by keeping in amber vial
- Do not freeze
- Keep vial tightly closed when not in use

## **Handling and Safety**

- Wear protective gloves when handling to avoid skin contact
- In case of accidental human exposure, seek medical advice immediately
- Dispose of empty vials and syringes as per local biohazard regulations
- Avoid environmental contamination with unused product or packaging

## **HS Code and HSN Code**

- HS Code: 3004.90 (Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses or in forms or packings for retail sale)
- HSN Code: 3004 (Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic uses)

## **Special Instructions**

- Do not administer intravenously or intramuscularly; only subcutaneous route is safe and effective
- Always calculate dose carefully based on animal weight
- Avoid using ivermectin in aquatic animals as it is toxic to fish
- Monitor treated animals for adverse reactions for 24 hours post-injection

## **Details of Human and Veterinary Applications**

- Ivermectin is approved widely for veterinary use to control parasites in livestock and companion animals
- Human use ivermectin formulations exist but differ significantly in concentration and excipients—never substitute veterinary product for human use
- Veterinary ivermectin is vital for animal health, food safety, and parasite management programs

## **Frequently Asked Questions (FAQs)**

### **Q1: What is Ivermectin (IVM)?**

A: Ivermectin is a broad-spectrum antiparasitic drug used in veterinary and human medicine to treat parasitic infections.

### **Q2: Can I use this ivermectin injection for pets like dogs and cats?**

A: This formulation is primarily for livestock animals. Use veterinary-approved formulations specifically designed for pets, under veterinary supervision.

### **Q3: How soon after injection can animals return to grazing or milking?**

A: Withdrawal period for meat is 28 days; avoid milking animals during treatment and follow local regulatory guidelines.

### **Q4: What if I overdose the animal?**

A: Signs may include tremors, drooling, or lethargy. Contact a veterinarian immediately for supportive care.

### **Q5: Is ivermectin safe during pregnancy?**

A: Use with caution; consult a veterinarian before administration in pregnant or lactating animals.

### **Q6: How should I store this product?**

A: Store between 15-30°C in a dry, light-protected place, and avoid freezing.